**APPENDIX 2-5: Rejected ECOTOX Bibliography for Chlorpyrifos**

Papers that Were Excluded from ECOTOX (based on ECOTOX runs conducted in 2007, 2008, 2009, and 2013).

**2007 Extraction**

Air contaminants. *Fed. Regist.*  57: 26002-601, 12 Jun 1992 .  
Chem Codes: Chemical of Concern: CPY Code : HUMAN HEALTH.

Antibody for Phenitrothion hapten determination. *Jpn. Kokai Tokkyo Koho* 18 pp. CODEN: JKXXAF.  
Chem Codes: Chemical of Concern: CPY Code: CHEM METHOD.

Broad specificity antibodies against organophosphates or antibiotics. *PCT Int. Appl.* 24 pp. CODEN: PIXXD2.  
Chem Codes: Chemical of Concern: CPY Code: METHOD.

Chlorpyrifos. *Govt reports announcements &amp;amp; index (gra&amp;i), issue 03, 2003*.  
Chem Codes: Chemical of Concern CPY Code: REVIEW.

Daphnia reproductive bioassay for testing toxicity of aqueous samples and presence of an endocrine disrupter. *U.S.* 17 pp.   
Chem Codes: Chemical of Concern: CPY Code : NO TOX DATA.

Herbicide antidotes as safeners for reducing phytotoxicity resulting from synergistic interaction between herbicides and other pesticides. *U.S. MON PATENT NO. KIND DATE APPLICATION NO. DATE -* 59 pp. Cont.-in-part of U.S. Ser. No. 636,360, abandoned. CODEN: USXXAM.  
Chem Codes: Chemical of Concern: CPY Code : NO SOURCE .

Immunological detection of organophosphates, and preparation of haptens and antibodies therefor. *PCT Int. Appl.* 65 pp. CODEN: PIXXD2.  
Chem Codes: Chemical of Concern: CPY Code: CHEM METHOD.

*Indoor air quality and work environment study Library of Congress, Madison Building. Volume 2. Results of indoor air environmental monitoring. Report (1990)HETA-88-364-2103; Order No. PB92-103183, 247 pp. Avail.: NTIS From: Gov. Rep. Announce. Index* .  
Chem Codes: Chemical of Concern: CPY Code: HUMAN HEALTH.

Method for determining the toxicity of selected organic chemicals in an aqueous sample matrix using antibody-mediated selective removal processes. *U.S.* 13 pp. CODEN: USXXAM.  
Chem Codes: Chemical of Concern: CPY Code: CHEM METHOD.

Phase 2 of the Re-Evaluation of Chlorpyrifos. *Govt reports announcements &amp;amp; index (gra&amp;i), issue 01, 2004*.  
Chem Codes: Chemical of Concern CPY Code: REVIEW.

Re-Evaluation of Lawn and Turf Uses of Pesticides. *Govt reports announcements &amp;amp; index (gra&amp;i), issue 03, 2003*.  
Chem Codes: Chemical of Concern CPY Code: HUMAN HEALTH.

Reducing insecticide resistance. *U.S. Patent* 5 pp. CODEN: USXXAM.  
Chem Codes: Chemical of Concern: CPY Code: NO SOURCE - PATENT ONLY.

Support Document for the Sara Section 110 "Second 100" List (Draft). *Epa/ots; doc #110-881013*.  
Chem Codes: Chemical of Concern CPY Code: NO TOX DATA.

Update on the Re-Evaluation of Chlorpyrifos in Canada. *Govt reports announcements &amp;amp; index (gra&amp;i), issue 03, 2003*.  
Chem Codes: Chemical of Concern CPY Code: NO TOX DATA.

UV protective aqueous emulsion and emulsifiable solids for cosmetic and agrochemical formulations. *U.S. Cont.-in-part of U.S. Ser. No. 975,811.*  6 pp.   
Chem Codes: Chemical of Concern: CPY Code: CHEM METHOD.

Abdel-Halim, K. Y., Salama, A. K., El-khateeb, E. N., and Bakry, N. M. (2006). Organophosphorus pollutants (OPP) in aquatic environment at Damietta Governorate, Egypt: Implications for monitoring and biomarker responses. *Chemosphere* 63: 1491-1498.  
Chem Codes: Chemical of Concern CPY Code: SURVEY.

Abdullah, A. R., Bajet, C. M., Matin, M. A., Nhan, D. D., and Sulaiman, A. H. (1997). Ecotoxicology Of Pesticides In The Tropical Paddy Field Ecosystem. *Environmental Toxicology And Chemistry* 16: 59-70.  
Chem Codes: Chemical of Concern: CPY Code : HUMAN HEALTH.

Abou-Arab, A. A. K. and Abou Donia, M. A. (2001). Pesticide residues in some Egyptian spices and medicinal plants as affected by processing. *Food Chemistry* 72: 439-445.  
Chem Codes: Chemical of Concern CPY Code: FOOD.

Abou-Donia, M. B. (1995). Organophosphorus Pesticides. *Chang, L. W. And R. S. Dyer (Ed.). Neurological Disease And Therapy, Vol. 36. Handbook Of Neurotoxicology. Xxi+1103p. Marcel Dekker, Inc.: New York, New York, Usa* Basel, Switzerland. Isbn 0-8247-8873-7.; 0: 419-473.  
Chem Codes: Chemical of Concern: CPY Code : HUMAN HEALTH.

Abou-Donia, M. B. and Garrettson, L. K. (2000). Detection Of Neurofilament Autoantibodies In Human Serum Following Chemically Induced Neurologic Disorder: A Case Report. *Environmental Epidemiology And Toxicology* 2: 37-41.  
Chem Codes: Chemical of Concern: CPY Code: HUMAN HEALTH.

Abou-Donia, S. A., Abdel-Shahaid, Y., Shaker, N., Salam, A., and Ismail, A. (1985). Fate Of 4 Pesticides In Egyptian Domiati Cheese Karish Cheese And Fermented Milk Zabady. *80th Annual Meeting Of The American Dairy Science Association, Urbana-Champaign, Ill., Usa, June 9-12, 1985. J Dairy Sci* 68: 99.  
Chem Codes : Chemical of Concern: CPY Code: HUMAN HEALTH.

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Chem Codes: Chemical of Concern CPY Code: BACTERIA.

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Chem Codes: Chemical of Concern CPY Code: FATE.

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Chem Codes: Chemical of Concern CPY Code: IN VITRO.

Ahmad, N., Bugueno, G., Guo, L., and Marolt, R. (1999). Determination Of Organochlorine And Organophosphate Pesticide Residues In Fruits, Vegetables And Sediments. *Journal Of Environmental Science And Health Part B Pesticides Food Contaminants And Agricultural Wastes* 34: 829-848.  
Chem Codes: Chemical of Concern: CPY Code : CHEM METHOD.

Ahmed, N. A. (1996). Chemical Pollutants And The Central Nervous System Neurotransmitters Special Reference To Pesticides. *Shiraki, K., S. Sagawa And M. K. Yousef (Ed.). Progress In Biometeorology, Vol. 11. Physiological Basis Of Occupational Health: Stressful Environments* International Symposium, Kitakyshu, Japan, October 18-20, 1995. Xii+278p. Spb Academic Publishing Bv: Amsterdam, Netherlands. Isbn 90-5103-127-0.; 11: 205-217.  
Chem Codes: Chemical of Concern: CPY Code: HUMAN HEALTH.

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Chem Codes: Chemical of Concern CPY,DMT Code: MIXTURE.

Akgur, S. A., Ozturk, P., Sozmen, E. Y., Delen, Y., Tanyalcin, T., and Ege, B. (1999). Paraoxonase and acetylcholinesterase activities in humans exposed to organophosphorus compounds. *J. Toxicol. Environ. Health Part A* 58: 469-474 .  
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Chem Codes: Chemical of Concern: CPY Code : SURVEY.

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Chem Codes: Chemical of Concern: CPY Code: HUMAN HEALTH.

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Chem Codes: EcoReference No.: 75121  
Chemical of Concern: ATZ,Captan,CPY,Folpet,IPD,MTL,PAH,PCB,PHTH,TBA,VCZ Code: REFS CHECKED/REVIEW.

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Chem Codes: Chemical of Concern: CPY Code: CHEM METHOD.

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Chem Codes : Chemical of Concern: CPY Code: CHEM METHOD.

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Chem Codes : EcoReference No.: 61865  
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Chem Codes: Chemical of Concern: CPY Code: IN VITRO.

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Chem Codes: Chemical of Concern: CPY Code: HUMAN HEALTH.

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Chem Codes: Chemical of Concern: CPY Code: METHOD.

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Chem Codes: Chemical of Concern: MDT,CPY,DZ Rejection Code: NO DURATION/SURVEY.

Wilson, B. W., Hooper, M. J., Littrell, E. E., Detrich, P. J., Hansen, M. E., Weisskopf, C. P., and Seiber, J. N. (1991). Orchard Dormant Sprays and Exposure of Red-Tailed Hawks to Organophosphates. *Bull.Environ.Contam.Toxicol.* 47: 717-724.  
Chem Codes: Chemical of Concern: MDT,CPY,DZ Rejection Code: NO DURATION/SURVEY.

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Chem Codes: Chemical of Concern: CPY Rejection Code: CHEM METHODS.

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Chem Codes: Chemical of Concern: DM,CTN,DMT,CPY,CYH,CYP,FNV Rejection Code: MIXTURE.

Zhang, Zhi Yong, Liu, Xian Jin, and Hong, Xiao Yue (2007). Effects of home preparation on pesticide residues in cabbage. 18: 1484-1487.  
Chem Codes: Chemical of Concern: CPY Rejection Code: FOOD.

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Chem Codes: Chemical of Concern: CPY,DDT Rejection Code: NON-ENGLISH.

**Papers that were Excluded from the May 2013 Refresh**

1. Insecticides, Testosterone, and Fertility.   
Rec #: 79829  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: MESH HEADINGS: Chlorpyrifos/adverse effects/pharmacology  
MESH HEADINGS: Fertility/\*drug effects  
MESH HEADINGS: Humans  
MESH HEADINGS: Insecticides/\*adverse effects  
MESH HEADINGS: Male  
MESH HEADINGS: Testosterone/\*metabolism eng

2. Abass, K.; Reponen, P.; Mattila, S., and Pelkonen, O. Metabolism of carbosulfan. I. Species differences in the in vitro biotransformation by mammalian hepatic microsomes including human. 2009; 181, (2): 210-219.   
Rec #: 55069  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The in vitro metabolism of carbosulfan, a widely used carbamate insecticide, by hepatic microsomes from human, rat, mouse, dog, rabbit, minipig, and monkey was studied. Altogether eight (8) phase I metabolites were detected by LC-MS; phase II metabolites were not found in human homogenates fortified with appropriate cofactors. The primary metabolic pathways were the initial oxidation of sulfur to carbosulfan sulfinamide ('sulfur oxidation pathway') and the cleavage of the nitrogen sulfur bond (N-S) to give carbofuran and dibutylamine ('carbofuran pathway'). Carbofuran was further hydroxylated to 3-hydroxycarbofuran and/or 7-phenolcarbofuran, which were further oxidized to 3-ketocarbofuran or 3-hydroxy-7-phenolcarbofuran, respectively, and finally to 3-keto-7-phenolcarbofuran. 3-Hydroxycarbofuran was the main metabolite in all species, but otherwise there were some qualitative interspecies differences in carbofuran pathway metabolites. On**ly rabbit liver microsomes we**re able to metabolize carbofuran via hydroxylation to 7-phenolcarbofuran. Carbofuran was not detected in dog liver microsomes due to rapid further metabolism. In general, liver microsomes from all seven species produced more toxic products (carbofuran, 3-hydroxy-carbofuran, 3-ketocarbofuran) more rapidly than a detoxification product (carbosulfan sulfinamide). Differences in intrinsic hepatic clearances (CL(int)) between the lowest and highest species were moderate; 2-fold for the carbofuran pathway, 2.7-fold for carbosulfan sulfinamide and 6.2-fold for dibutylamine. Our studies, although restricted to in vitro metabolic data from human and animal hepatic preparations, provide valuable quantitative carbosulfan-specific data for risk assessment, which suggest that interspecies differences, for carbosulfan active chemical moiety, in toxicokinetics are within the standard applied factor for species extrapolation in toxicokinetics. These results will be valuable in further defining the risks associated with exposure to carbosulfan. (C) 2009 Elsevier Ireland Ltd. All rights reserved.  
Keywords: Pesticides, Toxicokinetics, P450, In vitro, Metabolism, Risk assessment  
ISI Document Delivery No.: 499IO

3. Abass, K.; Reponen, P.; Mattila, S., and Pelkonen, O. Metabolism of carbosulfan II. Human interindividual variability in its in vitro hepatic biotransformation and the identification of the cytochrome P450 isoforms involved. 2010; 185, (3): 163-173.   
Rec #: 55079  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study aims to characterize interindividual variability and individual CYP enzymes involved in the in vitro metabolism of the carbamate insecticide carbosulfan. Microsomes from ten human livers (HLM) were used to characterize the interindividual variability in carbosulfan activation. Altogether eight phase I metabolites were analyzed by LC-MS. The primary metabolic pathways were detoxification by the initial oxidation of sulfur to carbosulfan sulfinamide ('sulfur oxidation pathway') and activation via cleavage of the nitrogen sulfur bond (N-S) to give carbofuran and dibutylamine ('carbofuran pathway'). Differences between maximum and minimum carbosulfan activation values with HLM indicated nearly 5.9-, 7.0, and 6.6-fold variability in the k(m), V(max) and CL(int) values, respectively. CYP3A5 and CYP2B6 had the greatest efficiency to form carbosulfan sulfinamide, while CYP3A4 and CYP3A5 were the most efficient in the generation of the carbofuran metabolic pathway. Based on average abundances of CYP enzymes in human liver, CYP3A4 contributed to 98% of carbosulfan activation, while CYP3A4 and CYP2B6 contributed 57 and 37% to detoxification, respectively. Significant correlations between carbosulfan activation and CYP marker activities were seen with CYP3A4 (omeprazole sulfoxidation), CYP2C19 (omeprazole 5-hydroxylation) and CYP3A4 (midazolam 1'-hydroxylation), displaying r(2) = 0.96, 0.87 and 0.82, respectively. Activation and detoxification pathways were inhibited by ketoconazole, a specific CYP3A4 inhibitor, by 90-97% and 47-94%, respectively. Carbosulfan inhibited relatively potently CYP3A4 and moderately CYP1A1/2 and CYP2C19 in pooled HLM. These results suggest that the carbosulfan activation pathway is more important than the detoxification pathway, and that carbosulfan activation is predominantly catalyzed in humans by CYP3A4. (C) 2010 Elsevier Ireland Ltd. All rights reserved.  
Keywords: Pesticides, Xenobiotic, Risk assessment, In vitro metabolism, P450,  
ISI Document Delivery No.: 602WM

4. Abass, K.; Turpeinen, M., and Pelkonen, O. An evaluation of the cytochrome P450 inhibition potential of selected pesticides in human hepatic microsomes. 2009; 44, (6): 553-563.   
Rec #: 55099  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The goal of this work was to study the ability of 18 pesticides to inhibit selective model activities for all major xenobiotic-metabolizing enzymes, namely CYP1A1/2, 2A6, 2B6, 2C8, 2C9, 2C19, 2D6, 2E1 and 3A4. Generally organophosphorus insecticides were the most potent and extensive inhibitors, especially towards CYP1A1/2 (IC(50) values of chlorpyrifos, fenitrothion and profenofos similar to 3 mu M), CYP2B6 (IC(50) values of chlorpyrifos and fenitrothion 2.5 mu M), CYP2C8 (fenitrothion 4.3 mu M), CYP2C9 (fenitrothion and malathion 4.8 and 2.5 mu M, respectively), CYP2D6 (chlorpyrifos and phenthoate similar to 3 mu M) and CYP3A4 (chlorpyrifos, fenitrothion and phenthoate 3-4 mu M). Otherwise there were quite considerable differences in potency and extent of inhibition between different organophosphates. Pyrethroids were in general very weak or inactive. Deltamethrin and fenvalerate were potent inhibitors of CYP2D6 (IC(50) values of similar to 3 mu M) while lambda-cyhalothrin potently inhibited both CYP2D6 and CYP3A4-mediated activities (IC(50)'s about 3-4 mu M). Some pesticides caused relatively potent inhibitions sporadically (carbendazim, CYP2D6, IC(50) = 12 mu M; atrazine, CYP3A4, IC(50) = 2.8 mu M; glyphosate, CYP2C9, IC(50) = 3.7 mu M; hexaflumuron, IC(50) = 6.0 mu M). With the exceptions of alpha-cypermethrin, cypermethrin, isoproturon, carbaryl and abamectin, most pesticides inhibited relatively potently at least one CYP-selective activity, which may have relevance for potential interactions in occupational exposures and for further studies on the CYP-associated metabolism of respective pesticides.  
Keywords: Pesticides, inhibitory interactions, P450, human liver microsomes, in  
ISI Document Delivery No.: 535VX

5. Abass, Khaled and Pelkonen, Olavi. The inhibition of major human hepatic cytochrome P450 enzymes by 18 pesticides: Comparison of the N-in-one and single substrate approaches. (0).  
Rec #: 5310  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: In the present study on human hepatic microsomes, the N-in-one assay with ten probe substrates for nine cytochrome-P450 enzymes (CYPs) was compared with the single substrate assays to investigate pesticidesÇôCYP interactions. CYP inhibition was measured by liquid chromatographyÇôtandem mass spectrometry (LC/MSÇôMS). As illustrated by the initial screening at 100 ++M concentration of 18 pesticides, CYPs are more sensitive to organophosphates (OPs) than to other pesticide groups. Chlorpyrifos and fenitrothion were most effective in inhibiting CYP1A1/2, and CYP2B6. Profenofos was also inhibitory towards multiple CYPs. Pyrethroids, e.g. deltamethrin, fenvalerate and lambda-cyhalothrin, potently inhibited CYP2D6. CYP3A4 activity was moderately inhibited by fenvalerate and potently by alpha-cypermethrin. The correlations between IC50 values obtained from the N-in-one and single substrate approaches were highly significant for CYP2Cs (r2 = 0.94), CYP3A4, omeprazole-sulfoxidation, (r2 = 0.89), followed by CYP1A2 and CYP2B6 (r2 = 0.82), and CYP2D6 (r2 = 0.80). In contrast no correlation was observed with CYP2E1 and CYP3A4 (midazolam-1Ç\_-hydroxylation). The N-in-one screening assay seems useful and reliable for most CYP activities when a comprehensive and quick evaluation of potential interactions with CYPs is needed. However, at the present moment, it does not enable discrimination on the basis of mechanism of inhibition. A strict comparison between single and N-in-one assays is a prerequisite for more extensive routine use. Pesticides/ Cytochrome P450/ Inhibitory interactions/ Human hepatic microsomes/ N-in-one assay/ Single substrate assay/ LCÇôMSÇôMS

6. Abdollahzadeh, Y.; Yamini, Y.; Jabbari, A.; Esrafili, A., and Rezaee, M. Application of ultrasound-assisted emulsification microextraction followed by gas chromatography for determination of organophosphorus pesticides in water and soil samples. 2012; 4, (3): 830-837.   
Rec #: 55129  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the present study a fast, simple and efficient method for determination of organophosphorus pesticides (OPPs) in water and soil samples was developed by using ultrasound assisted emulsification microextraction (USAEME) based on applying low density organic solvents. Fourteen microlitres of toluene was injected slowly into a 12 mL home-designed centrifuge glass vial containing an aqueous sample that was located inside the ultrasonic water bath. The formed emulsion was centrifuged and 2 mL of separated toluene (about 4 mu L) was injected into a gas chromatographic instrument equipped with a flame ionization detector for analysis. Under the optimum conditions, preconcentration factors of 2390 and 1390 were obtained for diazinon and chlorpyrifos respectively. The method performance was studied in terms of linear dynamic range (LDRs from 0.01 mu g L(-1) to 100 mu g L(-1)), linearity (r(2) >= 0.9984), precision (repeatability < 8.7%), and extraction percentage (79.9 and 46.3%). Also, limits of detections of 0.01 and 0.1 mu g L(-1) were obtained for diazinon and chlorpyrifos respectively. The applicability of the USAEME method was evaluated by the extraction and determination of OPPs from some natural water and soil samples.  
Keywords: POLYCYCLIC AROMATIC-HYDROCARBONS, LIQUID-PHASE MICROEXTRACTION,  
ISI Document Delivery No.: 901RG

7. Abente, E. J. ; Sosnovtsev, S. V.; Bok, K., and Green, K. Y. Visualization of Feline Calicivirus Replication in Real-Time With Recombinant Viruses Engineered to Express Fluorescent Reporter Proteins.   
Rec #: 50629  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: PLoS Biol. 2004 Dec;2(12):e432 (medline /15562321)  
COMMENTS: Cites: Virology. 2005 Mar 30;334(1):28-40 (medline /15749120)  
COMMENTS: Cites: J Virol. 2005 Apr;79(7):4012-24 (medline /15767403)  
COMMENTS: Cites: J Virol. 2005 Apr;79(8):4977-90 (medline /15795283)  
COMMENTS: Cites: J Virol. 2005 Jul;79(13):8602-13 (medline /15956601)  
COMMENTS: Cites: J Gen Virol. 2006 Feb;87(Pt 2):357-61 (medline /16432022)  
COMMENTS: Cites: J Gen Virol. 2006 Apr;87(Pt 4):921-6 (medline /16528041)  
COMMENTS: Cites: Virology. 2006 Jun 20;350(1):240-50 (medline /16574184)  
COMMENTS: Cites: J Clin Microbiol. 2006 Apr;44(4):1405-12 (medline /16597869)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2006 May 23;103(21):8048-53 (medline /16702551)  
COMMENTS: Cites: J Clin Microbiol. 2006 Jun;44(6):2271-5 (medline /16757638)  
COMMENTS: Cites: J Virol. 1991 Oct;65(10):5440-7 (medline /1716692)  
COMMENTS: Cites: J Gen Virol. 2007 Feb;88(Pt 2):506-17 (medline /17251569)  
COMMENTS: Cites: Vet Res. 2007 Mar-Apr;38(2):319-35 (medline /17296159)  
COMMENTS: Cites: J Virol. 2007 May;81(10):5046-57 (medline /17329335)  
COMMENTS: Cites: Virology. 2007 Jun 20;363(1):11-4 (medline /17434556)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2007 Jun 26;104(26):11050-5 (medline /17581883)  
COMMENTS: Cites: J Med Virol. 2007 Sep;79(9):1388-400 (medline /17607779)  
COMMENTS: Cites: J Virol. 2007 Nov;81(22):12111-8 (medline /17855555)  
COMMENTS: Cites: Virol J. 2007;4:115 (medline /17971212)  
COMMENTS: Cites: J Gen Virol. 2007 Dec;88(Pt 12):3347-59 (medline /18024905)  
COMMENTS: Cites: Clin Lab. 2007;53(9-12):567-70 (medline /18257462)  
COMMENTS: Cites: Nat Rev Genet. 2008 Apr;9(4):267-76 (medline /18319742)  
COMMENTS: Cites: J Virol. 2008 Jun;82(11):5408-16 (medline /18385231)  
COMMENTS: Cites: Virology. 2008 Jul 5;376(2):390-6 (medline /18455748)  
COMMENTS: Cites: Virology. 2008 Jul 20;377(1):117-23 (medline /18555887)  
COMMENTS: Cites: J Virol. 2008 Oct;82(19):9306-17 (medline /18632864)  
COMMENTS: Cites: Emerg Infect Dis. 2008 Aug;14(8):1224-31 (medline /18680645)  
COMMENTS: Cites: J Virol. 2008 Oct;82(20):10088-101 (medline /18684830)  
COMMENTS: Cites: J Virol. 2008 Nov;82(21):10519-31 (medline /18715913)  
COMMENTS: Cites: J Med Virol. 2008 Nov;80(11):1997-2004 (medline /18814250)  
COMMENTS: Cites: Virus Res. 2008 Dec;138(1-2):97-104 (medline /18824056)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2008 Oct 28;105(43):16749-54 (medline /18922782)  
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ABSTRACT: Caliciviruses are non-enveloped, icosahedral viruses with a single-stranded, positive sense RNA genome. Transposon-mediated insertional mutagenesis was used to insert a transprimer sequence into random sites of an infectious full-length cDNA clone of the feline calicivirus (FCV) genome. A site in the LC gene (encoding the capsid leader protein) of the FCV genome was identified that could tolerate foreign insertions, and two viable recombinant FCV variants expressing LC fused either to AcGFP, or DsRedFP were recovered. The effects of the insertions on LC processing, RNA replication, and stability of the viral genome were analyzed, and the progression of a calicivirus single infection and co-infection were captured by real-time imaging fluorescent microscopy. The ability to engineer viable recombinant caliciviruses expressing foreign markers enables new approaches to investigate virus and host cell interactions, as well as studies of viral recombination, one of the driving forces of calicivirus evolution.  
MESH HEADINGS: Animals  
MESH HEADINGS: Base Sequence  
MESH HEADINGS: Calicivirus, Feline/\*genetics/\*physiology  
MESH HEADINGS: Capsid Proteins/genetics  
MESH HEADINGS: Cats  
MESH HEADINGS: Cell Line  
MESH HEADINGS: DNA Primers/genetics  
MESH HEADINGS: Gene Expression  
MESH HEADINGS: Genes, Reporter  
MESH HEADINGS: Genetic Engineering  
MESH HEADINGS: Genome, Viral  
MESH HEADINGS: Green Fluorescent Proteins/genetics  
MESH HEADINGS: Host-Pathogen Interactions  
MESH HEADINGS: Luminescent Proteins/genetics  
MESH HEADINGS: Microscopy, Fluorescence  
MESH HEADINGS: Mutagenesis, Insertional  
MESH HEADINGS: Plasmids/genetics  
MESH HEADINGS: RNA/genetics  
MESH HEADINGS: RNA, Viral/genetics  
MESH HEADINGS: Recombinant Fusion Proteins/genetics  
MESH HEADINGS: Recombination, Genetic  
MESH HEADINGS: Virus Replication eng

8. Acero, J L; Benitez, F J; Real, F J; Gonzalez, M, and Acero, J L. Chlorination of Organophosphorus Pesticides in Natural Waters. 2008 May 1; 153, (1-2): 320-328.   
Rec #: 45999  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Unknown second-order rate constants for the reactions of three organophosphorus pesticides (chlorpyrifos, chlorfenvinfos and diazinon) with chlorine were determined in the present study, and the influence of pH and temperature was established. It was found that an increase in the pH provides a negative effect on the pesticides degradation rates. Apparent second-order rate constants at 20 super(o)C and pH 7 were determined to be 110.9, 0.004 and 191.6M super(-) super(1)s super(-) super(1) for chlorpyrifos, chlorfenvinfos and diazinon, respectively. A higher reactivity of chlorine with the phosphorothioate group (chlorpyrifos and diazinon) than with the phosphate moiety (chlorfenvinfos) could explain these results. Intrinsic rate constant for the elementary reactions of chlorine species with chlorpyrifos and diazinon were also calculated, leading to the conclusion that the reaction between hypochlorous acid and the pesticide is predominant at neutral pH. The elimination of these pesticides in surface waters was also investigated. A chlorine dose of 2.5mg L super(-) super(1) was enough to oxidize chlorpyrifos and diazinon almost completely, with a formation of trihalomethanes below the EU standard for drinking water. However, the removal of chlorfenvinfos was not appreciable. Therefore, chlorination is a feasible option for the removal of organophosphorus pesticides with phosphorothioate group during oxidation and disinfection processes, but not for the elimination of pesticides with phosphate moiety.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Disinfection  
Keywords: Surface water  
Keywords: Hypochlorous acid  
Keywords: Byproducts  
Keywords: Chlorine  
Keywords: Water quality  
Keywords: Freshwater  
Keywords: Pollution Abstracts; Toxicology Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Water Resources Abstracts  
Keywords: Agricultural Chemicals  
Keywords: Organophosphorus Pesticides  
Keywords: SW 3060:Water treatment and distribution  
Keywords: X 24330:Agrochemicals  
Keywords: pH effects  
Keywords: pH  
Keywords: Temperature effects  
Keywords: Pesticides (organophosphorus)  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Temperature  
Keywords: Hydrogen Ion Concentration  
Keywords: Water pollution  
Keywords: Chlorpyrifos  
Keywords: phosphorothioate  
Keywords: Phosphates  
Keywords: Phosphate  
Keywords: Hazardous materials  
Keywords: Trihalomethanes  
Keywords: Pesticides  
Keywords: Oxidation  
Keywords: disinfection  
Keywords: Chlorination  
Keywords: Drinking water  
Keywords: Diazinon  
Date revised - 2008-07-01  
Language of summary - English  
Pages - 320-328  
ProQuest ID - 19682771  
SubjectsTermNotLitGenreText - Temperature effects; Hazardous materials; Pesticides; Chlorination; Water quality; pH effects; Water pollution; Pesticides (organophosphorus); Disinfection; Surface water; Hypochlorous acid; Chlorine; Chlorpyrifos; phosphorothioate; Phosphate; Trihalomethanes; Oxidation; Drinking water; Diazinon; Byproducts; Temperature; Phosphates; disinfection; pH; Organophosphorus Pesticides; Agricultural Chemicals; Hydrogen Ion Concentration; Freshwater  
Last updated - 2011-12-14  
British nursing index edition - Journal of Hazardous Materials [J. Hazard. Mater.]. Vol. 153, no. 1-2, pp. 320-328. 1 May 2008.  
Corporate institution author - Acero, J L; Benitez, F J; Real, F J; Gonzalez, M  
DOI - MD-0008217721; 8287717; CS0839743; 0304-3894 English

9. Adams, J. P.; Adeli, A.; Hsu, C. Y.; Harkess, R. L.; Page, G. P.; Depamphilis, C. W.; Schultz, E. B., and Yuceer, C. Poplar Maintains Zinc Homeostasis With Heavy Metal Genes Hma4 and Pcs1.   
Rec #: 50129  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Plant Physiol. 2005 Mar;137(3):1082-91 (medline /15734913)  
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COMMENTS: Cites: Environ Pollut. 2003;123(1):131-8 (medline /12663213)  
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COMMENTS: Cites: Plant J. 2003 Jul;35(2):164-76 (medline /12848823)  
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ABSTRACT: Perennial woody species, such as poplar (Populus spp.) must acquire necessary heavy metals like zinc (Zn) while avoiding potential toxicity. Poplar contains genes with sequence homology to genes HMA4 and PCS1 from other species which are involved in heavy metal regulation. While basic genomic conservation exists, poplar does not have a hyperaccumulating phenotype. Poplar has a common indicator phenotype in which heavy metal accumulation is proportional to environmental concentrations but excesses are prevented. Phenotype is partly affected by regulation of HMA4 and PCS1 transcriptional abundance. Wild-type poplar down-regulates several transcripts in its Zn-interacting pathway at high Zn levels. Also, overexpressed PtHMA4 and PtPCS1 genes result in varying Zn phenotypes in poplar; specifically, there is a doubling of Zn accumulation in leaf tissues in an overexpressed PtPCS1 line. **The genomic complement and regulation of poplar highlighted in this study supports a role of HMA4 and PCS1 in Zn regulation dictating its phenotype.** These genes can be altered in poplar to change its interaction with Zn. However, other poplar genes in the surrounding pathway may maintain the phenotype by inhibiting drastic changes in heavy metal accumulation with a single gene transformation.  
MESH HEADINGS: Adenosine Triphosphatases/genetics/\*metabolism  
MESH HEADINGS: Aminoacyltransferases/genetics/\*metabolism  
MESH HEADINGS: Genotype  
MESH HEADINGS: Homeostasis  
MESH HEADINGS: Plant Leaves/growth &amp  
MESH HEADINGS: development/metabolism  
MESH HEADINGS: Plant Proteins/genetics/\*metabolism  
MESH HEADINGS: Populus/enzymology/\*genetics/growth &amp  
MESH HEADINGS: development/metabolism  
MESH HEADINGS: Zinc/\*metabolism eng

10. Adigun, A. A.; Ryde, I. T.; Seidler, F. J., and Slotkin, T. A. Organophosphate exposure during a critical developmental stage reprograms adenylyl cyclase signaling in PC12 cells. 2010; 1329, 36-44.   
Rec #: 55189  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Early-life organophosphate (OP) exposures elicit neurobehavioral deficits through mechanisms other than inhibiting cholinesterase. Cell signaling cascades are postulated as critical noncholinesterase targets that mediate both the initial alterations in neurodevelopment as well as subsequent abnormalities of synaptic function. We exposed PC12 cells to chlorpyrifos, diazinon or parathion in the undifferentiated state and during neurodifferentiation; we then assessed the function of the adenylyl cyclase (AC) signaling cascade, measuring basal AC activity as well as responses to stimulants acting at G-proteins or on the AC molecule itself. In undifferentiated cells, a 2 day exposure to the OPs had no significant effect on AC signaling but the same treatment in differentiating cells produced deficits in all AC measures when exposure commenced at the initiation of differentiation. However, when exposure of the differentiating cells was continued for 6 days, AC activities then became supranormal. The same increase was obtained if cells were exposed only for the first two days of differentiation, followed by four subsequent days without the OPs. Furthermore, the OP effects on cell signaling were entirely distinct from those on indices of cell number and neurite outgrowth. These results indicate that OP exposure reprograms the AC pathway during a discrete developmental stage at the commencement of neurodifferentiation, with effects that continue to emerge after OP exposure is discontinued. Importantly, the same sequence is seen with OP exposures in neonatal rats, indicating that direct effects of these agents to reprogram cell signaling provide a major mechanism for functional effects unrelated to cholinesterase inhibition. (C) 2010 Elsevier B.V. All rights reserved.  
Keywords: Adenylyl cyclase, Chlorpyrifos, Diazinon, Organophosphate insecticide,  
ISI Document Delivery No.: 598QR

11. Adigun, A. A.; Seidler, F. J., and Slotkin, T. A. Disparate Developmental Neurotoxicants Converge on the Cyclic AMP Signaling Cascade, Revealed by Transcriptional Profiles In Vitro and In Vivo. Department of Pharmacology and Cancer Biology, Duke University Medical Center, Durham, Box 3813 DUMC, Duke Univ. Med. Ctr., Durham, NC 27710, USA.//: 2010; 1316, 1-16.   
Rec #: 2120  
Keywords: IN VITRO  
Call Number: NO IN VITRO (CPY,DZ)  
Notes: Chemical of Concern: CPY,DLD,DZ

12. Aghajanian, G. K. Modeling &Quot;Psychosis&Quot; in Vitro by Inducing Disordered Neuronal Network Activity in Cortical Brain Slices.   
Rec #: 50739  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Nat Med. 2007 Sep;13(9):1102-7 (medline /17767166)  
COMMENTS: Cites: Mol Pharmacol. 2007 Aug;72(2):477-84 (medline /17526600)  
COMMENTS: Cites: Psychopharmacology (Berl). 2007 Jul;193(1):121-36 (medline /17384937)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 2003 Nov 11;100(23):13638-43 (medline /14595013)  
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COMMENTS: Cites: Neuroscientist. 2003 Oct;9(5):404-16 (medline /14580124)  
COMMENTS: Cites: Neuron. 2003 Sep 25;40(1):139-50 (medline /14527439)  
COMMENTS: Cites: Neurosci Lett. 2003 Aug 7;346(3):137-40 (medline /12853103)  
COMMENTS: Cites: Nature. 2003 May 15;423(6937):288-93 (medline /12748642)  
COMMENTS: Cites: Mol Pharmacol. 2003 Jan;63(1):2-8 (medline /12488530)  
COMMENTS: Cites: J Neurophysiol. 2002 Dec;88(6):3150-66 (medline /12466437)  
COMMENTS: Cites: J Neurosci. 2002 Nov 15;22(22):9885-94 (medline /12427845)  
COMMENTS: Cites: Schizophr Res. 2002 Oct 1;57(2-3):127-38 (medline /12223243)  
COMMENTS: Cites: Curr Opin Investig Drugs. 2001 Jan;2(1):123-32 (medline /11527004)  
COMMENTS: Cites: Am J Psychiatry. 2001 Sep;158(9):1411-22 (medline /11532725)  
COMMENTS: Cites: Neuropsychopharmacology. 2001 Jul;25(1):1-27 (medline /11377916)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2001 Jan 2;98(1):295-300 (medline /11134520)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2001 Jan 2;98(1):301-6 (medline /11134516)  
COMMENTS: Cites: Prog Brain Res. 2000;126:3-28 (medline /11105636)  
COMMENTS: Cites: Brain Res. 2000 Jun 9;867(1-2):250-4 (medline /10837822)  
COMMENTS: Cites: Brain Res Brain Res Rev. 2000 Mar;31(2-3):302-12 (medline /10719157)  
COMMENTS: Cites: Ann N Y Acad Sci. 1999;890:42-50 (medline /10668412)  
COMMENTS: Cites: J Pharmacol Exp Ther. 2000 Jan;292(1):76-87 (medline /10604933)  
COMMENTS: Cites: Am J Psychiatry. 2008 Dec;165(12):1585-93 (medline /18923067)  
COMMENTS: Cites: Nature. 2008 Mar 6;452(7183):93-7 (medline /18297054)  
COMMENTS: Cites: Psychopharmacology (Berl). 2008 Feb;196(3):431-40 (medline /18057917)  
COMMENTS: Cites: J Neurosci. 2007 Oct 24;27(43):11496-500 (medline /17959792)  
ABSTRACT: INTRODUCTION: Dysregulation of neuronal networks has been suggested to underlie the cognitive and perceptual abnormalities observed schizophrenia. DISCUSSIONS: An in vitro model of psychosis is proposed based on the two different approaches to cause aberrant network activity in layer V pyramidal cells of prefrontal brain slices: (1) psychedelic hallucinogens such as lysergic acid diethylamide and (2) minimal GABA(A) receptor antagonism, modeling the GABA interneuron deficit in schizophrenia. A test of this model would be to determine if drugs that normalize aberrant networks in brain slices have efficacy in the treatment of schizophrenia. Selective agonists of glutamate mGlu2/3 metabotropic receptors, which are highly effective in suppressing aberrant network activity in slices, are the most advanced toward reaching that clinical endpoint. In accord with the model, a recent phase II clinical trial shows that an mGlu2/3 receptor agonist is equivalent in efficacy to a standard antipsychotic drug for both negative and positive symptoms in schizophrenic patients, but without the usual side effects. D1/5 dopamine receptor agonists are also effective in normalizing aberrant network activity induced by both hallucinogens and minimal GABA(A) antagonism; clinical efficacy remains to be determined. A general model of network regulation is presented, involving astrocytes, GABA interneurons, and glutamatergic pyramidal cells, revealing a wide range of potential sites hitherto not considered as therapeutic targets.  
MESH HEADINGS: Animals  
MESH HEADINGS: Antipsychotic Agents/pharmacology  
MESH HEADINGS: Clinical Trials, Phase II as Topic  
MESH HEADINGS: Drug Delivery Systems  
MESH HEADINGS: Humans  
MESH HEADINGS: Models, Biological  
MESH HEADINGS: Nerve Net/physiopathology  
MESH HEADINGS: Prefrontal Cortex/\*physiopathology  
MESH HEADINGS: Psychotic Disorders/etiology/\*physiopathology  
MESH HEADINGS: Schizophrenia/etiology/\*physiopathology eng

13. Agudelo, C. R. M.; Jaramillo, M. L., and Penuela, G. Comparison of the Removal of Chlorpyrifos and Dissolved Organic Carbon in Horizontal Sub-Surface and Surface Flow Wetlands. Health and Environment Group, National Faculty of Public Health, University of Antioquia, Medellin, 51922, Colombia, Elsevier Science//: 2012; 431, 271-277.   
Rec #: 2620  
Keywords: FATE  
Call Number: NO FATE (CPY)  
Notes: Chemical of Concern: CPY

14. Agudelo, Ruth Marina; Machado, Carolina; Aguirre, Nestor Jaime; Morato, Jordi; Penuela, Gustavo, and Agudelo, Ruth Marina. Optimal Conditions for Chlorpyrifos and Dissolved Organic Carbon Removal in Subsurface Flow Constructed Wetlands. 2011 Jun; 91, (7-8): 668-679.   
Rec #: 39709  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This work used subsurface flow constructed wetlands, planted with Phragmites australis, using 2 water depths and 2 sizes of granular material, in order to find the optimal conditions for the removal of chlorpyrifos and dissolved organic carbon (DOC) from synthetic wastewater. In addition, some bacterial groups were identified which formed the biofilm present in subsurface flow constructed wetlands used in the removal of chlorpyrifos. In samples taken from influents and effluents of the wetlands, chlorpyrifos was quantified by gas chromatography (GC mu -ECD), DOC by an organic carbon analyser and bacterial groups using conventional microbiology, according to Standard Methods. The highest values of chlorpyrifos (97.9%) and DOC (80.1%) removal were found with granular material having diameters within 3.18-6.35 mm and according to water column depth (0.4 m) were 97.8% and 79.7%, respectively. The bacterial groups quantified in the biofilm were total heterotrophic, revivable heterotrophic, total coliforms, facultative sporulated, Pseudomonads, denitrifying bacteria and sulphate-reducing bacteria. Some bacteria showed little development, probably due to the pesticide and/or the anaerobic conditions of the systems (negative redox potential and dissolved oxygen (DO) concentrations approaching zero). It was proven that subsurface flow constructed wetlands, in adequate conditions, are able to eliminate organic matter and chlorpyrifos.  
Keywords: Sulfates  
Keywords: ENA 09:Land Use & Planning  
Keywords: Artificial wetlands  
Keywords: Aquatic plants  
Keywords: redox potential  
Keywords: Marshes  
Keywords: influents  
Keywords: Effluents  
Keywords: Dissolved oxygen  
Keywords: Chlorpyrifos  
Keywords: Q2 02405:Oil and gas  
Keywords: Microbiology  
Keywords: Pesticides  
Keywords: Phragmites australis  
Keywords: ASFA 2: Ocean Technology Policy & Non-Living Resources; Environment Abstracts  
Keywords: Wetlands  
Keywords: Dissolved organic carbon  
Keywords: Biofilms  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 668-679  
ProQuest ID - 899134968  
SubjectsTermNotLitGenreText - Microbiology; Pesticides; Aquatic plants; Wetlands; Marshes; Biofilms; Dissolved organic carbon; Effluents; Dissolved oxygen; Sulfates; Chlorpyrifos; Artificial wetlands; redox potential; influents; Phragmites australis  
Last updated - 2012-05-07  
British nursing index edition - International Journal of Environmental and Analytical Chemistry [Int. J. Environ. Anal. Chem.]. Vol. 91, no. 7-8, pp. 668-679. Jun 2011.  
Corporate institution author - Agudelo, Ruth Marina; Machado, Carolina; Aguirre, Nestor Jaime; Morato, Jordi; Penuela, Gustavo  
DOI - 9205d2d9-8d51-4f91-bf5bmfgefd101; 14942869; CS1156154; 0306-7319; 1029-0397 English

15. Agudelo, Ruth Marina; Penuela, Gustavo; Aguirre, Nestor Jaime; Morato, Jordi; Jaramillo, Monica Lucia, and Agudelo, Ruth Marina. Simultaneous Removal of Chlorpyrifos and Dissolved Organic Carbon Using Horizontal Sub-Surface Flow Pilot Wetlands. 2010 Oct; 36, (10): 1401-1408.   
Rec #: 40269  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Rural areas of developing countries require low-cost treatment systems to purify wastewater which is contaminated with pesticides and organic matter. This work evaluated for six months the simultaneous removal of chlorpyrifos and dissolved organic matter in water using four horizontal sub-surface flow constructed wetlands (SSFCW) at a pilot scale, that were planted with Phragmites australis at 20 plus or minus 2 degree C water temperature. In each wetland, three concentrations of chlorpyrifos and three of dissolved organic carbon (DOC) were tested by liquid chromatography and an organic carbon analyzer respectively. The pesticide and DOC were added to the wetlands in synthetic wastewater. For the experiments, four wetlands of equal dimensions were used, with granular material of igneous rocks, 3.9-6.4mm in diameter and at a depth of 0.3m with a layer of water 0.2m deep. For each treatment, regular sampling was carried out for the influent and effluents. As a supporting feature NH super(+) sub(4), NO super(-) sub(3) and PO super(3)- sub(4) were quantified and in situ measurements of dissolved oxygen (DO), pH, electrical conductivity, water temperature and redox potential were taken. The overall removal of the chlorpyrifos (92.6%) and DOC (93.2%) was high, as was DOC removal as a function of pesticide concentration in the influent. The minimum magnitude (92.0%) was reached with 425.6 mu gL super(-1) of chlorpyrifos and, with the highest pesticide removal (96.8%). At lower concentrations of the agrochemical, DOC removal increased. The removals were possibly due to mineralization processes, biological decomposition and sorption in plants. These findings demonstrate that SSFCW are capable of simultaneously removing dissolved organic matter and organophosphate pesticides such as chlorpyrifos, which indicate that chlorpyrifos did not interfere with the removal of organic material.  
Keywords: Artificial wetlands  
Keywords: Dissolved oxygen  
Keywords: Engineering  
Keywords: Q5 01523:Conservation, wildlife management and recreation  
Keywords: Carbon  
Keywords: Wetlands  
Keywords: Dissolved organic carbon  
Keywords: Environment Abstracts; Ecology Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; ASFA 1: Biological Sciences & Living Resources  
Keywords: D 04060:Management and Conservation  
Keywords: Sorption  
Keywords: dissolved organic matter  
Keywords: Water temperature  
Keywords: Influents  
Keywords: influents  
Keywords: Q1 01485:Species interactions: pests and control  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Phosphates  
Keywords: Liquid chromatography  
Keywords: Dissolved organic matter  
Keywords: Pesticides  
Keywords: Phragmites australis  
Keywords: Waste water  
Keywords: water temperature  
Keywords: Developing countries  
Keywords: Rural areas  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 1401-1408  
ProQuest ID - 811121176  
SubjectsTermNotLitGenreText - Sorption; Phosphates; Dissolved organic matter; Pesticides; Wetlands; Dissolved organic carbon; Influents; Developing countries; Dissolved oxygen; Chlorpyrifos; Carbon; Liquid chromatography; dissolved organic matter; Water temperature; Waste water; Artificial wetlands; influents; water temperature; Rural areas; Phragmites australis  
Last updated - 2012-08-02  
Corporate institution author - Agudelo, Ruth Marina; Penuela, Gustavo; Aguirre, Nestor Jaime; Morato, Jordi; Jaramillo, Monica Lucia  
DOI - OB-68a426d2-282e-4fa2-b1d6csamfg201; 13513049; CS1110185; 0925-8574 English

16. Ahmed, Nadia ; Mohamed, Aneesa, and Abdel-Wahhab, Mosaad. The protective role of vitamins C and E against chloropyrifos-induced oxidative stress in rats: With special reference to the histology of kidneys and retinas. 2009 Sep 13-; 189, Supplement, (0): S218.   
Rec #: 2300  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

17. Ahouangninou, Claude; Martin, Thibaud; Edorh, Patrick; Bio-Bangana, Sahabi; Samuel, Onil; St-Laurent, Louis; Dion, Sylvain; Fayomi, Benjamin, and Ahouangninou, Claude. Characterization of Health and Environmental Risks of Pesticide Use in Market-Gardening in the Rural City of Tori-Bossito in Benin, West Africa. 2012 Mar; 3, (3): 241.   
Rec #: 46839  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: A study on the use of pesticides in market-gardening production was carried out on 108 market-gardeners in the rural city of Tori-Bossito in Southern Benin. The objective of the study was to characterize the potential risks of pesticides usage by farmers and the impacts on their health and on the environment. Two risk indexes were calculated for each pesticide: an environmental risk index (ERI) and a health risk index (HRI). First stage larva of the mosquito Aedes aegypti were used as bio-indicator for detecting insecticide residue in vegetable before their harvesting on the farms. The highest ERI were obtained for carbofuran, chlorpyriphos ethyl and endosulfan. Pesticide residues were found in 42% of the samples of leaves of eggplant, cucumber, amaranth and solanum. Vegetables growers used pesticides that may be highly hazardous and which were not registered in most cases. These situations could have unexpected consequences including the exposure of consumers to health hazards.  
Keywords: Health & Safety Science Abstracts; Risk Abstracts; Environment Abstracts  
Keywords: Risk assessment  
Keywords: Bioindicators  
Keywords: Aedes aegypti  
Keywords: Farms  
Keywords: Pesticide residues  
Keywords: Solanum  
Keywords: carbofuran  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Endosulfan  
Keywords: Health risks  
Keywords: H 5000:Pesticides  
Keywords: Benin  
Keywords: Africa  
Keywords: R2 23050:Environment  
Keywords: Rural areas  
Keywords: Urban areas  
Date revised - 2012-06-01  
Language of summary - English  
Location - Benin; Africa  
Number of references - 28  
Pages - 241  
ProQuest ID - 1022566717  
SubjectsTermNotLitGenreText - Risk assessment; Bioindicators; Health risks; Farms; Pesticide residues; carbofuran; Endosulfan; Urban areas; Rural areas; Aedes aegypti; Solanum; Benin; Africa  
Last updated - 2012-12-14  
British nursing index edition - Journal of Environmental Protection. Vol. 3, no. 3, 241 p. Mar 2012.  
Corporate institution author - Ahouangninou, Claude; Martin, Thibaud; Edorh, Patrick; Bio-Bangana, Sahabi; Samuel, Onil; St-Laurent, Louis; Dion, Sylvain; Fayomi, Benjamin  
DOI - bf32371b-a185-48e2-9b92mfgefd107; 16812605; 2152-2197; 2152-2219  
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K. Hibar, M. Daami-Remadi and M. El Mahjoud, "Effets de Certains Fongicides de SynthĂ Ěse et Biologiques sur la Croissance MycĂÂ©lienne et l?AgressivitĂÂ© de Fusarium oxysporium f. sp. radicis-lycopersici," Tropicultura, Vol.25, 2007, pp. 146-152.  
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S. K. TraorĂÂ©, K. Mamadou, A. Dembele, P. Lafrance, P. Mazelliert and P. Houenou, "Contamination de l?Eau Souterraine par les Pesticides en RĂÂ©gions Agricoles en CĂ Ěte-d?Ivoire (Centre, Sud et Sud Ouest)," Journal Africain des Sciences de l?Environnement, Vol.1, 2006, pp. 1-9.  
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18. Ahrens, M. Literature Review of Organic Chemicals of Emerging Environmental Concern in Use in Auckland. SOIL; 2008: 193 p.   
Rec #: 1890  
Keywords: REVIEW  
Call Number: NO REVIEW (24D,24DXY,ACAC,ACP,AKTMD,BDF,BFT,BML,BUT,CBL,CPC,CPY,CTN,Captan,DM,DMB,DQTBr,DZ,ETHN,GYP,IMC,IZP,LCYT,MLN,MZB,PMR,PPB,PRO,RTN,TFN,TFR,TLM,TMT,Ziram)  
Notes: EcoReference No.: 120881  
Chemical of Concern: 24D,24DXY,ACAC,ACP,AKTMD,BDF,BFT,BML,BNL,BUT,CBL,CF,CPC,CPY,CTC,CTN,Captan,DEG,DM,DMB,DQTBr,DZ,ETHN,FMA,GYP,IMC,IZP,LCYT,MLN,MXC,MZB,PHTH,PMR,PPB,PRO,RTN,TFN,TFR,TLM,TMT,TOL,TPE,Ziram

19. Ajaz, M.; Jabeen, N.; Ali, T. A., and Rasool, S. A. SPLIT ROLE OF PLASMID GENES IN THE DEGRADATION OF CHLORPYRIFOS BY INDIGENOUSLY ISOLATED PSEUDOMONAS PUTIDA MAS-1. 2009; 41, (4): 2055-2060.   
Rec #: 55399  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A chlorpyrifos degrading bacterium Pseudomonas putida MAS-1 was isolated from the cotton grown soil of NIAB, Faisalabad, Pakistan. Genetic studies based on plasmid curing and electroporation mediated transformation were performed on this bacterium. The bacterium lost the property to grow on the nutrient agar containing 10mg/mL chlorpyrifos after acridine orange mediated curing. The plasmid (bearing chlorpyrifos degrading determinants / genes) was isolated and transferred into E. coli DH5 alpha. The transformants however, could not resist and grow in the chlorpyrifos containing medium. It may be concluded that chlorpyrifos degradation Pseudomonas putida MAS-1 is accomplished by the combined action of plasmid and chromosomal genes.  
Keywords: ORGANOPHOSPHATE NERVE AGENTS, DEGRADING BACTERIUM, ESCHERICHIA-COLI,  
ISI Document Delivery No.: 511TQ

20. Akkad, R. and Schwack, W. Determination of Organophosphorus and Carbamate Insecticides in Fresh Fruits and Vegetables by High-Performance Thin-Layer Chromatography-Multienzyme Inhibition Assay. 2012; 95, (5): 1371-1377.   
Rec #: 55449  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: HPTLC-enzyme inhibition assay was applied to different fruit and vegetable samples after individual spiking with organophosphate and carbamate pesticides at their maximum residue limits documented by the European Commission. Samples were extracted according to the QuEChERS (Quick, Easy, Cheap, Effective, Rugged, and Safe) method, including cleanup by primary secondary amine sorbent. Additional cleanup was performed on the HPTLC plate by a prechromatographic step to separate most coextracted matrix compounds from 20 different pesticides under study. With both rabbit liver esterase and cutinase from Fusarium solani pisi as enzyme sources, mean recoveries from apples, cucumbers, grapes, nectarines, plums, tomatoes, and lemons were in the ranges 86-109, 95-129, 96-114, and 90-111% for chlorpyrifos, paraoxon, parathion, and pirimicarb, respectively, with a mean RSD of 8.5% for all samples.  
Keywords: SOLID-PHASE EXTRACTION, PESTICIDE-RESIDUES, ENZYME-INHIBITION,  
ISI Document Delivery No.: 031OS

21. Akkad, R. and Schwack, W. Effect of bromine oxidation on high-performance thin-layer chromatography multi-enzyme inhibition assay detection of organophosphates and carbamate insecticides. 2011; 1218, (19): 2775-2784.   
Rec #: 55439  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Following high-performance thin-layer chromatography, thiophosphate pesticides, which inhibit choline esterases, are detectable using a multi-enzyme inhibition assay (HPTLC-EI) based on rabbit liver esterase (RLE), Bacillus subtilis (BS2) esterase, or cutinase (from Fusarium solani pisi). Because choline esterase inhibition is more effective after conversion of thiophosphate thions into their corresponding oxons, a pre-oxidation step was added to the HPTLC-EI assay. Bromine vapour was found to be more effective than iodine or UV irradiation for oxidation. Following oxidation, the inhibitory strength of parathion, parathion-methyl, chlorpyrifos, chlorpyrifos-methyl, and malathion, expressed as HPTLC enzyme inhibition factors (f(i)), increased by approximately 2 orders of magnitude. In contrast, bromine oxidation of organophosphate and carbamate insecticides resulted in a slight reduction in their inhibition factors, due to partial bromination and degradation of the parent compounds, while bromine oxidation increased the inhibition factors for demeton-S-methyl and propoxur. Apple juice and water samples spiked with paraoxon (0.001 mg/L), parathion (0.05 mg/L), and chlorpyrifos (0.5 mg/L) were used to test the HPTLC-EI system, resulting in mean recoveries of 95-106% and 91-102% for RLE and cutinase, respectively. (C) 2011 Elsevier B.V. All rights reserved.  
Keywords: Bromine oxidation, High-performance thin-layer chromatography, Enzyme  
ISI Document Delivery No.: 762SB

22. ---. Multi-enzyme inhibition assay for the detection of insecticidal organophosphates and carbamates by high-performance thin-layer chromatography applied to determine enzyme inhibition factors and residues in juice and water samples. 2010; 878, (17-18): 1337-1345.   
Rec #: 55429  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Esterase inhibition assays provide an effect-directed tool of rapid screening for inhibitors in environmental and food samples. According to a multi-enzyme microtiter-plate assay, rabbit liver esterase (RLE). Bacillus subtilis esterase (BS2), and cutinase from Fusarium solani pisi (CUT) were used for the detection of 21 organophosphorus and carbamate pesticides by high-performance thin-layer chromatography-enzyme inhibition assays (HPTLC-EI). Staining was performed with Fast Blue Salt B coupling to a-naphthol enzymatically released from the respective acetate used as substrate. Quantitative analysis was achieved by densitometric evaluation at 533 nm. Enzyme inhibition factors derived from HPTLC-EI were calculated from the slopes of the linear calibration curves, which allowed comparisons to published inhibition constants and well correlated to sensitivity parameters. Limits of detection ranged from a few pg/zone for organophosphates as strongest inhibitors to a few ng/zone for most carbamates, when RLE and BS2 were used. Without oxidation, chlorpyrifos and parathion were directly detectable at approximately 60 and 14 ng/zone, respectively. As the enzyme of lowest sensitivity. CUT was able to detect insecticides of high and low inhibitory power from the ng to mu g range per zone. Due to high selectivity of enzyme inhibition, oxon impurities of thionophosphate standards were strongly detected, although only present in low traces. The exemplary application of HPTLC-EI (RLE) to apple juice and drinking water samples spiked with paraoxon (0.001 mg/L), parathion (0.05 mg/L) and chlorpyrifos (0.5 mg/L) resulted in mean recoveries between 71 and 112% with standard deviations of 2.0-18.3%. (C) 2009 Elsevier B.V. All rights reserved.  
Keywords: High-performance thin-layer chromatography, Enzyme inhibition,  
ISI Document Delivery No.: 601RU

23. Al-Dawood, Asya N.; Al-Ghazal, Ramadan A.; Al-Jaser, May H., and Khalil, Galila M. Effect of chlorpyrifos on healing of cutaneous leishmaniasis lesions after treatment with Pentostam-«. 2009 Jul; 16, (1): 31-36.   
Rec #: 1510  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: The insecticide chlorpyrifos (CPF) is widely used in the Kingdom of Saudi Arabia (KSA) to control agricultural pests. The present work is a preliminary investigation of the effect of CPF on healing of cutaneous leishmaniasis (CL) lesions, caused by Leishmania major in farmers exposed to this insecticide, after treatment with Pentostam-«. Lesion diameters were measured and CPF concentrations in the blood plasma of farmer and non-farmer CL patients in Al-Ahsa were detected by gas chromatography/mass spectrometry/mass spectrometry before and 6 weeks after treatment with Pentostam-«. CPF concentrations in the blood of farmer patients ranged between 4.570 and 7.096 ng/++l (mean = 6.19 -\_ 0.881 ng/++l) before and after treatment with Pentostam-«. The mean lesion diameter in these patients decreased by a factor of 2.21 after treatment with Pentostam-«; they measured 1.85Çô11.75 mm, (mean = 6.165 -\_ 3.500 mm) before treatment and 0.22Çô6.10 mm (mean = 2.796 -\_ 2.102 mm) after treatment. Lesion diameter increased exponentially with the increase of CPF concentration in the patientsÇÖ blood. CPF was not detected in the non-farmer patients before or after treatment. Their mean lesion diameter decreased by a factor of 6.86 after treatment with Pentostam-«; they measured 1.33Çô7.10 mm (mean = 2.882 -\_ 1.764 mm) before treatment and 0.11Çô0.92 mm (mean = 0.425 -\_ 0.277 mm) after treatment. The mean lesion diameter in farmer patients was much greater than that of non-farmer patients both before (2.14+ù) and after (6.657+ù) treatment with Pentostam-«. Chronic exposure to low levels of the pesticide aggravates the development and delays the healing of CL lesions due to immunotoxicity and/or peripheral neurotoxicity caused by CPF. Further detailed studies would assess CPF effect on the severity of infection with CL in agricultural workers continuously exposed to this insecticide in different areas of KSA in conformity of their finding. Chlorpyrifos/ Organophosphates/ Leishmania major/ Cutaneous leishmaniasis/ Kingdom of Saudi Arabia/ GC/MS/MS/ Pentostam-«/ Pentavalent antimonials

24. Alasbahi, R. H. and Melzig, M. F. Forskolin and derivatives as tools for studying the role of cAMP. 2012; 67, (1): 5-13.   
Rec #: 55459  
Keywords: BIOLOGICAL TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Forskolin (7 beta-acetoxy-1 alpha,6 beta,9 alpha-trihydroxy-8,13-epoxy-Iabd-14-en-11-one) is the first main labdane diterpenoid isolated from the roots of the Indian Plectranthus barbatus ANDREWS and one of the most extensively studied constituents of this plant. The unique character of forskolin as a general direct, rapid and reversible activator of adenylyl cyclase not only underlies its wide range of pharmacological effects but also renders it as a valuable tool in the study of the role of cAMP. **The purpose of this review is to provide data presenting the utility of forskolin - as a cAMP activator - for studying the function of cAMP from different biological viewpoints as follows:** 1) Investigation on the role of cAMP in various cellular processes in different organs such as gastrointestinal tract, respiratory tract, reproductive organs, endocrine system, urinary system, olfactory system, nervous system, platelet aggregating system, skin, bones, eyes, and smooth muscles. 2) Studies on the role of cAMP activation and inhibition to understand the pathogenesis (e.g. thyroid autoimmune disorders, leukocyte signal transduction defect in depression, acute malaria infection, secretory dysfunction in inflammatory diseases) as well as its possibly beneficial role for curing diseases such as the regulation of coronary microvascular NO production after heart failure, the attenuation of the development or progression of fibrosis in the heart and lungs, the augmentation of myo-protective effects of ischemic preconditioning especially in the failing hearts after myocardial infarction, the stimulation of the regeneration of injured retinal ganglion cells, the curing of glaucoma and inflammatory diseases, the reducing of cyst formation early in the polycystic kidney disease, and the management of autoimmune disorders by enhancing Fas-mediated apoptosis. 3) Studies on the role of cAMP in the mechanism of actions of a number of drugs and substances such as the effect of the protoberberine alkaloid palmatine on the active ion transport across rat colonic epithelium, the inhibitory effect of retinoic acid on HIV-1-induced podocyte proliferation, the whitening activity of luteolin, the effect of cilostazol on nitric oxide production, an effect that is involved in capillary-like tube formation in human aortic endothelial cells, the apoptotic effect of bullatacin, the effects of paraoxon and chlorpyrifos oxon on nervous system. Moreover, cAMP was found to play a role in acute and chronic exposure to ethanol, in morphine dependence and withdrawal and in behavioral sensitization to cocaine as well as in the protection against cisplatin-induced oxidative injuries.  
Keywords: CYCLIC-AMP ACCUMULATION, SMOOTH-MUSCLE-CELLS, LOWERS  
ISI Document Delivery No.: 888CB

25. Albers, James W; Garabrant, David H; Berent, Stanley; Richardson, Rudy J, and Albers, James W. Paraoxonase Status and Plasma Butyrylcholinesterase Activity in Chlorpyrifos Manufacturing Workers. 2010 Jan; 20, (1): 79-89.   
Rec #: 40829  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos is an organophosphorus (OP) anticholinesterase insecticide. Paraoxonase (PON1) is an enzyme found in liver and plasma that hydrolyzes a number of OP compounds. PON1 polymorphisms include a glutamine (Q)/arginine (R) substitution at position 192 (PON1 sub(Q192R)) that affects hydrolysis of OP substrates, with the PON1 sub(192Q) allotype hydrolyzing chlorpyrifos oxon less efficiently than the PON1 sub(192R) allotype, a variation potentially important in determining susceptibility to chlorpyrifos. We studied 53 chlorpyrifos workers and 60 referents during 1 year and estimated chlorpyrifos exposure using industrial hygiene and employment records and excretion of the chlorpyrifos metabolite 3,5,6-trichloro-2-pyridinol (TCP). Plasma butyrylcholinesterase (BuChE) activity, which may by inhibited by chlorpyrifos exposure, was measured monthly. In addition, plasma samples were assayed for paraoxonase (PONase), diazoxonase (DZOase), and chlorpyrifosoxonase (CPOase) activity to determine PON1 status (inferred genotypes and their functional activity). Linear regression analyses modeled BuChE activity as a function of chlorpyrifos exposure and covariates. We postulated that the level of CPOase activity and the inferred PON1 sub(192) genotype (together reflecting PON1 status) would differ between groups and that PON1 status would modify the models of chlorpyrifos exposure on BuChE activity. Chlorpyrifos workers and referents had a 100-fold difference in cumulative chlorpyrifos exposure. Contrary to our hypotheses, mean CPOase activity was similar in both groups (P=0.58) and PON1 sub(192Q) showed a slight overrepresentation, not an underrepresentation, in the chlorpyrifos group compared with referents (PON1 sub(192QQ), 51% chlorpyrifos, 40% referent; PON sub(192QR), 43% chlorpyrifos, 40% referent; PON sub(192RR), 6% chlorpyrifos, 20% referent, P=0.08). In our models, BuChE activity was significantly inversely associated with measures of interim chlorpyrifos exposure, but the biological effects of chlorpyrifos exposure on BuChE activity were not modified by PON1 inferred genotype or CPOase activity.  
Keywords: Glutamine  
Keywords: employment  
Keywords: biological effects  
Keywords: Gene polymorphism  
Keywords: Aryldialkylphosphatase  
Keywords: Metabolites  
Keywords: Genotypes  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Models  
Keywords: Workers  
Keywords: Insecticides  
Keywords: Regression analysis  
Keywords: X 24330:Agrochemicals  
Keywords: Occupational exposure  
Keywords: Health & Safety Science Abstracts; Pollution Abstracts; Toxicology Abstracts  
Keywords: Arginine  
Keywords: Enzymes  
Keywords: Allotypes  
Keywords: H 1000:Occupational Safety and Health  
Keywords: Hydrolysis  
Keywords: Chlorpyrifos  
Keywords: Pesticides  
Keywords: Liver  
Keywords: Excretion  
Keywords: Hygiene  
Date revised - 2010-03-01  
Language of summary - English  
Pages - 79-89  
ProQuest ID - 21315843  
SubjectsTermNotLitGenreText - Glutamine; Arginine; Gene polymorphism; Enzymes; Aryldialkylphosphatase; Allotypes; Metabolites; Hydrolysis; Models; Chlorpyrifos; Workers; Insecticides; Regression analysis; Liver; Excretion; Hygiene; Occupational exposure; employment; biological effects; Genotypes; Pesticides  
Last updated - 2012-03-29  
British nursing index edition - Journal of Exposure Science and Environmental Epidemiology [J. Exposure Sci. Environ. Epidemiol.]. Vol. 20, no. 1, pp. 79-89. Jan 2010.  
Corporate institution author - Albers, James W; Garabrant, David H; Berent, Stanley; Richardson, Rudy J  
DOI - MD-0012539899; 11936603; 1559-0631 English

26. Aldridge, W. N. An Assessment of the Toxicological Properties of Pyrethroids and Their Neurotoxicity. 1990; 21, (2): 89-104.   
Rec #: 370  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (CPY,CYF,DM,FPP,FVL,PMR), NO REVIEW (CPY,CYF,DM,FPP,FVL,PMR)  
Notes: Chemical of Concern: CPY,CYF,DM,FPP,FVL,PMR

27. Ali, D. and Kumar, S. Chlorpyrifos-Mediated Biochemical Changes in the Freshwater Fish Channa punctatus (Bloch). 2008; 150, (Suppl.1,3): S111(ABS) (doi: 10.1016/j.cbpa.2008.04.241).   
Rec #: 380  
Keywords: ABSTRACT  
Call Number: NO ABSTRACT (CPY)  
Notes: Chemical of Concern: CPY

28. Allen, R. M. ; Marquart, T. J.; Albert, C. J.; Suchy, F. J. ; Wang, D. Q.; Ananthanarayanan, M.; Ford, D. A., and Bald, N. A. Mir-33 Controls the Expression of Biliary Transporters, and Mediates Statin- and Diet-Induced Hepatotoxicity.   
Rec #: 49949  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Lipid Res. 2009 Aug;50(8):1571-80 (medline /19252221)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 2010 Oct 5;107(40):17321-6 (medline /20855588)  
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COMMENTS: Cites: Pediatr Transplant. 2006 Mar;10(2):154-8 (medline /16573599)  
COMMENTS: Cites: Dig Dis Sci. 2008 Jul;53(7):1988-93 (medline /18392679)  
COMMENTS: Comment in: EMBO Mol Med. 2012 Sep;4(9):863-5 (medline /22903913)  
ABSTRACT: Bile secretion is essential for whole body sterol homeostasis. Loss-of-function mutations in specific canalicular transporters in the hepatocyte disrupt bile flow and result in cholestasis. We show that two of these transporters, ABCB11 and ATP8B1, are functional targets of miR-33, a micro-RNA that is expressed from within an intron of SREBP-2. Consequently, manipulation of miR-33 levels in vivo with adenovirus or with antisense oligonucleotides results in changes in bile secretion and bile recovery from the gallbladder. Using radiolabelled cholesterol, we show that systemic silencing of miR-33 leads to increased sterols in bile and enhanced reverse cholesterol transport in vivo. Finally, we report that simvastatin causes, in a dose-dependent manner, profound hepatotoxicity and lethality in mice fed a lithogenic diet. These latter results are reminiscent of the recurrent cholestasis found in some patients prescribed statins. Importantly, pretreatment of mice with anti-miR-33 oligonucleotides rescues the hepatotoxic phenotype. Therefore, we conclude that miR-33 mediates some of the undesired, hepatotoxic effects of statins.  
MESH HEADINGS: ATP-Binding Cassette Transporters/\*biosynthesis  
MESH HEADINGS: Adenosine Triphosphatases/\*biosynthesis  
MESH HEADINGS: Animals  
MESH HEADINGS: Bile/secretion  
MESH HEADINGS: Cells, Cultured  
MESH HEADINGS: Diet/methods  
MESH HEADINGS: \*Gene Expression Regulation  
MESH HEADINGS: Hepatocytes/drug effects  
MESH HEADINGS: Liver/pathology  
MESH HEADINGS: Male  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred C57BL  
MESH HEADINGS: MicroRNAs/\*genetics  
MESH HEADINGS: Models, Biological  
MESH HEADINGS: Simvastatin/administration &amp  
MESH HEADINGS: dosage/adverse effects eng

29. Allender, W. J. Column Extraction of Chlorpyrifos from Contaminated Fish. 1991; 15, (3): 141-143.   
Rec #: 2920  
Keywords: METHODS  
Call Number: NO METHODS (CPY)  
Notes: Chemical of Concern: CPY

30. Alonso, G. A.; Dominguez, R. B.; Marty, J. L., and Mu¤Oz, R. An Approach to an Inhibition Electronic Tongue to Detect on-Line Organophosphorus Insecticides Using a Computer Controlled Multi-Commuted Flow System.   
Rec #: 74789  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: An approach to an inhibition bioelectronic tongue is presented. The work is focused on development of an automated flow system to carry out experimental assays, a custom potentiostat to measure the response from an **enzymatic biosensor**, and an inhibition protocol which allows on-line detections. A Multi-commuted Flow Analysis system (MCFA) was selected and developed to carry out assays with an improved inhibition method to detect the insecticides chlorpyrifos oxon (CPO), chlorfenvinfos (CFV) and azinphos methyl-oxon (AZMO). The system manifold comprised a peristaltic pump, a set of seven electronic valves controlled by a personal computer electronic interface and software based on LabView&reg; to control the sample dilutions into the cell. The inhibition method consists in the injection of the insecticide when the enzyme activity has reached the plateau of the current; with this method the incubation time is avoided. A potentiostat was developed to measure the response from the enzymatic biosensor. Low limits of detection of 10 nM for CPO, CFV, and AZMO were achieved.  
MESH HEADINGS: Acetylcholinesterase/\*chemistry  
MESH HEADINGS: Animals  
MESH HEADINGS: Azinphosmethyl/analogs &amp  
MESH HEADINGS: derivatives/analysis  
MESH HEADINGS: Benzenesulfonates/analysis  
MESH HEADINGS: Biosensing Techniques/\*instrumentation  
MESH HEADINGS: Chlorpyrifos/analogs &amp  
MESH HEADINGS: derivatives/analysis  
MESH HEADINGS: Drosophila/\*chemistry  
MESH HEADINGS: \*Enzyme Inhibitors  
MESH HEADINGS: Insecticides/\*analysis  
MESH HEADINGS: Potentiometry/methods  
MESH HEADINGS: Software eng

31. Alonso, Gustavo A.; Istamboulie, Georges; Ram+ˇrez-Garc+ˇa, Alfredo; Noguer, Thierry; Marty, Jean-Louis, and Mu+\_oz, Roberto. Artificial neural network implementation in single low-cost chip for the detection of insecticides by modeling of screen-printed enzymatic sensors response. 2010 Nov; 74, (2): 223-229.   
Rec #: 3890  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: This work presents a hardware implementation of artificial neural networks (ANNs) using a dsPIC-« microcontroller to resolve mixtures of pesticides measured by amperometric acetylcholinesterase (AChE) biosensors. The response of three biosensors with different concentrations of Chlorpyrifos Oxon (CPO) and Chlorfenvinfos (CFV) was modeled by two ANNs, which were implemented on the dsPIC-«. The performance of the ANNs was good, the prediction ability was better than 0.986 when the obtained values were compared with those expected for a set of eight external test samples, which were not used for training. This implementation is proposed to develop low-cost analytical chemical specialized tools. Acetylcholinesterase/ Artificial neural networks/ dsPIC-«/ Hardware implementation/ Pesticides

32. Alvarez, David; Cranor, Walter; Perkins, Stephanie; Schroeder, Vickie; Werner, Stephen; Furlong, Edward; Kain, Donald; Brent, Robert, and Alvarez, David. Reconnaissance of Persistent and Emerging Contaminants in the Shenandoah and James River Basins, Virginia, During Spring of 2007. 2008.  
Rec #: 49829  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Fish exhibiting external lesions, incidences of intersex, and death have recently been observed in the Shenandoah and James River Basins. These basins are characterized by widespread agriculture (intensive in some areas), several major industrial discharges, numerous sewage treatment plant discharges, and urban, transportation, and residential growth that has increased rapidly in recent years. Nine locations in the Shenandoah River Basin, Virginia, and two in the James River Basin, Virginia, were selected for study in an attempt to identify chemicals that may have contributed to the declining fish health. Two passive sampling devices, semipermeable membrane devices (SPMDs) and polar organic chemical integrative samplers (POCIS), were deployed during the spring and early summer of 2007 to measure select organic contaminants to which fish may have been exposed. This study determined that concentrations of persistent hydrophobic contaminants, such as polycyclic aromatic hydrocarbons (17,000 picograms per liter), legacy pesticides (510 picograms per liter), and polychlorinated biphenyls (1,600 picograms per liter) were generally low and indicative of a largely agricultural area. Chlorpyrifos, endosulfan, and lindane were the most commonly detected chlorinated pesticides. Atrazine, which was detected at concentrations much greater than other pesticides associated with agricultural use, ranged from 0.18 to 430 nanograms per liter during the deployment period. Few chemicals characteristic of wastewater treatment plant effluent or septic tank discharges were detected. The fragrance components, galaxolide, indole, and tonalide, were the predominant waste indicator chemicals detected. Caffeine, the caffeine metabolite 1,7-dimethylxanthine, the nicotine metabolite cotinine, and the prescription pharmaceuticals carbamazepine, venlafaxine, and trimethoprim were detected at several sites. Natural and synthetic hormones were detected at a few sites with 17 alpha-ethynylestradiol concentrations estimated up to 8.1 nanograms per liter. Screening of the POCIS extracts for estrogenic chemicals by using the yeast estrogen screen revealed estrogenicity similar to levels reported for rural areas with minor effect from wastewater effluents.  
Start Page: 20  
End Page: 20  
Keywords: Yeasts  
Keywords: Chemicals  
Keywords: River Basins  
Keywords: caffeine  
Keywords: Metabolites  
Keywords: Q5 01502:Methods and instruments  
Keywords: Freshwater  
Keywords: Sex hormones  
Keywords: Sewage disposal  
Keywords: Growth  
Keywords: Agricultural Chemicals  
Keywords: Pollutant persistence  
Keywords: Aromatic hydrocarbons  
Keywords: Q1 01604:Stock assessment and management  
Keywords: Wastewater Facilities  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: AQ 00008:Effects of Pollution  
Keywords: River basins  
Keywords: USA, Virginia  
Keywords: Effluents  
Keywords: Samplers  
Keywords: SW 1030:Use of water of impaired quality  
Keywords: USA, North Dakota, James R. basin  
Keywords: Water Pollution Effects  
Keywords: Pesticides  
Keywords: Pollution Abstracts; Aqualine Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; ASFA 1: Biological Sciences & Living Resources  
Keywords: Wastewater Disposal  
Keywords: Fish  
Keywords: Wastewater Treatment  
Keywords: Rural areas  
Keywords: estrogens  
Date revised - 2011-11-01  
Language of summary - English  
Location - USA, North Dakota, James R. basin; USA, Virginia  
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SubjectsTermNotLitGenreText - Yeasts; Sewage disposal; Growth; Pollutant persistence; Pesticides; Aromatic hydrocarbons; River basins; Samplers; Sex hormones; Chemicals; caffeine; Metabolites; Fish; Effluents; Rural areas; estrogens; Wastewater Facilities; River Basins; Agricultural Chemicals; Water Pollution Effects; Wastewater Disposal; Wastewater Treatment; USA, North Dakota, James R. basin; USA, Virginia; Freshwater  
Last updated - 2012-12-14  
British nursing index edition - Open-File Report. U.S. Geological Survey. no. 2008-1231, 20 p. 2008.  
Corporate institution author - Alvarez, David; Cranor, Walter; Perkins, Stephanie; Schroeder, Vickie; Werner, Stephen; Furlong, Edward; Kain, Donald; Brent, Robert  
DOI - 06f97649-d055-42f0-803acsamfg201; 15958204; NO1101282 English

33. Amado, L. L. ; Rosa, C. E.; Castro, M. R.; Votto, A. P.; Santos, L. C.; Marins, L. F. F.; Trindade, G. S. ; Fraga, D. S.; Dame, R. C. F.; Barros, D. M.; Geracitano, L. A.; Bianchini, A.; de la Torre, F. R., and Monserrat, J. M. Integrated biological responses of zebrafish (Danio rerio) to analyze water quality in regions under anthropogenic influence. 2011; 82, (11): 1563-1570.   
Rec #: 55589  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study analyzed water quality in regions around Patos lagoon (Southern Brazil) that are under anthropogenic pressure. Water samples were collected from five different sites, including one used as a source for human consumption (COR) and others known to be influenced by human activities (IP). Danio rerio (Teleostei, Cyprinidae) organisms were exposed for 24 h to these water samples, plus a control group. It was observed that: (1) reactive oxygen species levels were lower in COR and IP than in the control group; (2) glutamate-cysteine ligase (catalytic subunit) expression was higher in COR than in other sites; (3) exposure to all water samples affected long-term memory (LTM) when compared to control group. Thus, some water samples possess the ability to modulate the antioxidant system and to induce a decline in cognitive functions, as measured by LTM. The obtained results indicate that a combination of variables of different organization level (molecular, biochemical and behavioral) can be employed to analyze water quality in impacted regions. (C) 2010 Elsevier Ltd. All rights reserved.  
Keywords: Antioxidant responses, Zebrafish, Long-term memory, Ecotoxicology, Total  
ISI Document Delivery No.: 737SG

34. Amaroli, Andrea; Aluigi, Maria Grazia; Falugi, Carla, and Chessa, Maria Giovanna. Effects of the neurotoxic thionophosphate pesticide chlorpyrifos on differentiating alternative models. 2013 Feb; 90, (7): 2115-2122.   
Rec #: 230  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Studies by researchers worldwide have revealed that, even in industrialised nations, people, infants and the aged in particular, are even more exposed to neurotoxic drugs as a consequence of the increased quantity of pesticide residues in food. This phenomenon, as underlined by The Worldwatch Institute (2006), is linked to the exponential increase in the use of these toxic compounds over the last 40 years, up from 0.49 kg per hectare in 1961 to 2 kg in 2004, with the result that these substances are found in the daily diet. Protozoa/ Sea urchin/ Stem cell/ Cholinesterase/ Neurotoxic drugs/ Chlorpyrifos

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Rec #: 1760  
Keywords: NO CONC  
Call Number: NO CONC (CPY)  
Notes: Chemical of Concern: CPY

36. Ames, B. D.; Korman, T. P.; Zhang, W.; Smith, P.; Vu, T.; Tang, Y., and Tsai, S. C. Crystal Structure and Functional Analysis of Tetracenomycin Aro/Cyc: Implications for Cyclization Specificity of Aromatic Polyketides.   
Rec #: 51289  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY   
Abstract: COMMENTS: Cites: J Mol Biol. 2006 Mar 17;357(1):210-20 (medline /16414075)  
COMMENTS: Cites: Proteins. 2001 May 1;43(2):134-44 (medline /11276083)  
COMMENTS: Cites: Bioessays. 2005 Jan;27(1):50-6 (medline /15612030)  
COMMENTS: Cites: J Biol Chem. 2004 Dec 10;279(50):52593-602 (medline /15371447)  
COMMENTS: Cites: Biochemistry. 2004 Nov 23;43(46):14529-38 (medline /15544323)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1999 Mar 30;96(7):3622-7 (medline /10097087)  
COMMENTS: Cites: Acta Crystallogr D Biol Crystallogr. 1998 Sep 1;54(Pt 5):905-21 (medline /9757107)  
COMMENTS: Cites: Chem Biol. 1999 Sep;6(9):607-15 (medline /10467128)  
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COMMENTS: Cites: Acta Crystallogr D Biol Crystallogr. 1999 Apr;55(Pt 4):849-61 (medline /10089316)  
COMMENTS: Cites: Nat Struct Biol. 1996 Dec;3(12):1040-5 (medline /8946858)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1996 Jun 25;93(13):6600-4 (medline /8692863)  
COMMENTS: Cites: Nature. 1995 Feb 16;373(6515):549 (medline /7854398)  
COMMENTS: Cites: J Mol Biol. 1993 Jan 5;229(1):105-24 (medline /7678431)  
COMMENTS: Cites: BMC Bioinformatics. 2004 Aug 12;5:109 (medline /15307895)  
COMMENTS: Cites: J Biol Chem. 2004 Sep 3;279(36):37956-63 (medline /15231835)  
COMMENTS: Cites: EMBO J. 2004 May 5;23(9):1911-21 (medline /15071504)  
COMMENTS: Cites: Proteins. 2003 Sep 1;52(4):609-23 (medline /12910460)  
COMMENTS: Erratum in: Proc Natl Acad Sci U S A. 2008 Jul 1;105(26):9129  
ABSTRACT: Polyketides are a class of natural products with highly diverse chemical structures and pharmaceutical activities. Polyketide cyclization, promoted by the aromatase/cyclase (ARO/CYC), helps diversify aromatic polyketides. How the ARO/CYC promotes highly specific cyclization is not well understood because of the lack of a first-ring ARO/CYC structure. The 1.9 A crystal structure of Tcm ARO/CYC reveals that the enzyme belongs to the Bet v1-like superfamily (or STAR domain family) with a helix-grip fold, and contains a highly conserved interior pocket. Docking, mutagenesis, and an in vivo assay show that the size, shape, and composition of the pocket are important to orient and specifically fold the polyketide chain for C9-C14 first-ring and C7-C16 second-ring cyclizations. Two pocket residues, R69 and Y35, were found to be essential for promoting first- and second-ring cyclization specificity. Different pocket residue mutations affected the polyketide product distribution. A mechanism is proposed based on the structure-mutation-docking results. These results strongly suggest that the regiospecific cyclizations of the first two rings and subsequent aromatizations take place in the interior pocket. The chemical insights gleaned from this work pave the foundation toward defining the molecular rules for the ARO/CYC cyclization specificity, whose rational control will be important for future endeavors in the engineered biosynthesis of novel anticancer and antibiotic aromatic polyketides.  
MESH HEADINGS: Amino Acids  
MESH HEADINGS: Aromatase/\*chemistry/metabolism  
MESH HEADINGS: Bacterial Proteins/chemistry  
MESH HEADINGS: Binding Sites  
MESH HEADINGS: Computer Simulation  
MESH HEADINGS: Crystallography, X-Ray  
MESH HEADINGS: Cyclization  
MESH HEADINGS: Macrolides  
MESH HEADINGS: \*Naphthacenes  
MESH HEADINGS: Streptomyces  
MESH HEADINGS: Substrate Specificity eng

37. Ampim, Peter Agbeehia Yao and Massey, Joseph H Stewart Barry R. Factors Affecting Pesticide Runoff From Warm-Season Turfgrasses. 2008: (UMI# 3315171 ).   
Rec #: 51899  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Knowledge of the impacts of management and scale are important for improved understanding and prediction of turf chemical runoff in urban environments. **This study addressed the effects of mowing height, warm-season turf species and plot size on runoff of water, bromide, dimethylamine salts of the herbicides 2, 4-D, MCPP and dicamba, flutolanil fungicide, and chlorpyrifos insecticide from a Brooksville silty clay soil.** The runoff plots were sloped at 3% and arranged as split-plot in a randomized complete block design. The pesticides were applied as a tank mix: 2, 4-D at 1.12 kg ai/ha, MCPP at 1.80 kg ai/ha, dicamba at 0.50 kg ai/ha, flutolanil at 2.24 kg ai/ha and chlorpyrifos at 2.24 kg ai/ha. Bromide was applied separately at 15 kg ai/ha. The pesticides and bromide were applied 24 h and 0.5 h respectively, prior to each rainfall simulation event. Rainfall simulated at 38 mm/h was applied to treated plots for 1.5 h to generate runoff which was collected at 5 minute intervals. Pesticide runoff concentrations were determined by reverse-phase HPLC using UV-Vis detection. The limit of quantification for each compound was approximately 5 ÎĽg/L. Bromide was analyzed for by an ion selective electrode following EPA method 9211 with the limit of detection at 200 ÎĽg/L. Plot size, mowing height and/or grass species significantly affected different runoff aspects of the pesticides investigated at p < 0.05. Averaged across treatments, percentages of applied pesticide lost in runoff were 43.3 Â± 12.7 for 2, 4-D, 29.5 Â± 8.3 for MCPP, 24.6 Â± 8.3 for dicamba, 6.8 Â± 1.0 for flutolanil and 0.22 Â± 0.04 for chlorpyrifos. Similarly, average peak pesticide concentrations were 3.7 Â± 0.9 mg/L for 2, 4-D, 4.2 Â± 1.1 mg/L for MCPP, 1.2 Â± 0.3 mg/L for dicamba, 0.8 Â± 0.3 mg/L for flutolanil and 0.04 Â± 0.02 mg/L for chlorpyrifos. Results obtained for water and bromide runoff suggest that the treatment effects observed for the pesticides were due to differences in retention mechanism rather than turf hydrology. Linear relationships were obtained between plot area and chemical mass and total runoff indicating that runoff from bermudagrass turf is 'scalable'.  
Start Page: 164  
ISSN/ISBN: 9780549644897  
Keywords: Bromide  
Keywords: Simulated rainfall  
Keywords: Mowing height  
Keywords: Herbicides  
Keywords: 0471:Horticulture  
Keywords: Plot size  
Keywords: Pesticide runoff  
Keywords: 0768:Environmental science  
Keywords: Turfgrasses  
Keywords: Insecticides  
Keywords: 0285:Agronomy  
Keywords: Fungicides  
Keywords: Turf species  
Keywords: Health and environmental sciences  
Keywords: Dimethylamine salts  
Keywords: Biological sciences  
Keywords: Runoff  
Keywords: Modeling  
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Simulated rainfall  
Pesticide runoff  
Copyright ProQuest, UMI Dissertations Publishing 2008  
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0768: Environmental science  
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Turf species  
Health and environmental sciences  
Dimethylamine salts  
0285: Agronomy  
0471: Horticulture  
Mowing height  
3315171  
Herbicides  
66569  
Plot size  
n/a  
English  
9780549644897  
Ampim, Peter Agbeehia Yao  
2010-08-07  
Fungicides  
38858881  
Biological sciences  
Runoff  
Modeling English

38. Amvrazi, E. G.; Martini, M. A., and Tsiropoulos, N. G. Headspace single-drop microextraction of common pesticide contaminants in honey-method development and comparison with other extraction methods. 2012; 92, (4): 450-465.   
Rec #: 55699  
Keywords: FOOD  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: In the present study the main factors that may influence the headspace single-drop microextraction (HS-SDME) of common pesticide contaminants (diazinon, lindane, chlorpyrifos ethyl, p,p'-DDE, and endosulfan) that may occur in honey were determined and an analytical protocol was further developed by the use of a multivariate optimization. The HS-SDME analytical method developed and two more analytical protocols for the determination of pesticides in honey: (i) by direct SDME (D-SDME), and (ii) by liquid-liquid extraction (LLE), were further validated for the determination of target analytes. The three methods were also applied in the same real honey samples and results were further discussed. By D-SDME, LODs ranged from 0.04 mu g kg(-1) for beta-endosulfan to 2.40 mg mu g kg(-1) for diazinon and repeatability expressed as %RSD from 3 for lindane to 15 for diazinon and chlorpyrifos methyl; by HS-SDME, LODs ranged from 0.07 mu g kg(-1) for p,p'-DDE to 12.54 mu g kg(-1) for chlorpyrifos methyl and repeatability expressed as % RSD from 11 for chlorpyrifos methyl to 19 for p,p'-DDE; by LLE, LODs ranged from 0.09 mu g kg(-1) for beta-endosulfan to 19.31 mu g kg(-1) for diazinon and repeatability expressed as % RSD from 6 for p,p'-DDE to 11 for lindane. For all target pesticides but p,p'-DDE that could not be recovered by D-SDME method tested. The proposed HS-SDME optimized in this study was shown to be the method of choice for the determination of diazinon in honey whereas the most favourable analytical characteristics from the comparative study performed were achieved by D-SDME.  
Keywords: head space single-drop microextraction, multivariate optimization,  
ISI Document Delivery No.: 908RA

39. Amvrazi, E. G. and Tsiropoulos, N. G. Chemometric study and optimization of extraction parameters in single-drop microextraction for the determination of multiclass pesticide residues in grapes and apples by gas chromatography mass spectrometry. 2009; 1216, (45): 7630-7638.   
Rec #: 55709  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A simple and rapid single-drop microextraction method coupled with gas chromatography and mass spectrometry (SDME-GC/MS) for the determination of 20 pesticides with different physicochemical properties in grapes and apples was optimized by the use of a multivariate strategy. Emphasis on the optimization study was given to the role of ionic strength, sugar concentration and pH of the donor sample solution prepared from the fruit samples. Since all three variables were found to affect negatively SDME (a lower extraction efficiency was observed as the values of variables were increased for most of the pesticides studied), donor sample solution was optimized using a central composite design to evaluate the optimum pH value and the optimum dilution of the sample extract. With some exceptions (chlorpyrifos ethyl, alpha-endosulfan, beta-endosulfan, pyriproxyfen, gamma-cyhalothrin and bifenthrin), the optimum method included the dilution of the analytical sample by 12.5-fold with a buffered acetone/water solution at pH = 4 and exhibited good analytical characteristics for the majority of target analytes (pyrimethanil, pirimicarb, metribuzin, vinclozolin, fosthiazate, procymidone, fludioxonil, kresoxim methyl, endosulfan sulfate, fenhexamid, iprodione, phosalone, indoxacarb and azoxystrobin) by providing high enrichment factors (14-328), low limits of detection (0.0003-0.007 mu g/g), and good precision (relative standard deviations below 15%). (C) 2009 Elsevier B.V. All rights reserved.  
Keywords: Single-drop microextraction, Experimental design, Liquid phase  
ISI Document Delivery No.: 514PT

40. Amvrazi, Elpiniki G and Albanis, Triantafyllos a. Multiclass Pesticide Determination in Olives and Their Processing Factors in Olive Oil: Comparison of Different Olive Oil Extraction Systems. 2008 Jul 23; 56, (14): 5700-5709.   
Rec #: 49339  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The processing factors (pesticide concentration found in olive oil/pesticide concentration found in olives) of azinphos methyl, chlorpyrifos, lambda-cyhalothrin, deltamethrin, diazinon, dimethoate, endosulfan, and fenthion were determined in olive oil production process in various laboratory-scale olive oil extractions based on three- or two-phase centrifugation systems in comparison with samples collected during olive oil extractions in conventional olive mills located at different olive oil production areas in Greece. Pesticide analyses were performed using a multiresidue method developed in our laboratory for the determination of different insecticides and herbicides in olive oil by solid-phase extraction techniques coupled to gas chromatography detection (electron capture detection and nitrogen phosphorus detection), optimized, and validated for olive fruits sample preparation. Processing factors were found to vary among the different pesticides studied. Water addition in the oil extraction procedure (as in a three-phase centrifugation system) was found to decrease the processing factors of dimethoate, alpha-endosulfan, diazinon, and chlorpyrifos, whereas those of fenthion, azinphos methyl, beta-endosulfan, lambda-cyhalothrin, and deltamethrin residues were not affected. The water content of olives processed was found to proportionally affect pesticide processing factors. Fenthion sulfoxide and endosulfan sulfate were the major metabolites of fenthion and endosulfan, respectively, that were detected in laboratory-produced olive oils, but only the concentration of fenthion sulfoxide was found to increase with the increase of water addition in the olive oil extraction process.  
Keywords: Pesticides -- analysis  
Keywords: Water -- analysis  
Keywords: Chromatography, Gas  
Keywords: 8001-25-0  
Keywords: Herbicides -- analysis  
Keywords: Plant Oils -- chemistry  
Keywords: Food Handling -- methods  
Keywords: Herbicides  
Keywords: Insecticides -- analysis  
Keywords: Water  
Keywords: Plant Oils  
Keywords: 7732-18-5  
Keywords: olive oil  
Keywords: 0  
Keywords: Insecticides  
Keywords: Pesticides  
Keywords: Olea -- chemistry  
Keywords: Plant Oils -- isolation & purification  
Keywords: Fruit -- chemistry  
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Language of summary - English  
Pages - 5700-5709  
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British nursing index edition - Journal of agricultural and food chemistry, July 23, 2008, 56(14):5700-5709  
Corporate institution author - Amvrazi, Elpiniki G; Albanis, Triantafyllos A  
DOI - MEDL-18558709; 18558709; 1520-5118 eng

41. Analytical Development Corp. Project No. 577; Report No. GH-C 1408R: Determination of 14C-Residues Following Oral Administration of 14C-Chlorpyrifos to Lactating Goats. 1980.  
Rec #: 390  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

42. Anderson, B. S.; De Vlaming, V.; Larsen, K.; Deanovic, L. S.; Birosik, S.; Smith, D. J.; Hunt, J. W.; Phillips, B. M., and Tjeerdema, R. S. Causes of Ambient Toxicity in the Calleguas Creek Watershed of Southern California. 2002; 78, (2): 131-151.   
Rec #: 400  
Keywords: MIXTURE  
Call Number: NO MIXTURE (CBL,CPY,DZ,PPB)  
Notes: Chemical of Concern: CBL,CPY,DZ,PPB

43. Anderson, B. S.; Hunt, J. W.; Phillips, B. M.; Nicely, P. A.; Vlaming, V. de; Connor, V.; Richard, N., and Tjeerdema, R. S. Integrated Assessment of the Impacts of Agricultural Drainwater in the Salinas River (California, USA). 2003; 124, (3): 523-532.   
Rec #: 410  
Keywords: SURVEY  
Call Number: NO SURVEY (CPY,DZ)  
Notes: Chemical of Concern: CPY,DZ

44. Anderson, Jacqueline M.; Petersson, Klas J.; Friberg, Lena E.; Worek, Franz; Thiermann, Horst, and Buckley, Nicholas A. Acute organophosphorus poisoning in humans: A PK model for chlorpyrifos. 2012 Jun 17-; 211, Supplement, (0): S173.   
Rec #: 2550  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY

45. Anderson, P D; Sargeant, D, and Anderson, P D. Skagit-Samish Watershed Intensive Surface Water Sampling for Pesticides in Salmonid-Bearing Streams. Quality Assurance Project Plan. 2009.  
Rec #: 48969  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The Washington State Department of Ecology (Ecology) has conducted a surface water monitoring program for pesticides in salmonid habitat since 2003. This program has included weekly monitoring at 16 sites in five index watersheds statewide: Thornton Creek, Longfellow Creek, Lower Yakima River, Wenatchee River, and Entiat River. In 2008, the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA-Fisheries) released a biological opinion for three organophosphate pesticides: chlorpyrifos, diazinon, and malathion.  
Start Page: 32  
End Page: 32  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: Rivers  
Keywords: Marine fisheries  
Keywords: Marine  
Keywords: Surface water  
Keywords: Anadromous species  
Keywords: Quality assurance  
Keywords: Surface Water  
Keywords: Q1 01485:Species interactions: pests and control  
Keywords: Q5 01502:Methods and instruments  
Keywords: Creek  
Keywords: INE, USA, Washington  
Keywords: Watersheds  
Keywords: Streams  
Keywords: USA, Washington, Yakima R.  
Keywords: Ecology  
Keywords: Agricultural Chemicals  
Keywords: SW 3010:Identification of pollutants  
Keywords: Aqualine Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; ASFA 1: Biological Sciences & Living Resources  
Keywords: Pesticides  
Keywords: Sampling  
Keywords: Monitoring  
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SubjectsTermNotLitGenreText - Marine fisheries; Surface water; Quality assurance; Anadromous species; Pesticides; Sampling; Watersheds; Creek; Streams; Ecology; Rivers; Agricultural Chemicals; Surface Water; Monitoring; Salmonidae; USA, Washington, Yakima R.; INE, USA, Washington; Marine  
Last updated - 2012-12-03  
British nursing index edition - Report. Washington State Department of Ecology. no. WSEO0903120, 32 p. 2009.  
Corporate institution author - Anderson, P D; Sargeant, D  
DOI - cc6033d2-4eb5-4d96-852fcsamfg201; 15947904; NO1100135 English

46. Anishkin, A. ; Kamaraju, K., and Sukharev, S. Mechanosensitive Channel Mscs in the Open State: Modeling of the Transition, Explicit Simulations, and Experimental Measurements of Conductance.   
Rec #: 51209  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Gen Physiol. 1999 Apr;113(4):525-40 (medline /10102934)  
COMMENTS: Cites: Nat Struct Mol Biol. 2007 Dec;14(12):1141-9 (medline /18037888)  
COMMENTS: Cites: Nature. 2001 Feb 8;409(6821):720-4 (medline /11217861)  
COMMENTS: Cites: Biophys J. 2001 May;80(5):2074-81 (medline /11325711)  
COMMENTS: Cites: Trends Neurosci. 2001 Jun;24(6):339-46 (medline /11356506)  
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COMMENTS: Cites: Biophys J. 2004 May;86(5):2846-61 (medline /15111402)  
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COMMENTS: Cites: Biophys J. 2004 Jun;86(6):3496-509 (medline /15189849)  
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COMMENTS: Cites: Biophys J. 2008 Feb 15;94(4):1252-66 (medline /17981908)  
COMMENTS: Cites: EMBO J. 1999 Apr 1;18(7):1730-7 (medline /10202137)  
ABSTRACT: Mechanosensitive channels of small conductance (MscS) are ubiquitous turgor pressure regulators found in many walled cells and some intracellular organelles. Escherichia coli MscS acting as a tension-activated osmolyte release valve shows a nonsaturable conductance (1.2 nS in a 39 mS/cm electrolyte) and weak preference for anions. Pursuing the transition pathways in this channel, we applied the extrapolated motion protocol (cycles of displacements, minimizations, and short simulations) to the previously generated compact resting conformation of MscS. We observed tilting and straightening of the kinked pore-forming TM3 helices during the barrel expansion. Extended all-atom simulations confirmed the stability of the open conformation in the bilayer. A 53 degrees spontaneous axial rotation of TM3s observed after equilibration increased the width and polarity of the pore allowing for stable voltage-independent hydration and presence of both cations and anions throughout the pore. The resultant open state, characterized by a pore 1.6 nm wide, satisfied the experimental conductance and in-plane expansion. Applied transmembrane electric field (+/-100 to +/-200 mV) in simulations produced a flow of both K(+) and Cl(-), with Cl(-) current dominating at higher voltages. Electroosmotic water flux strongly correlated with the chloride current (approximately 8 waters per Cl(-)). The selectivity and rectification were in agreement with the experimental measurements performed in the same range of voltages. Among the charged residues surrounding the pore, only K169 was found to contribute noticeably in the rectification. We conclude that (a) the barrel expansion involving tilting, straightening, and rotation of TM3s provides the geometry and electrostatics that accounts for the conductive properties of the open pore; (b) the observed regimen of ion passage through the pore is similar to electrodiffusion, thus macroscopic estimations closely approximate the experimental and molecular dynamics-simulated conductances; (c) increased interaction of the opposing ionic fluxes at higher voltages may result in selectivities stronger than measured near the reversal potential.  
MESH HEADINGS: Chlorine/chemistry  
MESH HEADINGS: \*Computer Simulation  
MESH HEADINGS: Diffusion  
MESH HEADINGS: Electric Conductivity  
MESH HEADINGS: Electrophysiology  
MESH HEADINGS: Escherichia coli Proteins/chemistry/\*physiology  
MESH HEADINGS: Ion Channel Gating/\*physiology  
MESH HEADINGS: Ion Channels/chemistry/\*physiology  
MESH HEADINGS: Ions/chemistry  
MESH HEADINGS: Lipid Bilayers/chemistry  
MESH HEADINGS: Membrane Potentials/physiology  
MESH HEADINGS: \*Models, Molecular  
MESH HEADINGS: Phosphatidylcholines/chemistry  
MESH HEADINGS: Potassium/chemistry  
MESH HEADINGS: Protein Conformation  
MESH HEADINGS: Static Electricity  
MESH HEADINGS: Water/chemistry eng

47. Anjum, Reshma and Malik, Abdul. Evaluation of mutagenicity of wastewater in the vicinity of pesticide industry. 2013 Mar; 35, (2): 284-291.   
Rec #: 5560  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Pesticide industrial wastewater samples were taken from the Chinhat industrial area nearby Lucknow city, India. GCÇôMS analysis revealed the presence of pesticides lindane, +\_-endosulfan, +\_-endosulfan, chlorpyriphos, monocrotophos, dimethoate and malathion. A pesticide mixture and wastewater extracts were studied to determine the mutagenicity by Ames Salmonella test, survival of DNA repair defective E. coli K-12 mutants and bacteriophage ++ systems. Wastewater samples were concentrated with XAD-resins as an adsorbent and liquidÇôliquid extraction procedure. The XAD concentrated sample exhibited maximum mutagenic activity in comparison to liquidÇôliquid extracted sample. TA98 strain was the most responsive strain for both test samples with (+S9) and without (ęĆS9) metabolic activation, while other strains exhibited weak response. A significant decline of DNA repair defective E. coli K-12 mutants, bacteriophage ++ was observed with test samples in the survival. The intracellular damage was highest when treated with XAD concentrated sample as compared to liquidÇôliquid extract after 6 h treatment. Salmonella mutagenicity test/ Industrial wastewater/ DNA repair defective mutants/ Genotoxicity

48. Anli, E.; Vural, N.; Vural, H., and Gucer, Y. Application of solid-phase micro-extraction (SPME) for determining residues of chlorpyrifos and chlorpyrifos-methyl in wine with gas chromatography (GC). 2007; 113, (2): 213-218.   
Rec #: 55749  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The incorrect use of insecticides in many countries' vineyards may result in some toxicological risks for the consumers by their presence on the grapes. In this research, a rapid gas chromatographic method was used for the determination of the residue levels of two organophosphorus pesticides (chlorpyrifos and chlorpyrifos-methyl) in wine. Pesticides are described and compared with each other. Ten red wines from two different regions of Turkey were analyzed for their chlorpyrifos and chlorpyrifos-methyl content. The samples were diluted with water and extracted by solid-phase micro extraction. Nitrogen-Phosphorus Detection (NDP) and Electron-Capture Detection (ECD) were used to identify and quantify the pesticides, the findings being confirmed using Mass Spectrometric Detection. Individual detection limits were in the range of (chlorpyrifos) 0.02-(chlorpyrifos-methyl) 0.1 ng. Limits of quantification varied from (chlorpyrifos) 0.01-(chlorpyrifos-methyl) 0.05 mg kg(-1). The maximum residues limits of the two pesticides in the Turkish wines examined were much lower than the Turkish and European Union limits.  
Keywords: chlorpyrifos, chlorpyrifos-methyl, gas chromatography, residue,  
ISI Document Delivery No.: 215NR

49. Anonymous. Selling in the Corn Market. 1986; 30, (3): 14-15.   
Rec #: 10  
Keywords: NO SPECIES  
Call Number: NO SPECIES (ACR,ATZ,BTY,CBF,CPY,DMB,EP,FNV,MTL,PDM,PMR,PRT,SZ,TBO)  
Notes: Chemical of Concern: ACR,ATZ,BMN,BTY,CBF,CPY,CZE,DMB,EP,FNF,FNV,MTL,NTP,PDM,PMR,PRT,SZ,TBO

50. Ansari, Mohd Ikram and Malik, Abdul. Genotoxicity of Agricultural Soils in the Vicinity of Industrial Area. 2009 Mar 17; 673, (2): 124-132.   
Rec #: 48679  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Soil samples from agricultural fields (cultivated) in the vicinity of industrial area of Ghaziabad City (India) were collected. In this city, wastewater coming from both industrial and domestic sources and without any treatment is used to irrigate the food crops. This practice has been polluting the soil and pollutants might reach the food chain. Gas chromatographic analysis show the presence of certain organochlorine (DDE, DDT, dieldrin, aldrin and endosulfan) and organophosphorus (dimethoate, malathion, methylparathion and chlorpyrifos) pesticides in soil samples. Samples were extracted using different solvents, i.e. methanol, chloroform, acetonitrile, hexane and acetone (all were HPLC-grade, SRL, India), and the extracts were assayed for genotoxic potential using Ames Salmonella/microsome test, DNA repair defective mutants and bacteriophage lambda systems. TA98 and TA100 were found to be the most sensitive strains to all the soil extracts tested. Methanol extracts exhibited a maximum mutagenicity with TA98 strain {540 (-S9) and 638 (+S9) revertants/g of soil} and 938 (-S9) and 1008 (+S9) revertants/g of soil with TA100 strain. The damage in the DNA repair defective mutants was found maximum with methanolic extract followed by acetonitrile, chloroform, hexane and acetone at the dose level of 40 microl/ml culture after 6h of treatment. The survival was 25, 30, 32, 33 and 35% in polA strain after 6h of treatment when tested with wastewater irrigated soil extracts of methanol, acetonitrile, chloroform, hexane and acetone, respectively. A significant decrease in the plaque forming units of bacteriophage lambda was also observed when treated with 40 microl of test samples. Present results showed that methanolic extracts of soil were more toxic than other soil extracts. The soil is accumulating a large number of pollutants due to wastewater irrigation and this practice of accumulation has an impact on soil health.  
Keywords: Agriculture  
Keywords: Industrial Waste -- adverse effects  
Keywords: Soil Pollutants -- toxicity  
Keywords: Water Pollutants, Chemical -- chemistry  
Keywords: Salmonella -- physiology  
Keywords: Water Pollutants, Chemical -- toxicity  
Keywords: Humans  
Keywords: Chemical Fractionation  
Keywords: Bacteriophage lambda -- physiology  
Keywords: Soil Pollutants -- chemistry  
Keywords: India  
Keywords: Industrial Waste  
Keywords: Soil  
Keywords: Soil Pollutants  
Keywords: Salmonella -- drug effects  
Keywords: Mutagenicity Tests  
Keywords: 0  
Keywords: Waste Disposal, Fluid  
Keywords: Soil -- analysis  
Keywords: Water Pollutants, Chemical  
Keywords: Bacteriophage lambda -- drug effects  
Keywords: Industry  
Date completed - 2009-06-03  
Date created - 2009-03-09  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 124-132  
ProQuest ID - 67004779  
Last updated - 2013-01-19  
British nursing index edition - Mutation research, March 17, 2009, 673(2):124-132  
Corporate institution author - Ansari, Mohd Ikram; Malik, Abdul  
DOI - MEDL-19167512; 19167512; 0027-5107 eng

51. Ansari, Mohd Ikram and Malik, Abdul. Genotoxicity of Wastewaters Used for Irrigation of Food Crops. 2009 Apr; 24, (2): 103-115.   
Rec #: 48639  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In most towns of India, wastewater coming from both industrial and domestic sources and without any treatment is used to irrigate the agricultural crops. This practice has been polluting the soil, and pollutants could possibly reach the food chain. For the above reasons, the wastewaters of Ghaziabad City (India), which is used for irrigation, were sampled (at two different sites) and monitored for the presence of genotoxic agents from January 2005 to June 2007. Gas chromatographic analysis showed the presence of certain OC (DDE, DDT, Dieldrin, Aldrin, and Endosulfan) and OP (Dimethoate, Malathion, Methlyparathion, and Chlorpyrifos) pesticides in both the sampling sites. Wastewater samples were concentrated using XAD resins (XAD-4 and XAD-8) and liquid-liquid extraction procedures, and the **extracts were assayed for genotoxic potential by Ames Salmonella/microsome test, DNA repair defective mutants, and bacteriophage lambda systems.** The test samples exhibited significant mutagenicity with TA98, TA97a, and TA100 strains with the probable role of contaminating pesticides in the wastewater. However, XAD-concentrated samples were more mutagenic in both sites as compared to liquid-liquid-extracted samples. The damage in the DNA repair defective mutants in the presence of XAD-concentrated water samples were also found to be higher to that of liquid-liquid-extracted water samples at the dose level of 20 muL/mL culture. All the mutants invariably exhibited significant decline in their colony-forming units as compared to their isogenic wild-type counterparts. The survival was decreased by 81.7 and 75.5% in polA(-) strain in site I, and 76.0 and 73.5% in site II in polA(-) under the same experimental conditions after 6 h of treatment with XAD-concentrated and liquid-liquid-extracted samples, respectively. A significant decrease in the survival of bacteriophage lambda was also observed when treated with the test samples. Copyright 2008 Wiley Periodicals, Inc.  
Keywords: Pesticides -- analysis  
Keywords: Mutagens  
Keywords: Soil Pollutants -- toxicity  
Keywords: Escherichia coli K12 -- physiology  
Keywords: Water Pollutants, Chemical -- analysis  
Keywords: Bacteriophage lambda -- genetics  
Keywords: Water Pollutants, Chemical -- toxicity  
Keywords: Salmonella typhimurium -- drug effects  
Keywords: Pesticides -- toxicity  
Keywords: India  
Keywords: Soil Pollutants  
Keywords: Escherichia coli K12 -- genetics  
Keywords: Microbial Viability  
Keywords: Water Pollutants, Chemical  
Keywords: Bacteriophage lambda -- drug effects  
Keywords: Salmonella typhimurium -- genetics  
Keywords: Chromatography, Gas  
Keywords: Escherichia coli K12 -- drug effects  
Keywords: Chemical Fractionation  
Keywords: Mutagens -- toxicity  
Keywords: Salmonella typhimurium -- physiology  
Keywords: Bacteriophage lambda -- physiology  
Keywords: DNA Repair -- drug effects  
Keywords: Soil Pollutants -- analysis  
Keywords: DNA Damage -- drug effects  
Keywords: Industrial Waste  
Keywords: Mutagenicity Tests  
Keywords: 0  
Keywords: Mutagens -- analysis  
Keywords: Waste Disposal, Fluid  
Keywords: Pesticides  
Keywords: Environmental Monitoring -- methods  
Date completed - 2009-05-26  
Date created - 2009-03-18  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 103-115  
ProQuest ID - 67040265  
Last updated - 2013-01-19  
British nursing index edition - Environmental toxicology, April 2009, 24(2):103-115  
Corporate institution author - Ansari, Mohd Ikram; Malik, Abdul  
DOI - MEDL-18442071; 18442071; 1522-7278 eng

52. Anwar, Samina; Liaquat, Fauzia; Khan, Qaiser M; Khalid, Zafar M, and Iqbal, Samina. Biodegradation of Chlorpyrifos and Its Hydrolysis Product 3,5,6-Trichloro-2-Pyridinol by Bacillus Pumilus Strain C2a1. 2009 Aug 30; 168, (1): 400-405.   
Rec #: 41059  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A bacterial strain C2A1 isolated from soil was found highly effective in degrading chlorpyrifos and its first hydrolysis metabolite 3,5,6-trichloro-2-pyridinol (TCP). On the basis of morphology, physiological characteristics, biochemical tests and 16S rRNA sequence analysis, strain C2A1 was identified as Bacillus pumilus. Role of strain C2A1 in the degradation of chlorpyrifos was examined under different culture conditions like pH, inoculum density, presence of added carbon/nutrient sources and pesticide concentration. Chlorpyrifos was utilized by strain C2A1 as the sole source of carbon and energy as well as it was co-metabolized in the presence of glucose, yeast extract and nutrient broth. Maximum pesticide degradation was observed at high pH (8.5) and high inoculum density when chlorpyrifos was used as the sole source and energy. In the presence of other nutrients, chlorpyrifos degradation was enhanced probably due to high growth on easily metabolizable compounds which in turn increased degradation. The strain C2A1 showed 90% degradation of TCP (300 mg L(-1)) within 8 days of incubation.  
Keywords: 2921-88-2  
Keywords: Insecticides -- metabolism  
Keywords: Pyridones -- metabolism  
Keywords: Bacillus -- metabolism  
Keywords: 6515-38-4  
Keywords: Hydrolysis  
Keywords: Chlorpyrifos  
Keywords: Pesticides -- metabolism  
Keywords: 3,5,6-trichloro-2-pyridinol  
Keywords: Insecticides  
Keywords: 0  
Keywords: Pyridones  
Keywords: Pesticides  
Keywords: Biodegradation, Environmental  
Keywords: Chlorpyrifos -- metabolism  
Date completed - 2009-08-05  
Date created - 2009-06-05  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 400-405  
ProQuest ID - 67322241  
Last updated - 2013-01-19  
British nursing index edition - Journal of hazardous materials, August 30, 2009, 168(1):400-405  
Corporate institution author - Anwar, Samina; Liaquat, Fauzia; Khan, Qaiser M; Khalid, Zafar M; Iqbal, Samina  
DOI - MEDL-19297093; 19297093; 1873-3336 eng

53. Anwar, T.; Ahmad, I., and Tahir, S. DETERMINATION OF PESTICIDE RESIDUES IN FRUITS OF NAWABSHAH DISTRICT, SINDH, PAKISTAN. 2011; 43, (2): 1133-1139.   
Rec #: 55789  
Keywords: FOOD  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Eight fruit samples of apple, guava, orange, grapes, pear, persimmon, banana and pear purchased from the local markets of Nawabshah district, Sindh and residues of pesticide of organophosphate (OP), pyrethroid and organochlorine (OC) (i.e., dichlorvos, fenvalerate, dimethoate, methyl parathion, fenitrothion, cypermethrin, endosulfan, deltamethrin, mevinphos, chlorpyriphos, profenofos and dicofol) were monitored in fruit samples by Gas Chromatography (GC). All the fruit samples were found contaminated except banana and among these only apple samples were found exceeding the maximum residue limits (MRL) of Codex Alimentarius Commission.  
Keywords: VEGETABLES, ORGANOCHLORINE, EXPOSURE, FOOD  
ISI Document Delivery No.: 750KY

54. Anwar, Tahir ; Ahmad, Imtiaz; Tahir, Seema, and Anwar, Tahir. Determination of Pesticide Residues in Soil of Nawabshah District, Sindh, Pakistan. 2012 Feb; 44, (1).  
Rec #: 46899  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticide residues of organophosphate (OP) and organochlorine (OC) of most commonly used classes were monitored in soil samples collected from cotton growing areas in Nawabshah district, Sindh. All the 19 soil samples presently analyzed were found contaminated with used pesticides (i.e. dichlorvos, dimethoate, methyl parathion, fenitrothion, endosulfan, mevinphos, chlorpyriphos and profenofos) and the varying degree of concentration and frequency were found in the top soil. The most widely detected pesticide was chlorpyriphos found in 16 samples with mean concentration of 0.486 mg kg super(-1). Endosulfan was the second most often detected pesticide investigated in 15 samples containing the mean concentrations of 0.426 mg kg super(-1). Dimethoate was the third most detected pesticide in 14 samples with mean concentration of 0.555 mg kg super(-1).  
Keywords: Pakistan  
Keywords: Zoology  
Keywords: Cotton  
Keywords: Organochlorine compounds  
Keywords: Pesticide residues  
Keywords: Organophosphates  
Keywords: P 5000:LAND POLLUTION  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Endosulfan  
Keywords: Soil  
Keywords: Pakistan, Sindh  
Keywords: Pollution Abstracts; Environment Abstracts  
Keywords: Dimethoate  
Keywords: Dichlorvos  
Date revised - 2012-10-01  
Language of summary - English  
Location - Pakistan, Sindh; Pakistan  
ProQuest ID - 1125225668  
SubjectsTermNotLitGenreText - Soil; Organochlorine compounds; Cotton; Zoology; Organophosphates; Pesticide residues; Dimethoate; Dichlorvos; Endosulfan; Pakistan, Sindh; Pakistan  
Last updated - 2012-12-14  
British nursing index edition - Pakistan Journal of Zoology [Pak. J. Zool.]. Vol. 44, no. 1, [np]. Feb 2012.  
Corporate institution author - Anwar, Tahir; Ahmad, Imtiaz; Tahir, Seema  
DOI - 41e489fd-05f1-45ad-82a3mfgefd108; 17259100; 0030-9923 English

55. Anyusheva, M.; Lamers, M.; Schwadorf, K., and Streck, T. Analysis of pesticides in surface water in remote areas in Vietnam: Coping with matrix effects and test of long-term storage stability. 2012; 92, (7): 797-809.   
Rec #: 55799  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: During the last years, the increased use of pesticides and growing awareness of associated environmental and health problems have led to the implementation of various monitoring programmes in South-East Asia. The introduction of numerous new active ingredients and commercial pesticide formulations in connection with reports on pesticide-related health problems strongly indicate that the analytical procedures should be tested and evaluated for currently used pesticides. Coping with matrix effects and ensuring pesticide stability when samples are taken in remote areas are paramount. In the present study, we tested an analytical method that targets nine currently used pesticides in surface water in northern Vietnam. The method consists of solid phase extraction, storage at -18 degrees C in the adsorbed state, and capillary gas chromatography with nitrogen-phosphorus-detection of five insecticides (dichlorvos, fenobucarb, dimethoate, fenitrothion, and chlorpyrifos), three fungicides (chlorothalonil, metalaxyl, and edifenphos) and one herbicide (atrazine). We evaluated the potential analytical bias caused by matrix effect and investigated its possible causes. We also tested the long-term stability (up to 9 months) of pesticides adsorbed to Carbopack SPE cartridges when stored at temperatures below -18 degrees C. Adopting a matrix-matched calibration technique considerably improved the recovery values of seven of the nine tested pesticides. At spiking levels of 0.1 mu g L(-1) and 1 mu g L(-1) and after storage of 119 days at -18 degrees C, recovery values of these pesticides ranged from 67% to 107% and from 67% to 155%, respectively. For the remaining two pesticides recovered at 53-55% at both spiking levels - dichlorvos and chlorothalonil - the method could still be useful for semi-quantitative analysis or as a screening tool. Even though the general recommendation is to minimise storage time to reduce pesticides degradation, our results showed that storage times up to nine months can be adopted for atrazine, metalaxyl, fenitrothion, and chlorpyrifos.  
Keywords: pesticide analysis, matrix effect, SPE, storage stability, water matrix  
ISI Document Delivery No.: 942JD

56. Aozowicka, B ; Jankowska, M; Kaczynski, P, and aozowicka, B . Pesticide Residues in Brassica Vegetables and Exposure Assessment of Consumers. 2012 Jun; 25, (2): 561-575.   
Rec #: 42729  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The presence of pesticide residues in Brassica vegetables (365 samples) produced in north-eastern Poland (2006-2009) was determined and their health risks assessed. The analytical procedure was developed to examine of 130 pesticides of different chemical classes (chloroorganic, phosphoroorganic, carbamates, strobilurines, neonicotinoids, amides, pyrimidines, benzimidazoles, imidazoles and triazoles) in broccoli, Brussels sprouts, cauliflower, head and Chinese cabbage. Pesticides were extracted using matrix solid phase dispersion (MSPD) and analyzed by gas chromatography (GC) with dual detection system: electron capture (ECD) and nitrogen-phosphorus (NPD). Linearity (R2 greater than or equal to 0.997) was good over the concentration range from 2.5 to 0.001 mg/kg for all the pesticides, and instrumental detection limits ranged from 0.001 to 0.01 mg/kg. Mean recoveries for vegetables spiked at three fortification levels (0.001-2.5 mg/kg) ranged from 70.07 to 118.90%. Relative standard deviations ranged from 0.15 to 8.58%, except: dicofol, pyridaben (acaricides), dichloran (fungicide), isofenphos, triasophos (insecticides) where mean recoveries were above 120% (122.2-127%) and also dichlofluanid, tecnazene (fungicides), dichlobenil (herbicide), endosulfan-sulfate, phorate, phosmet (insecticides) with mean recoveries below 70% (42.83-69.1%). The method used to monitor pesticide residues in vegetables. Fifteen different pesticides (insecticides mainly) were detected in 118 samples (32%), while multiple pesticides (more than one pesticide residue) in about 4% samples. Chlorpyrifos and cypermethrin were the most commonly detected pesticides. Chlorpyrifos was present in 27.4% items and ranged from 0.005 to 1.51 mg/kg, while cypermethrin were detected in 3.3% samples and ranged from 0.02 to 0.19 mg/kg. Thirty-three (9%) samples exceeded the maximum residue levels (MRLs). The dietary intake of residues of some pesticides can pose acute hazards. Data obtained were then used for estimating the potential health risks associated with the exposures to these pesticides. The estimated daily intakes (EDIs) ranged from 0.005% of the ADI (acceptable daily intake) for fenhexamid to 4.454% of the ADI for diazinon. Combine cumulative exposure for chlorpyrifos detected on Brassica were 0.777% of ADI. The results show that occurrence of pesticide residues in Brassica vegetables from this region could not be considered a serious public health problem. Nevertheless, an investigation into continuous monitoring and tighter regulation of pesticide residues in vegetables is recommended.  
Keywords: Diets  
Keywords: Cypermethrin  
Keywords: Pesticide residues  
Keywords: Risk Abstracts; Health & Safety Science Abstracts  
Keywords: Brassica  
Keywords: Public health  
Keywords: Chlorpyrifos  
Keywords: Health risks  
Keywords: Insecticides  
Keywords: Poland  
Keywords: H 5000:Pesticides  
Keywords: Pesticides  
Keywords: Fungicides  
Keywords: R2 23010:General: Models, forecasting  
Date revised - 2012-10-01  
Language of summary - English  
Location - Poland  
Pages - 561-575  
ProQuest ID - 1093454209  
SubjectsTermNotLitGenreText - Diets; Chlorpyrifos; Health risks; Insecticides; Cypermethrin; Pesticide residues; Fungicides; Pesticides; Public health; Brassica; Poland  
Last updated - 2012-12-14  
British nursing index edition - Food Control [Food Control]. Vol. 25, no. 2, pp. 561-575. Jun 2012.  
Corporate institution author - aozowicka, B; Jankowska, M; Kaczynski, P  
DOI - 2f6ee060-8198-4764-be4acsamfg201; 16187606; 0956-7135 English

57. Aranzazu Taborda, D. A.; De Rodriguez, B.; Vieco Duran, B., and Restrepo Betancur, L. F. Effect of Chlorpyrifos 0,0-Dietil 0-(3, 5, 6-Tricloro-2-Piridil Fosforotioato) in Juvenile of Tilapia (Oreochromis spp.) Males (Efecto del Clorpirifos 0,0-Dietil 0-(3,5,6-Tricloro-2-Piridil Fosforotioato) en Machos Juveniles de Tilapia (Oreochromis spp.)). daranta7@gmail.com//Grupo de Investigacion Centauro, Docente, Escuela de Medicina Veterinaria, Facultad de Ciencias Agrarias, Universidad de Antioquia, Medellin, Colombia. //: 2012; 25, (2): 276-291(SPA) (ENG ABS).   
Rec #: 2430  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

58. Arb Trialists Collaboration. Effects of Telmisartan, Irbesartan, Valsartan, Candesartan, and Losartan on Cancers in 15 Trials Enrolling 138,769 Individuals.   
Rec #: 50019  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Comment in: Nat Rev Cardiol. 2011 May;8(5):243 (medline /21451473)  
COMMENTS: Comment in: J Hypertens. 2013 Jan;31(1):217 (medline /23221944)  
COMMENTS: Comment in: J Hypertens. 2011 Apr;29(4):653-4 (medline /21389812)  
ABSTRACT: BACKGROUND: Angiotensin-converting enzyme inhibitors (ACEi) and angiotensin II receptor blockers (ARBs) reduce cardiovascular disease (CVD) events, but a recent meta-analysis of selected studies suggested that ARBs may increase cancer risks.  
ABSTRACT: OBJECTIVE: Candesartan, irbesartan, telmisartan, valsartan, and losartan were assessed for incident cancers in 15 large parallel long-term multicenter double-blind clinical trials of these agents involving 138,769 participants.  
ABSTRACT: PATIENTS AND METHODS: Individuals at high CVD risk were randomized to telmisartan (three trials, n=51,878), irbesartan (three trials, n=14,859), valsartan (four trials, n=44,264), candesartan (four trials, n=18,566), and losartan (one trial, n=9193) and followed for 23-60 months. Incident cancer cases were compared in patients randomized to ARBs versus controls. In five trials (n=42,403), the ARBs were compared to ACEi and in 11 trials (n=63,313) to controls without ACEi. In addition, in seven trials (n=47,020), the effect of ARBs with ACEi was compared to ACEi alone and in two trials ARBs with ACEi versus ARB alone (n=25,712).  
ABSTRACT: RESULTS: Overall, there was no excess of cancer incidence with ARB therapy compared to controls in the 15 trials [4549 (6.16%) cases of 73,808 allocated to ARB versus 3856 (6.31%) of 61 106 assigned to non-ARB controls; odds ratio (OR) 1.00, 95% confidence interval (CI) 0.95-1.04] overall or when individual ARBs were examined. ORs comparing combination therapy with ARB along with ACEi versus ACEi was 1.01 (95% CI 0.94-1.10), combination versus ARB alone 1.02 (95% CI 0.91-1.13), ARB alone versus ACEi alone 1.06 (95% CI 0.97-1.16) and ARB versus placebo/control without ACEi 0.97 (95% CI 0.91-1.04). There was no excess of lung, prostate or breast cancer, or overall cancer deaths associated with ARB treatment.  
ABSTRACT: CONCLUSION: There was no significant increase in the overall or site-specific cancer risk from ARBs compared to controls.  
MESH HEADINGS: Angiotensin-Converting Enzyme Inhibitors/\*adverse effects  
MESH HEADINGS: Benzimidazoles/therapeutic use  
MESH HEADINGS: Benzoates/therapeutic use  
MESH HEADINGS: Biphenyl Compounds/therapeutic use  
MESH HEADINGS: Case-Control Studies  
MESH HEADINGS: Double-Blind Method  
MESH HEADINGS: Humans  
MESH HEADINGS: Hypertension/complications/\*drug therapy  
MESH HEADINGS: Losartan/therapeutic use  
MESH HEADINGS: Neoplasms/\*chemically induced  
MESH HEADINGS: \*Randomized Controlled Trials as Topic  
MESH HEADINGS: Tetrazoles/therapeutic use eng

59. Arcury, T. A.; Grzywacz, J. G.; Talton, J. W.; Chen, H.; Vallejos, Q. M.; Galv, N. L; Barr, D. B., and Quandt, S. A. Repeated Pesticide Exposure Among North Carolina Migrant and Seasonal Farmworkers.   
Rec #: 76809  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Am J Ind Med. 2009 Jul;52(7):539-50 (medline /19517490)  
COMMENTS: Cites: Am J Ind Med. 2001 Nov;40(5):487-9 (medline /11675617)  
COMMENTS: Cites: Am J Ind Med. 2008 Oct;51(10):782-94 (medline /18702096)  
COMMENTS: Cites: Environ Health Perspect. 2008 May;116(5):687-94 (medline /18470300)  
COMMENTS: Cites: J Expo Sci Environ Epidemiol. 2008 Mar;18(2):167-74 (medline /17495869)  
COMMENTS: Cites: J Expo Sci Environ Epidemiol. 2007 Sep;17(6):559-66 (medline /17534384)  
COMMENTS: Cites: Environ Health Perspect. 2007 Aug;115(8):1254-60 (medline /17687456)  
COMMENTS: Cites: J Expo Sci Environ Epidemiol. 2007 Jul;17(4):321-30 (medline /17440487)  
COMMENTS: Cites: Environ Health Perspect. 2007 May;115(5):792-8 (medline /17520070)  
COMMENTS: Cites: Environ Health Perspect. 2006 Jul;114(7):999-1006 (medline /16835050)  
COMMENTS: Cites: Environ Health Perspect. 2006 Jun;114(6):943-52 (medline /16759999)  
COMMENTS: Cites: Environ Health Perspect. 2005 Dec;113(12):1802-7 (medline /16330368)  
COMMENTS: Cites: Am J Ind Med. 1997 Sep;32(3):301-2 (medline /9219661)  
COMMENTS: Cites: Anal Chem. 2004 May 1;76(9):2453-61 (medline /15117183)  
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COMMENTS: Cites: J Expo Anal Environ Epidemiol. 2003 May;13(3):203-10 (medline /12743614)  
COMMENTS: Cites: Annu Rev Public Health. 2003;24:175-93 (medline /12359914)  
COMMENTS: Cites: Am J Ind Med. 2001 Nov;40(5):490-501 (medline /11675618)  
COMMENTS: Cites: J Agric Food Chem. 2008 Nov 26;56(22):10638-45 (medline /18947233)  
ABSTRACT: BACKGROUND: Limited data document the multiple and repeated pesticide absorption experienced by farmworkers in an agricultural season or their risk factors.  
ABSTRACT: METHODS: Data were collected from 196 farmworkers four times at monthly intervals in 2007. Urine samples were tested for 12 pesticide urinary metabolites. Questionnaire data provided measures of exposure risks.  
ABSTRACT: RESULTS: Farmworkers had at least one detection for many pesticide urinary metabolites; for example, 84.2% had at least one detection for acephate, 88.8% for 3,5,6-trichloro-2-pyridinol. Most farmworkers had multiple detections for specific metabolites; for example, 64.8% had two or more detections for acephate, 64.8% for 3,5,6-trichloro-2-pyridinol, 79.1% for 3-phenoxybenzoic acid, and 86.7% for 2,4-dichlorophenoxyacetic acid. Housing type had a consistent significant association with metabolite detections.  
ABSTRACT: CONCLUSIONS: Farmworkers are exposed to multiple pesticides across an agricultural season, and they experience repeated exposures to the same pesticides. Reducing farmworker pesticide exposure and delineating the health outcomes of this exposure require more detailed data. Am. J. Ind. Med. 53:802-813, 2010. (c) 2010 Wiley-Liss, Inc.  
MESH HEADINGS: 2,4-Dichlorophenoxyacetic Acid/urine  
MESH HEADINGS: Adolescent  
MESH HEADINGS: Adult  
MESH HEADINGS: Agriculture/\*statistics &amp  
MESH HEADINGS: numerical data  
MESH HEADINGS: Benzoates/urine  
MESH HEADINGS: Data Collection  
MESH HEADINGS: Female  
MESH HEADINGS: Health Status  
MESH HEADINGS: Health Status Disparities  
MESH HEADINGS: Humans  
MESH HEADINGS: Male  
MESH HEADINGS: Multivariate Analysis  
MESH HEADINGS: /epidemiology  
MESH HEADINGS: Occupational Diseases/\*epidemiology/etiology/urine  
MESH HEADINGS: Occupational Exposure/\*adverse effects  
MESH HEADINGS: Organothiophosphorus Compounds/urine  
MESH HEADINGS: Pesticides/\*toxicity/urine  
MESH HEADINGS: Phosphoramides  
MESH HEADINGS: Pyridones/urine  
MESH HEADINGS: Questionnaires  
MESH HEADINGS: Transients and Migrants/\*statistics &amp  
MESH HEADINGS: numerical data  
MESH HEADINGS: Young Adult eng

60. Armes, M. N. ; Liew, Z.; Wang, A.; Wu, X. M.; Bennett, D. H.; Hertz-Picciotto, I., and Ritz, B. Residential Pesticide Usage in Older Adults Residing in Central California. 2011; 8, (8): 3114-3133.   
Rec #: 55839  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Information on residential pesticide usage and behaviors that may influence pesticide exposure was collected in three population-based studies of older adults residing in the three Central California counties of Fresno, Kern, and Tulare. We present data from participants in the Study of Use of Products and Exposure Related Behaviors (SUPERB) study (N = 153) and from community controls ascertained in two Parkinson's disease studies, the Parkinson's Environment and Gene (PEG) study (N = 359) and The Center for Gene-Environment Studies in Parkinson's Disease (CGEP; N = 297). All participants were interviewed by telephone to obtain information on recent and lifetime indoor and outdoor residential pesticide use. Interviews ascertained type of product used, frequency of use, and behaviors that may influence exposure to pesticides during and after application. Well over half of all participants reported ever using indoor and outdoor pesticides; yet frequency of pesticide use was relatively low, and appeared to increase slightly with age. Few participants engaged in behaviors to protect themselves or family members and limit exposure to pesticides during and after treatment, such as ventilating and cleaning treated areas, or using protective equipment during application. Our findings on frequency of use over lifetime and exposure related behaviors will inform future efforts to develop population pesticide exposure models and risk assessment.  
Keywords: pesticides, residential exposure, exposure-related behavior, lifetime  
ISI Document Delivery No.: 811WP

61. Armitage, J. M.; Franco, A.; Gomez, S., and Cousins, I. T. Modeling the potential influence of particle deposition on the accumulation of organic contaminants by submerged aquatic vegetation. 2008; 42, (11): 4052-4059.   
Rec #: 55849  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Submerged aquatic vegetation can act as both a mitigating factor (e.g., reducing downstream impacts of pesticides following runoff/spray drift) and mobilizing factor (e.g., remobilization of contaminants from sediments) influencing the fate and distribution of organic contaminants in the environment. Consequently, there has been wide scientific and regulatory interest in assessing the role of these plants in different contamination scenarios. Mechanistic models describing the environmental fate of contaminants in submerged aquatic vegetation are useful tools for interpreting laboratory and field measurements in addition to providing valuable information to risk assessors. In this study, we developed a fugacity-based model to investigate the influence of particle deposition to plant surfaces on the fate and distribution of two substances in small ponds. The main motivation for conducting this study was to address the fact that the potential contribution of this process is not typically considered by many types of models describing contaminant dynamics in submerged aquatic vegetation. For the hydrophobic substance included in this evaluation (lambda-cyhalothrin), model performance was greatly improved by including this process. The model was also applied in a generic context to compare the importance of particle deposition versus direct water uptake as a function of chemical properties (log K(0W)) and concentration of suspended solids in the water column. The generic application demonstrated that contaminant mass transfer is dominated by particle deposition for chemicals with log K(0W) greater than approximately 5.5-6 across a wide range of suspended solid concentrations and can be important even for low log K(0W) substances in some circumstances. Further empirical and modeling studies are recommended to explore this process more comprehensively.  
Keywords: POLYCHLORINATED-BIPHENYLS, WETLAND MESOCOSMS, METHYL-PARATHION, ACUTE  
ISI Document Delivery No.: 306UW

62. Armstrong, Jenna L; Fenske, Richard a; Yost, Michael G; Galvin, Kit; Tchong-French, Maria; Yu, Jianbo, and Armstrong, Jenna L. Presence of Organophosphorus Pesticide Oxygen Analogs in Air Samples. 2013 Feb; 66, 145-150.   
Rec #: 38419  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A number of recent toxicity studies have highlighted the increased potency of oxygen analogs (oxons) of several organophosphorus (OP) pesticides. These findings were a major concern after environmental oxons were identified in environmental samples from air and surfaces following agricultural spray applications in California and Washington State. This paper reports on the validity of oxygen analog measurements in air samples for the OP pesticide, chlorpyrifos. Controlled environmental and laboratory experiments were used to examine artificial formation of chlorpyrifos-oxon using OSHA Versatile Sampling (OVS) tubes as recommended by NIOSH method 5600. Additionally, we compared expected chlorpyrifos-oxon attributable to artificial transformation to observed chlorpyrifos-oxon in field samples from a 2008 Washington State Department of Health air monitoring study using non-parametric statistical methods. The amount of artificially transformed oxon was then modeled to determine the amount of oxon present in the environment. Toxicity equivalency factors (TEFs) for chlorpyrifos-oxon were used to calculate chlorpyrifos-equivalent air concentrations. The results demonstrate that the NIOSH-recommended sampling matrix (OVS tubes with XAD-2 resin) was found to artificially transform up to 30% of chlorpyrifos to chlorpyrifos-oxon, with higher percentages at lower concentrations (<30 ng m super(-3)) typical of ambient or residential levels. Overall, the 2008 study data had significantly greater oxon than expected by artificial transformation, but the exact amount of environmental oxon in air remains difficult to quantify with the current sampling method. Failure to conduct laboratory analysis for chlorpyrifos-oxon may result in underestimation of total pesticide concentration when using XAD-2 resin matrices for occupational or residential sampling. Alternative methods that can accurately measure both OP pesticides and their oxygen analogs should be used for air sampling, and a toxicity equivalent factor approach should be used to determine potential health risks from exposures.  
Keywords: Environmental monitoring  
Keywords: Pollution monitoring  
Keywords: Meteorological & Geoastrophysical Abstracts; Pollution Abstracts; Environment Abstracts; Risk Abstracts; Health & Safety Science Abstracts  
Keywords: Resins  
Keywords: Safety regulations  
Keywords: P 0000:AIR POLLUTION  
Keywords: Analogs  
Keywords: Sprays  
Keywords: Statistical analysis  
Keywords: Toxicity  
Keywords: Chlorpyrifos  
Keywords: R2 23080:Industrial and labor  
Keywords: Oxygen  
Keywords: USA, Washington  
Keywords: H 5000:Pesticides  
Keywords: Pesticides  
Keywords: Air sampling  
Keywords: M2 551.5:General (551.5)  
Keywords: USA, California  
Keywords: Laboratory experiments  
Keywords: ENA 01:Air Pollution  
Date revised - 2013-01-01  
Language of summary - English  
Location - USA, Washington; USA, California  
Pages - 145-150  
ProQuest ID - 1268652762  
SubjectsTermNotLitGenreText - Analogs; Statistical analysis; Laboratory experiments; Environmental monitoring; Chlorpyrifos; Pollution monitoring; Oxygen; Resins; Safety regulations; Sprays; Pesticides; Air sampling; Toxicity; USA, Washington; USA, California  
Last updated - 2013-02-08  
British nursing index edition - Atmospheric Environment [Atmos. Environ.]. Vol. 66, pp. 145-150. Feb 2013.  
Corporate institution author - Armstrong, Jenna L; Fenske, Richard A; Yost, Michael G; Galvin, Kit; Tchong-French, Maria; Yu, Jianbo  
DOI - 454788ae-946e-416e-97aacsamfg201; 17491934; 1352-2310 English

63. Arora, Sumitra and Arora, Sumitra. Analysis of Insecticides in Okra and Brinjal From Ipm and Non-Ipm Fields. 2009 Apr; 151, (1-4): 311-315.   
Rec #: 41259  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Samples of okra and brinjal fruits, collected from non-integrated pest management (Non-IPM) and IPM fields in village Raispur, Ghaziabad District (U.P.), were analyzed for pesticide residues. The residues of chlorpyrifos in soil were 4.219 and 1.135 mu g/g at harvest time in non-IPM and IPM fields of summer okra crop from initial value of 0.407 mu g/g before sowing, while in brinjal crop, it was not detected in soils of any trials. During first year of study, the residues of chlorpyrifos and cypermethrin in okra fruit were observed to be 5.75 and 0.625 mu g/g, respectively, for non-IPM fields; and 0.104 mu g/g of chlorpyrifos for IPM trials. The pesticide residues were found to be 0.77, 1.39, 0.4 and 0.32 mu g/g for cypermethrin, chlorpyrifos, monocrotophos and dimethoate, respectively, for non-IPM okra fruits in second year. For brinjal fruit, residues of cypermethrin and imidacloprid were not detected in IPM trials while it was found to be 0.28 and 0.78 mu g/g for cypermethrin and chlorpyrifos respectively, for non-IPM trials.  
Keywords: Pesticide residues  
Keywords: P 5000:LAND POLLUTION  
Keywords: M3 1010:Issues in Sustainable Development  
Keywords: fruits  
Keywords: Pest control  
Keywords: villages  
Keywords: EE 10:General Environmental Engineering  
Keywords: Sustainability Science Abstracts; Pollution Abstracts; Environment Abstracts; Environmental Engineering Abstracts  
Keywords: Crops  
Keywords: Environmental Studies  
Keywords: ENA 06:Food & Drugs  
Keywords: Soil  
Keywords: Chlorpyrifos  
Keywords: cypermethrin  
Keywords: Insecticides  
Keywords: Pesticides  
Keywords: summer  
Keywords: dimethoate  
Date revised - 2010-02-01  
Language of summary - English  
Pages - 311-315  
ProQuest ID - 810092802  
SubjectsTermNotLitGenreText - Soil; Chlorpyrifos; cypermethrin; Insecticides; Pesticide residues; fruits; Pesticides; summer; Pest control; villages; dimethoate; Crops  
Last updated - 2012-08-02  
Corporate institution author - Arora, Sumitra  
DOI - OB-MD-0010934212; 11715458; 0167-6369; 1573-2959 English

64. Arora, Sumitra; Mukherjee, Irani, and Trivedi, T P. Determination of Pesticide Residue in Soil, Water and Grain From Ipm and Non-Ipm Field Trials of Rice. 2008 Oct; 81, (4): 373-6.   
Rec #: 49109  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Soil, water and rice grain samples from field trials conducted under the IPM and non-IPM modules in Kaithal (Haryana) region were analyzed for pendimethalin, atrazine, lindane and chlorpyriphos, and in Dehradun (Uttarakhand) region, samples were analyzed for carbendazim only. The pesticide residues were found below the detectable limit in the soil and water samples of the Kaithal region. From Dehradun region the residues of carbendazim in rice grains were detected at 0.001 mg/kg level, and in soil they were in the range of 0.03-0.001 mg/kg. The insecticides applied in IPM as well as non-IPM trials in both regions were observed to be below the prescribed maximum residue level. [PUBLICATION ABSTRACT]  
Keywords: Cereals -- chemistry  
Keywords: Agriculture  
Keywords: Water -- analysis  
Keywords: Oryza sativa -- chemistry  
Keywords: Chromatography, Gas  
Keywords: Hydrogen-Ion Concentration  
Keywords: Spectrophotometry, Ultraviolet  
Keywords: Pesticide Residues  
Keywords: Water  
Keywords: Chromatography, High Pressure Liquid  
Keywords: Environmental Studies  
Keywords: Soil  
Keywords: Soil -- analysis  
Keywords: Pesticide Residues -- analysis  
Keywords: Electrochemistry  
Keywords: Insect Control  
Copyright - Springer Science+Business Media, LLC 2008  
Language of summary - English  
Pages - 373-6  
ProQuest ID - 233186011  
Document feature - References  
Last updated - 2012-02-29  
Place of publication - New York  
Corporate institution author - Arora, Sumitra; Mukherjee, Irani; Trivedi, T P  
DOI - 1896279561; 49370061; 108019; BVCX; 18679559; SPVLBVCX128819493 English

65. Artus, C.; Boujrad, H.; Bouharrour, A.; Brunelle, M. N.; Hoos, S.; Yuste, V. J.; Lenormand, P.; Rousselle, J. C.; Namane, A.; England, P.; Lorenzo, H. K., and Susin, S. A. Aif Promotes Chromatinolysis and Caspase-Independent Programmed Necrosis by Interacting With Histone H2ax.   
Rec #: 50559  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Nature. 1999 Feb 4;397(6718):441-6 (medline /9989411)  
COMMENTS: Cites: Genes Dev. 2004 Jun 1;18(11):1272-82 (medline /15145826)  
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COMMENTS: Cites: J Bioenerg Biomembr. 2004 Aug;36(4):287-94 (medline /15377859)  
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COMMENTS: Cites: J Neurochem. 2009 Jul;110(2):687-96 (medline /19457082)  
COMMENTS: Cites: Cell. 2009 Jun 12;137(6):1100-11 (medline /19524512)  
COMMENTS: Cites: Cell. 2009 Jun 12;137(6):1112-23 (medline /19524513)  
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COMMENTS: Cites: J Biol Chem. 1997 Mar 7;272(10):6677-84 (medline /9045699)  
ABSTRACT: Programmed necrosis induced by DNA alkylating agents, such as MNNG, is a caspase-independent mode of cell death mediated by apoptosis-inducing factor (AIF). After poly(ADP-ribose) polymerase 1, calpain, and Bax activation, AIF moves from the mitochondria to the nucleus where it induces chromatinolysis and cell death. The mechanisms underlying the nuclear action of AIF are, however, largely unknown. We show here that, through its C-terminal proline-rich binding domain (PBD, residues 543-559), AIF associates in the nucleus with histone H2AX. This interaction regulates chromatinolysis and programmed necrosis by generating an active DNA-degrading complex with cyclophilin A (CypA). Deletion or directed mutagenesis in the AIF C-terminal PBD abolishes AIF/H2AX interaction and AIF-mediated chromatinolysis. H2AX genetic ablation or CypA downregulation confers resistance to programmed necrosis. AIF fails to induce chromatinolysis in H2AX or CypA-deficient nuclei. We also establish that H2AX is phosphorylated at Ser139 after MNNG treatment and that this phosphorylation is critical for caspase-independent programmed necrosis. Overall, our data shed new light in the mechanisms regulating programmed necrosis, elucidate a key nuclear partner of AIF, and uncover an AIF apoptogenic motif.  
MESH HEADINGS: Animals  
MESH HEADINGS: Apoptosis Inducing Factor/chemistry/\*metabolism  
MESH HEADINGS: Calpain/metabolism  
MESH HEADINGS: Caspases/\*metabolism  
MESH HEADINGS: Cell Line  
MESH HEADINGS: Chromatin/\*metabolism  
MESH HEADINGS: Cyclophilin A/genetics/metabolism  
MESH HEADINGS: DNA Damage  
MESH HEADINGS: Down-Regulation  
MESH HEADINGS: Fibroblasts/cytology/metabolism  
MESH HEADINGS: Gene Deletion  
MESH HEADINGS: Histones/chemistry/genetics/\*metabolism  
MESH HEADINGS: Methylnitronitrosoguanidine/pharmacology  
MESH HEADINGS: Mice  
MESH HEADINGS: Models, Molecular  
MESH HEADINGS: Necrosis/\*metabolism  
MESH HEADINGS: Poly(ADP-ribose) Polymerases/metabolism  
MESH HEADINGS: bcl-2-Associated X Protein/metabolism eng

66. Aschner, M.; Levin, E. D.; Sunol, C.; Olopade, J. O.; Helmcke, K. J.; Avila, D. S.; Sledge, D.; Ali, R. H.; Upchurch, L.; Donerly, S.; Linney, E.; Forsby, A.; Ponnuru, P., and Connor, J. R. Gene-environment interactions: Neurodegeneration in non-mammals and mammals. 2010; 31, (5): 582-588.   
Rec #: 55909  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The understanding of how environmental exposures interact with genetics in central nervous system dysfunction has gained great momentum in the last decade. Seminal findings have been uncovered in both mammalian and non-mammalian model in large result of the extraordinary conservation of both genetic elements and differentiation processes between mammals and non-mammalians. Emerging model organisms, such as the nematode and zebrafish have made it possible to assess the effects of small molecules rapidly, inexpensively, and on a miniaturized scale. By combining the scale and throughput of in vitro screens with the physiological complexity and traditional animal studies, these models are providing relevant information on molecular events in the etiology of neurodegenerative disorders. The utility of these models is largely driven by the functional conservation seen between them and higher organisms, including humans so that knowledge obtained using non-mammalian model systems can often provide a better understanding of equivalent processes, pathways, and mechanisms in man. Understanding the molecular events that trigger neurodegeneration has also greatly relied upon the use of tissue culture models. **The purpose of this summary is to provide-state-of-the-art review of recent developments of non-mammalian experimental models and their utility in addressing issues pertinent to neurotoxicity (Caenorhabditis elegans and Danio rerio).** The synopses by Aschner and Levin summarize how genetic mutants of these species can be used to complement the understanding of molecular and cellular mechanisms associated with neurobehavioral toxicity and neurodegeneration. Next, studies by Sunol and Olopade detail the predictive value of cultures in assessing neurotoxicity. Sunol and colleagues summarize present novel information strategies based on in vitro toxicity assays that are predictive of cellular effects that can be extrapolated to effects on individuals. Olopade and colleagues describe cellular changes caused by sodium metavanadate (SMV) and demonstrate how rat primary astrocyte cultures can be used as predicitive tools to assess the neuroprotective effects of antidotes on vanadium-induced astrogliosis and demyelination. (C) 2010 Elsevier Inc. All rights reserved.  
Keywords: Caenorhabditis elegans, Zebrafish, Tissue culture, Neurotoxicity,  
ISI Document Delivery No.: 651PI

67. Asensio-Ramos, M; Hernandez-Borges, J; Borges-Miquel, T M; Rodriguez-Delgado, Ma, and Asensio-Ramos, M. Evaluation of Multi-Walled Carbon Nanotubes as Solid-Phase Extraction Adsorbents of Pesticides From Agricultural, Ornamental and Forestal Soils. 2009 Aug; 647, (2): 167-176.   
Rec #: 41069  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A new, simple and cost-effective method based on the use of multi-walled carbon nanotubes (MWCNTs) as solid-phase extraction stationary phases is proposed for the determination of a group of seven organophosphorus pesticides (i.e. ethoprophos, diazinon, chlorpyriphos-methyl, fenitrothion, malathion, chlorpyriphos and phosmet) and one thiadiazine (buprofezin) in different kinds of soil samples (forestal, ornamental and agricultural) using gas chromatography with nitrogen phosphorus detection. Soils were first ultrasound extracted with 10 mL 1:1 methanol/acetonitrile (v/v) and the evaporated extract redissolved in 20 mL water (pH 6.0) was passed through 100 mg of MWCNTs of 10-15 nm o.d., 2-6 nm i.d. and 0.1-10 km length. Elution was carried out with 20 mL dichloromethane. The method was validated in terms of linearity, precision, recovery, accuracy and selectivity. Matrix-matched calibration was carried out for each type of soil since statistical differences between the calibration curves constructed in pure solvent and in the reconstituted soil extract were found for most of the pesticides under study. Recovery values of spiked samples ranged between 54 and 91% for the three types of soils (limits of detection (LODs) between 2.97 and 9.49 ng g super(-1)), except for chlorpyrifos, chlorpyrifos-methyl and buprofezin which ranged between 12 and 54% (LODs between 3.14 and 72.4 ng g super(-1)), which are the pesticides with the highest soil organic carbon sorption coefficient (K sub(OC)) values. Using a one-sample test (Student's t-test) with fortified samples at two concentration levels in each type of soil, no significant differences were observed between the real and the experimental values (accuracy percentages ranged between 87 and 117%). It is the first time that the adsorptive potential of MWCNTs for the extraction of organophosphorus pesticides from soils is investigated.  
Keywords: Sorption  
Keywords: P 5000:LAND POLLUTION  
Keywords: Organic carbon  
Keywords: Phosphorus  
Keywords: Solvents  
Keywords: Malathion  
Keywords: Soil  
Keywords: Chlorpyrifos  
Keywords: Carbon  
Keywords: Gas chromatography  
Keywords: Economics  
Keywords: Pesticides  
Keywords: Adsorption  
Keywords: Pollution Abstracts  
Keywords: Diazinon  
Keywords: pH  
Keywords: nanotechnology  
Keywords: Nitrogen  
Date revised - 2009-08-01  
Language of summary - English  
Pages - 167-176  
ProQuest ID - 20761837  
SubjectsTermNotLitGenreText - Sorption; Organic carbon; Solvents; Phosphorus; Malathion; Soil; Chlorpyrifos; Carbon; Gas chromatography; Pesticides; Economics; Adsorption; Diazinon; pH; nanotechnology; Nitrogen  
Last updated - 2012-03-29  
British nursing index edition - Analytica Chimica Acta [Anal. Chim. Acta]. Vol. 647, no. 2, pp. 167-176. Aug 2009.  
Corporate institution author - Asensio-Ramos, M; Hernandez-Borges, J; Borges-Miquel, T M; Rodriguez-Delgado, MA  
DOI - MD-0010125877; 10258726; 0003-2670 English

68. Ashauer, R. Predicting Effects of Fluctuating or Pulsed Exposure to Pesticides on Aquatic Organisms. 2007: (UMI#C828639).   
Rec #: 420  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CBL,CPY,PCP)  
Notes: Chemical of Concern: CBL,CPY,PCP

69. Ashauer, R.; Wittmer, I.; Stamm, C., and Escher, B. I. Environmental Risk Assessment of Fluctuating Diazinon Concentrations in an Urban and Agricultural Catchment Using Toxicokinetic-Toxicodynamic Modeling. 2011; 45, (22): 9783-9792.   
Rec #: 55969  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Temporally resolved environmental risk assessment of fluctuating concentrations of micropollutants is presented. We separated the prediction of toxicity over time from the extrapolation from one to many species and from acute to sublethal effects. A toxicokinetic-toxicodynamic (TKTD) model predicted toxicity caused by fluctuating concentrations of **diazinon**, measured by time-resolved sampling over 108 days from three locations in a stream network, representing urban, agricultural and mixed land use. We calculated extrapolation factors to quantify variation in toxicity among species and effect types based on available toxicity data, while correcting for different test durations with the TKTD model. Sampling from the distribution of extrapolation factors and prediction of time-resolved toxicity with the TKTD model facilitated subsequent calculation of the risk of undesired toxic events. Approximately one-fifth of aquatic organisms were at risk and fluctuating concentrations were more toxic than their averages. Contribution of urban and agricultural sources of diazinon to the overall risk varied. Thus using fixed concentrations as water quality criteria appears overly simplistic because it ignores the temporal dimension of toxicity. However, the improved prediction of toxicity for fluctuating concentrations may be small compared to uncertainty due to limited diversity of toxicity data to base the extrapolation factors on.  
Keywords: DAPHNIA-MAGNA, PULSED EXPOSURE, GAMMARUS-PULEX, AQUATIC ECOTOXICOLOGY,  
ISI Document Delivery No.: 844OI

70. Assis, C. R. D.; Linhares, A. G.; Oliveira, V. M.; Franca, R. C. P.; Carvalho, E. V. M. M.; Bezerra, R. S.; De Carvalho, and L.B.,Jr. Comparative Effect of Pesticides on Brain Acetylcholinesterase in Tropical Fish. 2012; 441, (0): 141-150.   
Rec #: 2570  
Keywords: IN VITRO  
Call Number: NO IN VITRO (CBF,CBL,CPY,DDVP,DZ,TMP)  
Notes: Chemical of Concern: CBF,CBL,CPY,DDVP,DZ,TMP

71. Assis, Caio Rodrigo Dias; Castro, Patricia Fernandes; Amaral, Ian Porto Gurgel; Carvalho, Elba Veronica Matoso Maciel; Carvalho, Luiz Bezerra; Bezerra, Ranilson Souza, and Assis, Caio Rodrigo Dias. Characterization of Acetylcholinesterase From the Brain of the Amazonian Tambaqui (Colossoma Macropomum) and in Vitro Effect of Organophosphorus and Carbamate Pesticides. 2010 Oct 1; 29, (10): 2243-2248.   
Rec #: 43839  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the present study, acetylcholinesterase (AChE) from the brain of the Amazonian fish tambaqui (Colossoma macropomum) was partially characterized and its activity was assayed in the presence of five organophosphates (dichlorvos, diazinon, chlorpyrifos, and tetraethyl pyrophosphate [TEPP]) and two carbamates (carbaryl and carbofuran) insecticides. Optimal pH and temperature were 7.0 to 8.0 and 45 degree C, respectively. The enzyme retained approximately 70% of activity after incubation at 50 degree C for 30 min. The insecticide concentration capable of inhibiting half of the enzyme activity (IC50) for dichlorvos, chlorpyrifos, and TEPP were calculated as 0.04 mu mol/L, 7.6 mu mol/L, and 3.7 mu mol/L, respectively. Diazinon and temephos did not inhibit the enzyme. The IC50 values for carbaryl and carbofuran were estimated as 33.8 mu mol/L and 0.92 mu mol/L, respectively. These results suggest that AChE from the juvenile C. macropomum brain could be used as an alternative biocomponent of organophosphorus and carbamate biosensors in routine pesticide screening in the environment.  
Keywords: Acetylcholinesterase  
Keywords: Carbaryl  
Keywords: Q5 01502:Methods and instruments  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Environmental factors  
Keywords: Biosensors  
Keywords: Insecticides  
Keywords: Enzymatic activity  
Keywords: X 24330:Agrochemicals  
Keywords: pH effects  
Keywords: Toxicology  
Keywords: pyrophosphates  
Keywords: Dichlorvos  
Keywords: Screening  
Keywords: Temperature effects  
Keywords: Carbofuran  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: Geochemistry  
Keywords: dichlorvos  
Keywords: Brain  
Keywords: Enzymes  
Keywords: carbofuran  
Keywords: organophosphates  
Keywords: Pesticides (carbamates)  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: CSA Neurosciences Abstracts; Environment Abstracts; Toxicology Abstracts; Pollution Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Pesticides  
Keywords: Diazinon  
Keywords: Colossoma macropomum  
Date revised - 2011-03-01  
Language of summary - English  
Pages - 2243-2248  
ProQuest ID - 858424080  
SubjectsTermNotLitGenreText - Screening; Insecticides; Geochemistry; Pesticides; Brain; Enzymatic activity; Environmental factors; Toxicology; Temperature effects; Carbofuran; Acetylcholinesterase; Enzymes; Carbaryl; organophosphates; Pesticides (carbamates); Biosensors; Chlorpyrifos; pH effects; Diazinon; pyrophosphates; Dichlorvos; dichlorvos; carbofuran; Colossoma macropomum  
Last updated - 2012-06-18  
British nursing index edition - Environmental Toxicology and Chemistry [Environ. Toxicol. Chem.]. Vol. 29, no. 10, pp. 2243-2248. 1 Oct 2010.  
Corporate institution author - Castro, Patricia Fernandes; Carvalho, Luiz Bezerra; Bezerra, Ranilson Souza  
DOI - 45c24da6-c0ec-4f17-9429csamfg201; 14430004; CS1146774; 1552-8618 English

72. Atkins, M. B.; Hsu, J.; Lee, S.; Cohen, G. I.; Flaherty, L. E.; Sosman, J. A.; Sondak, V. K.; Kirkwood, J. M., and Eastern Cooperative Oncology Group. Phase Iii Trial Comparing Concurrent Biochemotherapy With Cisplatin, Vinblastine, Dacarbazine, Interleukin-2, and Interferon Alfa-2b With Cisplatin, Vinblastine, and Dacarbazine Alone in Patients With Metastatic Malignant Melanoma (E3695): a Trial Coordinated by the Eastern Cooperative Oncology Group.   
Rec #: 51019  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Clin Oncol. 2008 Feb 1;26(4):527-34 (medline /18235113)  
COMMENTS: Cites: Cancer J Sci Am. 2000 Feb;6 Suppl 1:S11-4 (medline /10685652)  
COMMENTS: Cites: J Clin Oncol. 2007 Sep 1;25(25):3802-7 (medline /17761969)  
COMMENTS: Cites: Clin Cancer Res. 2006 Apr 1;12(7 Pt 2):2353s-2358s (medline /16609058)  
COMMENTS: Cites: Ann Oncol. 2006 Apr;17(4):571-7 (medline /16469753)  
COMMENTS: Cites: J Clin Oncol. 2005 Sep 20;23(27):6747-55 (medline /16170182)  
COMMENTS: Cites: J Clin Oncol. 1999 Mar;17(3):968-75 (medline /10071291)  
COMMENTS: Cites: J Clin Oncol. 1999 Feb;17(2):651-7 (medline /10080611)  
COMMENTS: Cites: J Clin Oncol. 1998 Sep;16(9):2921-9 (medline /9738559)  
COMMENTS: Cites: J Clin Oncol. 1998 May;16(5):1752-9 (medline /9586888)  
COMMENTS: Cites: Cancer J Sci Am. 1997 Dec;3 Suppl 1:S9-15 (medline /9457387)  
COMMENTS: Cites: Cancer J Sci Am. 1997 Dec;3 Suppl 1:S16-21 (medline /9457388)  
COMMENTS: Cites: J Clin Oncol. 1997 Jul;15(7):2579-88 (medline /9215828)  
COMMENTS: Cites: J Clin Oncol. 1994 Aug;12(8):1553-60 (medline /8040667)  
COMMENTS: Cites: Clin Cancer Res. 2002 Sep;8(9):2775-81 (medline /12231516)  
COMMENTS: Cites: J Clin Oncol. 2002 Apr 15;20(8):2045-52 (medline /11956264)  
COMMENTS: Cites: J Clin Oncol. 2002 Mar 15;20(6):1600-7 (medline /11896110)  
COMMENTS: Cites: Clin Cancer Res. 2000 Jun;6(6):2201-8 (medline /10873069)  
COMMENTS: Cites: J Clin Oncol. 2007 Dec 1;25(34):5426-34 (medline /18048825)  
ABSTRACT: PURPOSE: Phase II trials with biochemotherapy (BCT) have shown encouraging response rates in metastatic melanoma, and meta-analyses and one phase III trial have suggested a survival benefit. In an effort to determine the relative efficacy of BCT compared with chemotherapy alone, a phase III trial was performed within the United States Intergroup.  
ABSTRACT: PATIENTS AND METHODS: Patients were randomly assigned to receive cisplatin, vinblastine, and dacarbazine (CVD) either alone or concurrent with interleukin-2 and interferon alfa-2b (BCT). Treatment cycles were repeated at 21-day intervals for a maximum of four cycles. Tumor response was assessed after cycles 2 and 4, then every 3 months.  
ABSTRACT: RESULTS: Four hundred fifteen patients were enrolled, and 395 patients (CVD, n = 195; BCT, n = 200) were deemed eligible and assessable. The two study arms were well balanced for stratification factors and other prognostic factors. Response rate was 19.5% for BCT and 13.8% for CVD (P = .140). Median progression-free survival was significantly longer for BCT than for CVD (4.8 v 2.9 months; P = .015), although this did not translate into an advantage in either median overall survival (9.0 v 8.7 months) or the percentage of patients alive at 1 year (41% v 36.9%). More patients experienced grade 3 or worse toxic events with BCT than CVD (95% v 73%; P = .001).  
ABSTRACT: CONCLUSION: Although BCT produced slightly higher response rates and longer median progression-free survival than CVD alone, this was not associated with either improved overall survival or durable responses. Considering the extra toxicity and complexity, this concurrent BCT regimen cannot be recommended for patients with metastatic melanoma.  
MESH HEADINGS: Protocol: CVD protocol  
MESH HEADINGS: Adult  
MESH HEADINGS: Aged  
MESH HEADINGS: Aged, 80 and over  
MESH HEADINGS: Antineoplastic Combined Chemotherapy Protocols/administration &amp  
MESH HEADINGS: dosage/adverse effects/\*therapeutic use  
MESH HEADINGS: Cyclophosphamide/administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Dacarbazine/administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Disease-Free Survival  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: Interferon-alpha/administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Interleukin-2/administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Kaplan-Meier Estimate  
MESH HEADINGS: Male  
MESH HEADINGS: Melanoma/\*drug therapy/mortality/pathology  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: Neoplasm Metastasis  
MESH HEADINGS: Recombinant Proteins  
MESH HEADINGS: Time Factors  
MESH HEADINGS: Treatment Outcome  
MESH HEADINGS: Vincristine/administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Young Adult eng

73. Auta, J.; Ogueji, E. O.; Araoye, P. A.; Adikwu, I. A., and Banke, R. O. K. Acute Toxicity and Behavioural Effects of Chlorpyrifos Ethyl Pesticide to Juveniles of Clarias gariepinus. 2008: 264-272.   
Rec #: 430  
Keywords: NO SOURCE  
Call Number: NO CONTROL (CPY), NO ENDPOINT (CPY)  
Notes: Chemical of Concern: CPY

74. AuYeung, W.; Canales, R. A., and Leckie, J. O. The fraction of total hand surface area involved in young children's outdoor hand-to-object contacts. 2008; 108, (3): 294-299.   
Rec #: 56079  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Information on the fraction of total hand surface area touching a contaminated object is necessary in accurately estimating contaminant (e.g., pesticides, pathogens) loadings onto the hands during hand-to-object contacts. While several existing physical-stochastic human exposure models require such surface area data to estimate dermal and non-dietary ingestion exposure, there are very limited data sets. This paper provides statistical distributions of fractional surface areas (FSAs) for children's outdoor hand contacts. These distributions were constructed by combining information collected from two distinct studies exploring children's activity patterns and quantifying hand contact surface area. Results show that for outdoor contacts with "All Objects", a range of 0.13-0.27 captured median FSAs, while a range of 0.12-0.24 captured time-weighted FSAs. Overall, an FSA of 0.31 captured 80-100% of FSAs involved in each child's outdoor hand contacts, depending upon the object of interest. These values are much lower than the often conservative assumptions of up to 1 (i.e., the entire hand) that researchers currently make regarding FSAs involved in indoor and outdoor contacts [USEPA, 1997. Standard operating procedures (SOPs) for residential exposure assessments. Contract no. 68-W6-0030. < http://www.epa.gov/pesticides/trac/science/trac6a05.pdf >]. (C) 2008 Elsevier Inc. All rights reserved.  
Keywords: Dermal exposure, Non-dietary exposure, Hand surface area, Micro-level  
ISI Document Delivery No.: 368YR

75. Awkerman, J. A.; Raimondo, S., and Barron, M. G. Estimation of Wildlife Hazard Levels Using Interspecies Correlation Models and Standard Laboratory Rodent Toxicity Data. 2009; 72, (24): 1604-1609.   
Rec #: 20  
Keywords: MODELING,REFS CHECKED  
Call Number: NO MODELING (4AP,CBF,CPY,DCTP,DZ,MCB,PPX,STCH,TMP), NO REFS CHECKED (4AP,CBF,CPY,DCTP,DZ,MCB,PPX,STCH,TMP)  
Notes: Chemical of Concern: 4AP,CBF,CPY,DCTP,DZ,EN,EPRN,FNTH,MCB,PPHD,PPX,PRN,STCH,TMP

76. Baas, Jan; Jager, Tjalling; Kooijman, Bas, and Baas, Jan. Understanding Toxicity as Processes in Time. 2010 Aug 15; 408, (18): 3735-3739.   
Rec #: 47769  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Studies in ecotoxicology usually focus on a single end point (typically mortality, growth, or reproduction) at a standardized exposure time. The exposure time is chosen irrespective of the properties of the chemical under scrutiny, but should depend on the organism of choice in combination with the compound(s) of interest. This paper discusses the typical patterns for toxic effects in time that can be observed for the most encountered endpoints growth reproduction and survival. Ignoring the fact that toxicity is a process in time can lead to severe bias in environmental risk assessment. We show that especially ECx values for sublethal endpoints can show very distinct patterns in time. We recommend that the test duration for survival as an endpoint should be extended till the incipient LC50 is observed. Given the fact that toxicity data for single compounds show clear patterns in time, it is to be expected that effects of mixtures will also be strongly dependent on time. The few examples that have been published support this statement.  
Keywords: Risk assessment  
Keywords: Survival  
Keywords: SW 3030:Effects of pollution  
Keywords: Population dynamics  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Environmental factors  
Keywords: Toxicity tests  
Keywords: Environmental Studies  
Keywords: ecotoxicology  
Keywords: Ecotoxicology  
Keywords: Assessments  
Keywords: Exposure  
Keywords: environmental assessment  
Keywords: R2 23050:Environment  
Keywords: X 24300:Methods  
Keywords: Testing Procedures  
Keywords: Mortality  
Keywords: Data processing  
Keywords: Environmental assessment  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Q5 01504:Effects on organisms  
Keywords: Toxicity  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Risk  
Keywords: Risk Abstracts; Environment Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Pollution Abstracts; Aqualine Abstracts; Water Resources Abstracts; Toxicology Abstracts  
Keywords: Water Pollution Effects  
Keywords: Standards  
Keywords: Reproduction  
Keywords: survival  
Keywords: Mortality causes  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 3735-3739  
ProQuest ID - 814223853  
SubjectsTermNotLitGenreText - Ecotoxicology; Environmental assessment; Survival; Toxicity; Population dynamics; Environmental factors; Toxicity tests; Mortality causes; Risk assessment; Mortality; Data processing; Reproduction; ecotoxicology; environmental assessment; Standards; survival; Testing Procedures; Risk; Assessments; Exposure; Water Pollution Effects  
Last updated - 2012-08-02  
Corporate institution author - Baas, Jan; Jager, Tjalling; Kooijman, Bas  
DOI - OB-40cc3f1b-d186-4990-b59ecsaobj202; 13249917; CS1100398; 0048-9697 English

77. Babina, Kateryna; Dollard, Maureen; Pilotto, Louis, and Edwards, John W. Environmental exposure to organophosphorus and pyrethroid pesticides in South Australian preschool children: A cross sectional study. 2012 Nov 1-; 48, (0): 109-120.   
Rec #: 4180  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Organophosphorus (OP) and pyrethroid (PYR) compounds are the most widely used insecticides. OPs and PYRs are developmental neurotoxicants. Understanding the extent of exposure in the general population and especially in young children is important for the development of public health policy on regulation and use of these chemicals. Presented here are the results of the first investigation into the extent of environmental exposure to neurotoxic insecticides in preschool children in South Australia (SA). Environmental exposure/ Organophosphate/ Pyrethroid/ Neurotoxic insecticides/ Children/ South Australia

78. Babu, V; Unnikrishnan, P; Anu, G; Nair, S M, and Babu, V. Distribution of Organophosphorus Pesticides in the Bed Sediments of a Backwater System Located in an Agricultural Watershed: Influence of Seasonal Intrusion of Seawater. 2011 May; 60, (4): 597-609.   
Rec #: 43349  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This article focuses on the temporal and spatial distribution of three organophosphorous pesticides-malathion, methyl parathion, and chlorpyrifos-in the sedimentary environment of a backwater ecosystem, Kuttanad backwaters, situated in Kerala, India. Based on salinity distribution, geographic characteristics, and human activities prevailing in the area, the study area was divided into three zones: zone 1 with riverine characteristics, zone 2 with freshwater characteristics during and after the monsoon season and estuarine characteristics during the premonsoon season, and zone 3 with estuarine characteristics. The organophosphorus pesticides in the study area showed the order of enrichment as chlorpyrifos >malathion >methyl parathion. While studying the variations in pesticide concentrations seasonally, higher concentrations were observed during the premonsoon monsoon season, with the concentrations being lower than the detectable level. Sediment characteristics, such as pH, texture, organic carbon, moisture content, etc., had reflective effect on the degradation rates of pesticides. The runoff water from the paddy fields made a larger contribution of pesticide pollution to the study area.  
Keywords: India, Kerala, Kuttanad  
Keywords: Backwater  
Keywords: Degradation  
Keywords: Spatial distribution  
Keywords: M2 551.468:Coastal Oceanography (551.468)  
Keywords: ENA 12:Oceans & Estuaries  
Keywords: ISW, India, Kerala  
Keywords: Watersheds  
Keywords: Spatial Distribution  
Keywords: Malathion  
Keywords: backwaters  
Keywords: spatial distribution  
Keywords: Salinity  
Keywords: Carbon  
Keywords: Organophosphorus Pesticides  
Keywords: Agricultural Chemicals  
Keywords: Rice fields  
Keywords: Marine environment  
Keywords: H 5000:Pesticides  
Keywords: Salinity effects  
Keywords: Pesticide pollution  
Keywords: Seasonal variability  
Keywords: Methyl parathion  
Keywords: Enrichment  
Keywords: X 24330:Agrochemicals  
Keywords: Salinity distribution  
Keywords: pH effects  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: Pesticides (organophosphorus)  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: Freshwater environments  
Keywords: Sedimentary environments  
Keywords: Sediments  
Keywords: Chlorpyrifos  
Keywords: P 1000:MARINE POLLUTION  
Keywords: Pesticides  
Keywords: Pesticides in river water  
Keywords: Meteorological & Geoastrophysical Abstracts; Health & Safety Science Abstracts; Environment Abstracts; Water Resources Abstracts; Pollution Abstracts; Aqualine Abstracts; Toxicology Abstracts  
Keywords: Runoff  
Keywords: Parathion  
Keywords: Monsoons  
Date revised - 2011-06-01  
Language of summary - English  
Location - India, Kerala, Kuttanad; ISW, India, Kerala  
Pages - 597-609  
ProQuest ID - 874193277  
SubjectsTermNotLitGenreText - Pesticides (organophosphorus); Spatial distribution; Freshwater environments; Watersheds; Sediments; Malathion; Chlorpyrifos; Carbon; Rice fields; Marine environment; Salinity effects; Pesticide pollution; Methyl parathion; pH effects; Runoff; Monsoons; Pesticides in river water; Seasonal variability; Sedimentary environments; Salinity distribution; backwaters; spatial distribution; Degradation; Pesticides; Parathion; Salinity; Organophosphorus Pesticides; Agricultural Chemicals; Backwater; Spatial Distribution; Enrichment; India, Kerala, Kuttanad; ISW, India, Kerala  
Last updated - 2012-09-10  
British nursing index edition - Archives of Environmental Contamination and Toxicology [Arch. Environ. Contam. Toxicol.]. Vol. 60, no. 4, pp. 597-609. May 2011.  
Corporate institution author - Babu, V; Unnikrishnan, P; Anu, G; Nair, S M  
DOI - f466c5d7-d862-4dfd-b756csaobj201; 14757491; 0090-4341 English

79. Bagheri, Habib; EsÇÖhaghi, Ali; Es-haghi, Ali, and Mesbahi, Noushin. A high-throughput approach for the determination of pesticide residues in cucumber samples using solid-phase microextraction on 96-well plate. 2012 Aug 31-; 740, (0): 36-42.   
Rec #: 5030  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: A high-throughput solid-phase microextraction (SPME) on 96-well plate together with gas chromatographyÇômass spectrometry (GCÇôMS) was developed for the determination of some selected pesticides in cucumber samples. Pieces with the length of 1.0 cm of silicon tubing were precisely prepared and then coated on the end part of stainless steel wires. The prepared fibers were positioned in a home-made polytetrafluoroethylene (PTFE)-based constructed ninety-six holes block to have the possibility of simultaneous immersion of the SPME fibers into the center of individual wells. Pesticides such as diazinon, penconazol, tebuconazol, bitertanol, malathion, phosalone and chlorpyrifos-methyl were selected for their highly application in cucumber field. The performances of the SPME fibers, such as intra and inter-fibers reproducibility, were evaluated and the results showed a good similarity in extraction yields. A volume of 1 mL of the aquatic supernatant of the cucumber samples was transferred into the 96-well plate and the array of SPME fibers was applied for the extraction of the selected pesticides. The important parameters influencing the whole extraction process including, organic solvent percent, salt addition, dilution factor, stirring rate and extraction time were optimized. The inter- and intra-day RSD% were found to be less than 15.4%. Limits of detection (LOD) and limits of quantification (LOQ) were below 60 and 180 ++g kgęĆ1, respectively. The coefficient of determination was satisfactory (r2 &gt; 0.99) for all the studied analytes. The developed method was successfully applied to the monitoring of several samples gathered from local markets. High-throughput/ 96-Well plate/ Pesticide residues/ Cucumber analysis/ Solid-phase microextraction

80. Baglieri, A. ; Gennari, M.; Arena, M., and Abbate, C. The adsorption and degradation of chlorpyriphos-methyl, pendimethalin and metalaxyl in solid urban waste compost. 2011; 46, (6): 454-460.   
Rec #: 56169  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: To evaluate the feasibility of using compost to prepare substrates for the disposal of pesticide residues, adsorption and degradation studies were carried out on three widely used agricultural pesticides: **chlorpyriphos-methyl, pendimethalin and metalaxyl.** Obtained from solid urban waste, this compost has been shown to be able to adsorb high levels of chlorpyriphos-methyl and pendimethalin (85 %, 100 %) whereas metalaxyl was only adsorbed at a level of 37 %. However, adding smectite to the compost increased the adsorption of metalaxyl by 117 %. Chlorpyriphos-methyl and pendimethalin degraded quickly with half-lives of 1.7 and 14.5 days, respectively, whereas metalaxyl proved more persistent (a half-life of 84 days). Adding ammonium nitrate to the compost accelerated metalaxyl degradation to a half-life of 15 days.  
Keywords: Chlorpyriphos-methyl, pendimethalin, metalaxyl, degradation, adsorption  
ISI Document Delivery No.: 879QK

81. Bahrami, F.; Yousefpour, M.; Mehrani, H.; Golmanesh, L.; Sadraee, S. H.; Khoshbaten, A., and Asgari, A. TYPE OF CELL DEATH AND THE ROLE OF ACETYLCHOLINESTERASE ACTIVITY IN NEUROTOXICITY INDUCED BY PARAOXON IN CULTURED RAT HIPPOCAMPAL NEURONS. 2009; 60, (1): 1-13.   
Rec #: 56179  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphate (Ops) neurotoxicity is attributed both to its well-known cholinergic and non-cholinergic effects. In the present study we compared enzymatic and morphologic changes in **neurons exposed to paraoxon** during one day and one week. The effect of exposure time is important in neurotoxicity of Ops. The longer the exposure time is the more damage is observed in neurons, although there are few investigations about the effect in the post-exposure period. Hippocampal cells were obtained from rat neonates and cultured in Neurobasal/B27. Paraoxon at 50 and 100 mu M were added. Inverted microscope and electron microscope were used to study cell morphology and Neutral Red staining was used to measure viability. We also assayed caspase-3 and (acetylcholinesterase) AChE activity. Hoechst staining was utilized to determine the type of cell death. Culture medium was replaced after 24 h in one-day group, however, tests were all carried out at the end of the first week in both group. The results indicate that paraoxon reduced the viability in a dose-dependent manner. Our results do not confirm apoptosis in either group; it seems that the cell death in one-day exposure group was not AChE dependent. In conclusion, present data imply that the toxicity of paraoxon is both dose and duration dependent, which may even remain after the cessation of exposure.  
Keywords: Paraoxon, hippocampus, cell culture, apoptosis, cholinesterase activity  
ISI Document Delivery No.: 427BU

82. Bai, Y. H.; Chen, J. R.; Yang, Y.; Guo, L. M., and Zhang, C. H. Degradation of organophosphorus pesticide induced by oxygen plasma: Effects of operating parameters and reaction mechanisms. 2010; 81, (3): 408-414.   
Rec #: 56189  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The degradation effectiveness and degradation mechanism of representative organophosphorus (OP) pesticide during oxygen plasma treatment have been studied. The identification and quantitative determination of OP pesticide, the degradation mechanisms for OP pesticide destruction, its destruction intermediates, and by-products were performed using gas chromatography/mass spectrometry (GC/MS) Plausible mechanisms of the degradation are discussed. Experimental results indicate that oxygen plasma treatment has noticeable effects on OP pesticide with satisfactory degradation efficiency, which mainly depends on related operating parameters including plasma treatment time, discharge power, distance from the center of the induction coil, and concentrations of OP pesticide It was found that OP pesticide was degraded into less-toxic compounds, and free radical reaction and addition reaction were to be the dominated the degradation mechanisms for OP pesticides treated by oxygen plasma. Therefore, our results suggest that oxygen plasma is suitable for degradation of OP pesticide (C) 2010 Elsevier Ltd All rights reserved  
Keywords: Degradation, Organophosphorus (OP) pesticide, Oxygen plasma, Reaction  
ISI Document Delivery No.: 661IZ

83. Balayiannis, George; Balayiannis, Panos, and Balayiannis, George. Bee Honey as an Environmental Bioindicator of Pesticides' Occurrence in Six Agricultural Areas of Greece. 2008 Oct; 55, (3): 462-470.   
Rec #: 45499  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The pollution of six agricultural areas of Greece (north, central, south) by insecticides used in crop protection has been investigated utilizing, as a bioindicator, bee honey produced in those areas. Honey samples collected randomly from apiaries located in those areas were analyzed for pesticide residues with a multianalytical method, able to determine simultaneously up to 10 organophosphorous insecticides from the same honey extract. Findings concerning the acaricide coumaphos were also included, even though it is not used in crop protection. Coumaphos is used to control the mite Varroa destructor, an external parasite of the honeybee. The above areas are cultivated in large extent with citrus trees or cotton or sunflower crops, which are good forages for honeybees. The main pests of those crops are insects; hence, insecticides are used on a large scale for crop protection. The most contaminated samples originated from citrus groves; 16 out of 19 had pesticide residues: 4 samples had chlorfenvinphos (21.05%), 10 had chlorpyrifos (52.63%) and 2 had phorate (10.53%). Out of 17 samples from cotton fields, residues were found in 8, phorate in 6 (35.29%), chlorfenvinphos in 1 (5.88%), and chlorpyrifos in 1 (5.88%). Out of nine samples from fields of sunflower, four had phorate residues (44.44%). In brief, from the 50 analyzed samples, residues of chlorfenvinphos were detected in 5 samples (10%), residues of chlorpyrifos in 11 samples (22%), and residues of phorate in 12 samples (24%). Their levels ranged between 0.70 and 0.89 kg/kg. Coumaphos residues ranged from 0.10 up to 4.80 kg/kg and were derived exclusively from beehives treated with Perizin (the commercial formulation of coumaphos) for Varroa control. This study indicates that in agricultural areas with developed apiculture, useful information about the occurrence and the distribution of pesticide residues due to crop protection treatments can be derived from the analysis of randomly collected honey samples, used as bioindicators. It also shows that, very often, the chemicals used by apiculturists inside the hives in order to control disease are the main pollutants of the produced honey.  
Keywords: Citrus  
Keywords: Chemicals  
Keywords: Parasites  
Keywords: Z 05300:General  
Keywords: Cotton  
Keywords: Greece  
Keywords: Beehives  
Keywords: Trees  
Keywords: phorate  
Keywords: Toxicology Abstracts; Aqualine Abstracts; Water Resources Abstracts; Environment Abstracts; Pollution Abstracts; Entomology Abstracts  
Keywords: Pesticide residues  
Keywords: Apis mellifera  
Keywords: Chlorfenvinphos  
Keywords: insects  
Keywords: acaricides  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Varroa destructor  
Keywords: Crops  
Keywords: Forages  
Keywords: pests  
Keywords: Insecticides  
Keywords: Agricultural Chemicals  
Keywords: Pollutants  
Keywords: Coumaphos  
Keywords: Apiculture  
Keywords: Pests  
Keywords: Acaricides  
Keywords: X 24330:Agrochemicals  
Keywords: Pollution  
Keywords: Honey  
Keywords: Bioindicators  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Pesticide Residues  
Keywords: Protection  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Pesticides  
Keywords: forage  
Keywords: Mites  
Keywords: Crop protection  
Keywords: Indicator species  
Keywords: Helianthus  
Date revised - 2010-02-01  
Language of summary - English  
Location - Greece  
Pages - 462-470  
ProQuest ID - 21266956  
SubjectsTermNotLitGenreText - Parasites; Cotton; Beehives; Trees; phorate; Pesticide residues; Chlorfenvinphos; Crops; Chlorpyrifos; Insecticides; Pollutants; Pesticides; Crop protection; Coumaphos; Apiculture; Acaricides; Pests; Honey; Pollution; Indicator species; Bioindicators; Chemicals; acaricides; insects; pests; forage; Mites; Agricultural Chemicals; Pesticide Residues; Protection; Forages; Citrus; Apis mellifera; Varroa destructor; Helianthus; Greece  
Last updated - 2012-07-27  
British nursing index edition - Archives of Environmental Contamination and Toxicology [Arch. Environ. Contam. Toxicol.]. Vol. 55, no. 3, pp. 462-470. Oct 2008.  
Corporate institution author - Balayiannis, George; Balayiannis, Panos  
DOI - MD-0011188778; 11899294; 0090-4341; 1432-0703 English

84. Baldwin, D. H.; Spromberg, J. A.; Collier, T. K., and Scholz, N. L. A Fish of Many Scales: Extrapolating Sublethal Pesticide Exposures to the Productivity of Wild Salmon Populations. David.Baldwin@noaa.gov//: 2009; 19, (8): 2004-2015.   
Rec #: 30  
Keywords: MODELING  
Call Number: NO MODELING (AZ,CPY,DDVP,DZ,MLN,MP,MTM,PSM)  
Notes: Chemical of Concern: AZ,CPY,DDVP,DZ,FNF,MLN,MP,MTM,PSM

85. Baldwin, William S and Roling, Jonathan a. A Concentration Addition Model for the Activation of the Constitutive Androstane Receptor by Xenobiotic Mixtures. 2009 Jan; 107, (1): 93-105.   
Rec #: 48979  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effects of contaminants are typically studied in individual exposures; however, environmental exposures are rarely from a single contaminant. Therefore, the study of chemical mixtures is important in determining the effects of xenobiotics. The constitutive androstane receptor (CAR) responds to endobiotics and xenobiotics, and in turn induces detoxification enzymes involved in their elimination. First, we compared several androgens as inverse agonists, including androgens allegedly used by Bay Area Laboratory Co-operative to enhance athletic performance. CAR inverse agonists ranked in order of potency were **dihydroandrosterone (DHA) > tetrahydrogestrinone (THG) > androstanol > norbolethon**e. Therefore, we used DHA as an inverse agonist during transactivation assays. Next, we examined the effects of several pesticides, plasticizers, steroids, and bile acids on CAR activation. Our data demonstrates that several pesticides and plasticizers, including **diethylhexylphthalate, nonylphenol, cypermethrin, and chlorpyrifos** activate CAR. Both full and partial CAR activators were discovered, and EC(50) values and Hillslopes were determined for use in the concentration addition models. Concentration addition models with and without restraint values to account for partial activators were developed. Measured results from transactivation assays with a mixture of two to five chemicals indicate that the concentration addition model without restraints correctly predicts activity unless all of the chemicals in the mixture are partial activators, and then restraint values be considered. Overall, our data indicates that it is important to consider that we are exposed to a milieu of chemicals, and the efficacy of each individual chemical is not the sole factor in determining CAR's activity in mixture modeling.  
Keywords: Animals  
Keywords: Complex Mixtures -- pharmacology  
Keywords: Algorithms  
Keywords: Transcriptional Activation -- drug effects  
Keywords: Receptors, Cytoplasmic and Nuclear -- genetics  
Keywords: Xenobiotics  
Keywords: Models, Biological  
Keywords: 76150-91-9  
Keywords: Hazardous Substances  
Keywords: constitutive androstane receptor  
Keywords: Gene Expression Regulation -- drug effects  
Keywords: 1,4-bis(2-(3,5-dichloropyridyloxy))benzene  
Keywords: Androgens -- metabolism  
Keywords: Receptors, Cytoplasmic and Nuclear  
Keywords: Dose-Response Relationship, Drug  
Keywords: Xenobiotics -- pharmacology  
Keywords: Hazardous Substances -- pharmacology  
Keywords: Mice  
Keywords: Pyridines  
Keywords: Androgens -- agonists  
Keywords: Complex Mixtures  
Keywords: Receptors, Cytoplasmic and Nuclear -- agonists  
Keywords: 0  
Keywords: Receptors, Cytoplasmic and Nuclear -- metabolism  
Keywords: Models, Chemical  
Keywords: Pyridines -- pharmacology  
Keywords: Cell Line  
Keywords: Androgens  
Date completed - 2009-08-07  
Date created - 2008-12-16  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 93-105  
ProQuest ID - 66738531  
SuppNotes - Cites: J Pharm Sci. 1976 Apr;65(4):595-6[1271264]; Cites: Mol Pharmacol. 2006 Apr;69(4):1095-102[16377764]; Cites: Ann N Y Acad Sci. 1971 Jul 6;179:362-9[5285381]; Cites: Science. 1995 Dec 1;270(5241):1491-4[7491495]; Cites: Environ Health Perspect. 1995 Feb;103(2):142-5[7737059]; Cites: Mol Cell Biol. 1994 Mar;14(3):1544-52[8114692]; Cites: Mol Endocrinol. 1993 Aug;7(8):992-8[8232319]; Cites: Environ Health Perspect. 1995 Oct;103 Suppl 7:35-8[8593872]; Cites: Endocrinology. 1996 May;137(5):1735-44[8612509]; Cites: J Biol Chem. 1997 Jun 20;272(25):15959-66[9188497]; Cites: Nature. 1998 Oct 8;395(6702):612-5[9783588]; Cites: J Biol Chem. 1999 Mar 5;274(10):6043-6[10037683]; Cites: J Cell Physiol. 1999 Jun;179(3):297-304[10228948]; Cites: Mol Cell Biol. 1999 Sep;19(9):6318-22[10454578]; Cites: J Biol Chem. 2000 May 19;275(20):15122-7[10748001]; Cites: Mol Cell Biol. 2000 May;20(9):2951-8[10757780]; Cites: Nature. 2000 Oct 19;407(6806):920-3[11057673]; Cites: J Biol Chem. 2006 Sep 8;281(36):26540-51[16825189]; Cites: Biochem J. 2007 Feb 1;401(3):735-41[17032173]; Cites: Toxicology. 2007 Mar 7;231(2-3):224-33[17276571]; Cites: Toxicol Sci. 2007 Aug;98(2):416-26[17483497]; Cites: Annu Rev Pharmacol Toxicol. 2008;48:1-32[17608617]; Cites: J Lipid Res. 2008 Mar;49(3):550-62[18056926]; Cites: Mol Cell. 2004 Dec 22;16(6):893-905[15610733]; Cites: Hepatology. 2005 Aug;42(2):420-30[15986414]; Cites: Mol Pharmacol. 2006 Jan;69(1):56-65[16207822]; Cites: Drug Metab Rev. 2006;38(1-2):51-73[16684648]; Cites: Drug Metab Dispos. 2006 Dec;34(12):2003-10[16936065]; Cites: Drug Metab Dispos. 2007 Jun;35(6):995-1000[17353348]; Cites: Drug Metab Dispos. 2007 Sep;35(9):1700-10[17576804]; Cites: Pediatr Res. 2008 Jun;63(6):667-73[18327154]; Cites: Pharm Res. 2001 Feb;18(2):146-50[11405283]; Cites: Science. 2001 Jun 22;292(5525):2329-33[11408620]; Cites: J Biol Chem. 2002 Jan 25;277(4):2908-15[11706036]; Cites: Environ Sci Technol. 2002 Mar 15;36(6):1202-11[11944670]; Cites: Mol Endocrinol. 2002 May;16(5):977-86[11981033]; Cites: Rapid Commun Mass Spectrom. 2002;16(13):1273-5[12112254]; Cites: Environ Health Perspect. 2002 Sep;110(9):917-21[12204827]; Cites: Science. 2002 Oct 11;298(5592):422-4[12376703]; Cites: J Biol Chem. 2003 Apr 18;278(16):14146-52[12571232]; Cites: Environ Health Perspect. 2002 Dec;110 Suppl 6:947-56[12634124]; Cites: Environ Health Perspect. 2002 Dec;110 Suppl 6:979-83[12634128]; Cites: Mol Pharmacol. 2003 Aug;64(2):474-81[12869653]; Cites: J Biol Chem. 2003 Nov 14;278(46):45062-71[12923173]; Cites: J Clin Invest. 2004 Jan;113(1):137-43[14702117]; Cites: Mol Endocrinol. 2004 Jul;18(7):1589-98[14988430]; Cites: J Biol Chem. 2004 May 21;279(21):22250-7[15004017]; Cites: Toxicol Sci. 2004 Jul;80(1):134-50[15084752]; Cites: J Biol Chem. 2004 Jul 9;279(28):29295-301[15123723]; Cites: Rapid Commun Mass Spectrom. 2004;18(12):1245-049[15174177]; Cites: Mol Endocrinol. 2004 Oct;18(10):2402-8[15272053]; Cites: J Biol Chem. 2004 Nov 19;279(47):49517-22[15358766]; Cites: J Biol Chem. 2005 Feb 11;280(6):4367-73[15572372]; Cites: J Endocrinol. 2005 Feb;184(2):427-33[15684350]; Cites: Toxicol Sci. 2005 Oct;87(2):520-8[16002478]; Cites: Chem Biol Interact. 2005 Aug 15;155(3):111-28[16054614]; Cites: J Theor Biol. 1985 Jun 7;114(3):413-31[4021503]  
Last updated - 2013-01-19  
British nursing index edition - Toxicological sciences : an official journal of the Society of Toxicology, January 2009, 107(1):93-105  
Corporate institution author - Baldwin, William S; Roling, Jonathan A  
DOI - MEDL-18832183; 18832183; PMC2735418; 1096-0929 eng

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Rec #: 56349  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorus (OP) insecticides were among the first pesticides that EPA reevaluated as part of the Food Quality Protection Act of 1996. Our goal was to assess exposure to OP insecticides in the U. S. general population over a six-year period. We analyzed 7,456 urine samples collected as part of three two-year cycles of the National Health and Nutrition Examination Survey (NHANES) from 1999-2004. We measured six dialkylphosphate metabolites of OP pesticides to assess OP pesticide exposure. In NHANES 2003-2004, dimethylthiophosphate was detected most frequently with median and 95th percentile concentrations of 2.03 and 35.3 mu g/L, respectively. Adolescents were two to three times more likely to have diethylphosphate concentrations above the 95th percentile estimate of 15.5 mu g/L than adults and senior adults. Conversely, for dimethyldithiophosphate, senior adults were 3.8 times and 1.8 times more likely to be above the 95th percentile than adults and adolescents, respectively, while adults were 2.1 times more likely to be above the 95th percentile than the adolescents. Our data indicate that the most vulnerable segments of our population-children and older adults-have higher exposures to OP pesticides than other population segments. However, according to DAP urinary metabolite data, exposures to OP pesticides have declined during the last six years at both the median and 95th percentile levels.  
Keywords: NHANES, urine, organophosphorus, pesticide, dialkylphosphate  
ISI Document Delivery No.: 811WP

87. Barr, Dana B ; Ananth, Cande V; Yan, Xiaoyong; Lashley, Susan; Smulian, John C; Ledoux, Thomas a; Hore, Paromita; Robson, Mark G, and Barr, Dana B. Pesticide Concentrations in Maternal and Umbilical Cord Sera and Their Relation to Birth Outcomes in a Population of Pregnant Women and Newborns in New Jersey. 2010 Jan 15; 408, (4): 790-795.   
Rec #: 44249  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We evaluated in utero exposures to pesticides by measuring maternal and cord serum biomarkers in a New Jersey cohort of pregnant women and the birth outcomes of their neonates. The study was based on 150 women that underwent an elective cesarean delivery at term in a hospital in central New Jersey. We evaluated the following pesticide compounds in both maternal and umbilical cord sera: chlorpyrifos, diazinon, carbofuran, chlorothalonil, dacthal, metolachlor, trifluralin and diethyl-m-toluamide (DEET). Of these compounds, chlorpyrifos, carbofuran, chlorothalonil, trifluralin, metolachlor and DEET were the pesticides most frequently detected in the serum samples. We found high (a[control][yen75th percentile) metolachlor concentrations in cord blood that were related to birth weight (3605g in upper quartile vs 3399g; p=0.05). We also observed an increase in abdominal circumference with increasing cord dichloran concentrations (p=0.031). These observations suggest that in utero exposures to certain pesticides may alter birth outcomes.  
Keywords: Environmental Engineering Abstracts (EN); CSA / ASCE Civil Engineering Abstracts (CE)  
Date revised - 2013-01-01  
Language of summary - English  
Number of references - 1  
Pages - 790-795  
ProQuest ID - 746074109  
Last updated - 2013-01-07  
British nursing index edition - Science of the Total Environment [Sci. Total Environ.]. Vol. 408, no. 4, pp. 790-795. 15 Jan 2010.  
Corporate institution author - Barr, Dana B; Ananth, Cande V; Yan, Xiaoyong; Lashley, Susan; Smulian, John C; Ledoux, Thomas A; Hore, Paromita; Robson, Mark G  
DOI - 1a6c86d4-a719-4e94-8c16csaobj202; 12929747; 0048-9697  
Tomlin. The pesticide manual. 11 ed. English

88. Barraza, Douglas; Jansen, Kees; Van Wendel De Joode, Berna; Wesseling, Catharina, and Barraza, Douglas. Pesticide Use in Banana and Plantain Production and Risk Perception Among Local Actors in Talamanca, Costa Rica. 2011 Jul; 111, (5): 708-717.   
Rec #: 47239  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The Talamanca County in Costa Rica has large-scale banana and small-scale plantain production, probably causing pesticide exposure in indigenous children. We explored to what extent different community actors are aware of children's pesticide hazards and how their awareness related to socio-economical and cultural conditions. Methods comprised eight focus groups with fathers and mothers separately, 27 semi-structured interviews to key actors, and field observations. As a whole, the indigenous plantain farmers and banana plantation workers had some general knowledge of pesticides concerning crop protection, but little on acute health effects, and hardly any on exposure routes and pathways, and chronic effects. People expressed vague ideas about pesticide risks. Inter-community differences were related to pesticide technologies used in banana and plantain production, employment status on a multinational plantation versus smallholder status, and gender. Compared to formalized practices on transnational company plantations, where workers reported to feel protected, pesticide handling by plantain smallholders was not perceived as hazardous and therefore no safety precautions were applied. Large-scale monoculture was perceived as one of the most important problems leading to pesticide risks in Talamanca on banana plantations, and also on neighboring small plantain farms extending into large areas. Plantain farmers have adopted use of highly toxic pesticides following banana production, but in conditions of extreme poverty. Aerial spraying in banana plantations was considered by most social actors a major determinant of exposure for the population living nearby these plantations, including vulnerable children. We observed violations of legally established aerial spraying distances. Economic considerations were most mentioned as the underlying reason for the pesticide use: economic needs to obtain the production quantity and quality, and pressure to use pesticides by other economic agents such as middlemen. Risk perceptions were modulated by factors such as people's tasks and positions in the production process, gender, and people's possibilities to define their own social conditions (more fatalistic perceptions among banana workers). The challenge for the future is to combine these insights into improved health risk assessment and management that is culturally adequate for each particular community and agricultural context.  
Keywords: Costa Rica  
Keywords: Risk Abstracts; Environment Abstracts  
Keywords: Children  
Keywords: R2 23110:Psychological aspects  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: plantations  
Keywords: Musa  
Keywords: Perception  
Keywords: poverty  
Keywords: Pesticides  
Keywords: Economics  
Keywords: Gender  
Keywords: Occupational exposure  
Keywords: culture  
Date revised - 2011-10-01  
Language of summary - English  
Location - Costa Rica  
Pages - 708-717  
ProQuest ID - 886220194  
SubjectsTermNotLitGenreText - plantations; poverty; Perception; Gender; Economics; Pesticides; Children; culture; Occupational exposure; Musa; Costa Rica  
Last updated - 2012-08-02  
Corporate institution author - Barraza, Douglas; Jansen, Kees; Wesseling, Catharina  
DOI - OB-0d92573f-a69c-4717-96c4csaobj201; 15092106; 0013-9351 English

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Rec #: 2580  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

90. Barry, R. C.; Lin, Y. H.; Wang, J.; Liu, G. D., and Timchalk, C. A. Nanotechnology-based electrochemical sensors for biomonitoring chemical exposures. 2009; 19, (1): 1-18.   
Rec #: 56359  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The coupling of dosimetry measurements and modeling represents a promising strategy for deciphering the relationship between chemical exposure and disease outcome. To support the development and implementation of biological monitoring programs, quantitative technologies for measuring xenobiotic exposure are needed. The development of portable nanotechnology-based electrochemical (EC) sensors has the potential to meet the needs for low cost, rapid, high-throughput, and ultrasensitive detectors for biomonitoring an array of chemical markers. Highly selective EC sensors capable of pM sensitivity, high-throughput and low sample requirements (< 50 mu l) are discussed. These portable analytical systems have many advantages over currently available technologies, thus potentially representing the next generation of biomonitoring analyzers. This paper highlights research focused on the development of field-deployable analytical instruments based on EC detection. Background information and a general overview of EC detection methods and integrated use of nanomaterials in the development of these sensors are provided. New developments in EC sensors using various types of screen-printed electrodes, integrated nanomaterials, and immunoassays are presented. Recent applications of EC sensors for assessing exposure to pesticides or detecting biomarkers of disease are highlighted to demonstrate the ability to monitor chemical metabolites, enzyme activity, or protein biomarkers of disease. In addition, future considerations and opportunities for advancing the use of EC platforms for dosimetric studies are discussed.  
Keywords: biomonitoring, dosimetry, electrochemical sensors, exposure assessment  
ISI Document Delivery No.: 384YF

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Rec #: 51349  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY   
Abstract: COMMENTS: Cites: EMBO J. 1999 Jun 15;18(12):3293-304 (medline /10369670)  
COMMENTS: Cites: Neuron. 1997 Jun;18(6):857-63 (medline /9208853)  
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COMMENTS: Cites: J Neurosci. 2004 Apr 21;24(16):3964-73 (medline /15102912)  
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COMMENTS: Cites: Nat Cell Biol. 2004 Sep;6(9):831-9 (medline /15322554)  
COMMENTS: Cites: Mol Hum Reprod. 2005 Jan;11(1):43-51 (medline /15542541)  
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COMMENTS: Cites: Cell. 1990 May 18;61(4):709-21 (medline /2111733)  
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COMMENTS: Cites: J Cell Biol. 1997 Nov 17;139(4):875-83 (medline /9362506)  
COMMENTS: Cites: J Cell Biol. 1998 Jan 12;140(1):61-9 (medline /9425154)  
COMMENTS: Cites: Cell. 1998 Mar 20;92(6):759-72 (medline /9529252)  
COMMENTS: Cites: J Biol Chem. 1987 Dec 5;262(34):16671-6 (medline /3680269)  
COMMENTS: Cites: Brain Res. 1985 Jun;352(2):286-90 (medline /3896407)  
COMMENTS: Cites: Cell. 1980 Aug;21(1):205-15 (medline /6996832)  
COMMENTS: Cites: J Biol Chem. 1995 Oct 6;270(40):23667-71 (medline /7559535)  
COMMENTS: Cites: J Biol Chem. 1995 Jul 14;270(28):16955-61 (medline /7622514)  
COMMENTS: Cites: Biophys J. 1994 Dec;67(6):2546-57 (medline /7696493)  
COMMENTS: Cites: Mol Biol Cell. 1994 Jul;5(7):773-83 (medline /7812046)  
COMMENTS: Cites: J Biol Chem. 1995 Feb 3;270(5):2213-7 (medline /7836452)  
COMMENTS: Cites: Nature. 1995 Feb 16;373(6515):626-30 (medline /7854421)  
COMMENTS: Cites: EMBO J. 1993 Dec;12(12):4821-8 (medline /7901002)  
COMMENTS: Cites: EMBO J. 1994 Nov 1;13(21):5051-61 (medline /7957071)  
COMMENTS: Cites: Cell. 1993 Nov 5;75(3):409-18 (medline /8221884)  
COMMENTS: Cites: J Biol Chem. 1994 Jan 21;269(3):1617-20 (medline /8294407)  
COMMENTS: Cites: J Biol Chem. 1996 Aug 23;271(34):20223-6 (medline /8702750)  
COMMENTS: Cites: Cold Spring Harb Symp Quant Biol. 1995;60:197-204 (medline /8824391)  
COMMENTS: Cites: J Cell Sci. 1996 Sep;109 ( Pt 9):2417-22 (medline /8886991)  
COMMENTS: Cites: J Cell Biol. 2000 Jan 24;148(2):317-24 (medline /10648564)  
ABSTRACT: Regulated exocytosis in neurons and neuroendocrine cells requires the formation of a stable soluble N-ethylmaleimide-sensitive factor attachment protein receptor (SNARE) complex consisting of synaptobrevin-2/vesicle-associated membrane protein 2, synaptosome-associated protein of 25 kDa (SNAP-25), and syntaxin 1. This complex is subsequently disassembled by the concerted action of alpha-SNAP and the ATPases associated with different cellular activities-ATPase N-ethylmaleimide-sensitive factor (NSF). We report that NSF inhibition causes accumulation of alpha-SNAP in clusters on plasma membranes. Clustering is mediated by the binding of alpha-SNAP to uncomplexed syntaxin, because cleavage of syntaxin with botulinum neurotoxin C1 or competition by using antibodies against syntaxin SNARE motif abolishes clustering. Binding of alpha-SNAP potently inhibits Ca(2+)-dependent exocytosis of secretory granules and SNARE-mediated liposome fusion. Membrane clustering and inhibition of both exocytosis and liposome fusion are counteracted by NSF but not when an alpha-SNAP mutant defective in NSF activation is used. We conclude that alpha-SNAP inhibits exocytosis by binding to the syntaxin SNARE motif and in turn prevents SNARE assembly, revealing an unexpected site of action for alpha-SNAP in the SNARE cycle that drives exocytotic membrane fusion.  
MESH HEADINGS: Amino Acid Motifs  
MESH HEADINGS: Animals  
MESH HEADINGS: Binding Sites  
MESH HEADINGS: Calcium/pharmacology  
MESH HEADINGS: Cell Membrane/drug effects/metabolism  
MESH HEADINGS: Cell-Free System  
MESH HEADINGS: Exocytosis/drug effects  
MESH HEADINGS: Humans  
MESH HEADINGS: \*Membrane Fusion/drug effects  
MESH HEADINGS: Models, Biological  
MESH HEADINGS: N-Ethylmaleimide-Sensitive Proteins/metabolism  
MESH HEADINGS: PC12 Cells  
MESH HEADINGS: Protein Conformation/drug effects  
MESH HEADINGS: Protein Transport/drug effects  
MESH HEADINGS: Rats  
MESH HEADINGS: SNARE Proteins/\*chemistry/\*metabolism  
MESH HEADINGS: Secretory Vesicles/drug effects/metabolism  
MESH HEADINGS: Soluble N-Ethylmaleimide-Sensitive Factor Attachment Proteins/\*metabolism  
MESH HEADINGS: Syntaxin 1/chemistry/metabolism eng

92. Bartels, M.; Rick, D.; Lowe, E.; Loizou, G.; Price, P.; Spendiff, M.; Arnold, S.; Cocker, J., and Ball, N. Development of PK- and PBPK-based modeling tools for derivation of biomonitoring guidance values. 2012; 108, (2): 773-788.   
Rec #: 56379  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: There are numerous programs ongoing to analyze environmental exposure of humans to xenobiotic chemicals via biomonitoring measurements (e.g.: EU ESBIO, COPHES; US CDC NHANES; Canadian Health Measures Survey). The goal of these projects is to determine relative trends in exposure to chemicals, across time and subpopulations. Due to the lack of data, there is often little information correlating biomarker concentrations with exposure levels and durations. As a result, it can be difficult to utilize biomonitoring data to evaluate if exposures adhere to or exceed hazard/exposure criteria such as the Derived No-Effect Level values under the EU REACH program, or Reference Dose/Concentration values of the US EPA. A tiered approach of simple, arithmetic pharmacokinetic (PK) models, as well as more standardized mean-value, physiologically-based (PBPK) models, have therefore been developed to estimate exposures from biomonitoring results. Both model types utilize a user-friendly Excel spreadsheet interface. QSPR estimations of chemical-specific parameters have been included, as well as accommodation of variations in urine production. Validation of each model's structure by simulations of published datasets and the impact of assumptions of major model parameters will be presented. (C) 2012 Elsevier Ireland Ltd. All rights reserved.  
Keywords: Pharmacokinetic, PBPK, Excel, Micturition, Model, Biomonitoring, QSAR  
ISI Document Delivery No.: 033VC

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Rec #: 40  
Keywords: METHODS,REVIEW  
Call Number: NO METHODS (24D,24DXY,ATZ,AZ,CPY,DQTBr,MLN,PMR,PPX,PQT,TPR), NO REVIEW (24D,24DXY,ATZ,AZ,CPY,DQTBr,MLN,PMR,PPX,PQT,TPR)  
Notes: EcoReference No.: 151373  
Chemical of Concern: 24D,24DXY,ATZ,AZ,CPY,DDE,DEET,DQTBr,DTM,EPRN,HCCH,IFP,MLN,PMR,PND,PPCP,PPGL,PPX,PQT,PRN,TPR

94. Bauer, M; Dondero, F; Olivieri, C; Viarengo, a G; Rudzok, S, and Bauer, M. Comparative Transcriptomic Responses to Acute Nickel and Chlorpyrifos Exposure in Human Hepg2. 2009 Sep 13; 189, 1-S91.   
Rec #: 41009  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Abstract not available.  
Keywords: Chlorpyrifos  
Keywords: Toxicology Abstracts; Environment Abstracts  
Keywords: Pesticides  
Keywords: Nickel  
Keywords: X 24330:Agrochemicals  
Keywords: ENA 02:Toxicology & Environmental Safety  
Date revised - 2009-08-01  
Language of summary - English  
Pages - S91  
ProQuest ID - 20760857  
SubjectsTermNotLitGenreText - Pesticides; Chlorpyrifos; Nickel  
Last updated - 2011-12-14  
British nursing index edition - Toxicology Letters [Toxicol. Lett.]. Vol. 189, S91 p. 13 Sep 2009.  
Corporate institution author - Bauer, M; Dondero, F; Olivieri, C; Viarengo, A G; Rudzok, S  
DOI - MD-0010153981; 10273405; 0378-4274 English

95. Bauer, Mario; Dondero, Francesco; Olivieri, Caterina; Viarengo, Aldo Giuseppe, and Rudzok, Susanne. Comparative transcriptomic responses to acute nickel and chlorpyrifos exposure in human HepG2: Abstracts of the 46th Congress of the European Societies of Toxicology. 2009 Sep 13-; 189, Supplement, (0): S91.   
Rec #: 2470  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY

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Rec #: 440  
Keywords: IN VITRO,NO SPECIES  
Call Number: NO IN VITRO (AZ,CPY,MLN,MLO), NO SPECIES (AZ,CPY,MLN,MLO)  
Notes: Chemical of Concern: AZ,CPY,MLN,MLO

97. Baydoun, H. H.; Pancewicz, J., and Nicot, C. Human T-Lymphotropic Type 1 Virus P30 Inhibits Homologous Recombination and Favors Unfaithful Dna Repair.   
Rec #: 50199  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Mol Aspects Med. 2010 Oct;31(5):333-43 (medline /20673780)  
COMMENTS: Cites: Mol Aspects Med. 2010 Oct;31(5):359-66 (medline /20599553)  
COMMENTS: Cites: Science. 1990 Mar 2;247(4946):1082-4 (medline /2309119)  
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COMMENTS: Cites: J Biol Chem. 2007 May 11;282(19):14608-15 (medline /17360706)  
COMMENTS: Cites: Biochem Cell Biol. 2007 Aug;85(4):509-20 (medline /17713585)  
COMMENTS: Cites: Mol Biol Cell. 2008 Apr;19(4):1693-705 (medline /18256278)  
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COMMENTS: Cites: J Virol. 2009 Nov;83(22):11467-76 (medline /19726513)  
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COMMENTS: Cites: Virology. 2000 May 10;270(2):291-8 (medline /10792988)  
COMMENTS: Cites: J Virol. 2001 Oct;75(20):9885-95 (medline /11559821)  
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COMMENTS: Cites: Adv Cancer Res. 2003;89:69-132 (medline /14587871)  
COMMENTS: Cites: Biochimie. 2003 Nov;85(11):1161-73 (medline /14726021)  
COMMENTS: Cites: Nat Med. 2004 Feb;10(2):197-201 (medline /14730358)  
COMMENTS: Cites: J Biol Chem. 2005 May 13;280(19):18771-81 (medline /15734743)  
COMMENTS: Cites: J Biol Chem. 2006 Dec 1;281(48):37150-8 (medline /17008317)  
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COMMENTS: Cites: Oncogene. 2008 Feb 14;27(8):1135-41 (medline /17704807)  
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COMMENTS: Cites: J Natl Cancer Inst. 2008 Jan 16;100(2):98-108 (medline /18182620)  
COMMENTS: Cites: J Virol. 2008 Jul;82(14):6952-61 (medline /18434398)  
COMMENTS: Cites: PLoS Genet. 2008 Jun;4(6):e1000110 (medline /18584027)  
COMMENTS: Cites: J Biol Chem. 2008 Dec 26;283(52):36311-20 (medline /18957425)  
COMMENTS: Cites: Mol Biol Cell. 2009 Apr;20(7):2096-107 (medline /19211838)  
COMMENTS: Cites: Blood. 2010 Nov 11;116(19):3809-17 (medline /20647569)  
ABSTRACT: Whereas oncogenic retroviruses are common in animals, human T-lymphotropic virus 1 (HTLV-1) is the only transmissible retrovirus associated with cancer in humans and is etiologically linked to adult T-cell leukemia. The leukemogenesis process is still largely unknown, but relies on extended survival and clonal expansion of infected cells, which in turn accumulate genetic defects. A common feature of human tumor viruses is their ability to stimulate proliferation and survival of infected pretumoral cells and then hide by establishing latency in cells that have acquired a transformed phenotype. Whereas disruption of the DNA repair is one of the major processes responsible for the accumulation of genomic abnormalities and carcinogenesis, the absence of DNA repair also poses the threat of cell-cycle arrest or apoptosis of virus-infected cells. This study describes how the HTLV-1 p30 viral protein inhibits conservative homologous recombination (HR) DNA repair by targeting the MRE11/RAD50/NBS1 complex and favors the error-prone nonhomologous-end-joining (NHEJ) DNA-repair pathway instead. As a result, HTLV-1 p30 may facilitate the accumulation of mutations in the host genome and the cumulative risk of transformation. Our results provide new insights into how human tumor viruses may manipulate cellular DNA-damage responses to promote cancer.  
MESH HEADINGS: Blotting, Western  
MESH HEADINGS: Cell Cycle  
MESH HEADINGS: Cell Nucleus  
MESH HEADINGS: Cells, Cultured  
MESH HEADINGS: Cytoplasm  
MESH HEADINGS: DNA Damage/genetics  
MESH HEADINGS: DNA Repair/\*genetics  
MESH HEADINGS: DNA, Viral/\*genetics  
MESH HEADINGS: Human T-lymphotropic virus 1  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunoprecipitation  
MESH HEADINGS: Protein Transport  
MESH HEADINGS: Recombination, Genetic/\*genetics  
MESH HEADINGS: Retroviridae Proteins/genetics/\*metabolism eng

98. Bayoumi, R. A.; Mohamed, E.; Louboudy, S., and Hendawy, A. Biodegradation of Organophosphate Pesticide Chloropyrifos by Egyptian Bacterial Isolates.   
Rec #: 77799  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Sixteen microbial isolates capable of growing on Dursban as a secondary substrate were isolated from three soil and sewage water samples collected from different localities polluted with pesticides. Six developed isolates only were capable of biodegrading Dursban and utilizing it as only sole source of carbon, energy and phosphorus. The six bacterial isolates were managed to grow on enrichment medium containing Dursban up to 40 ml/liter, for seven days at 25 degrees C. Each isolate exhibited growth and degradation of Dursban concentrations that best bacteria were identified as Pseudomonas stutzeri S7B4 and Flavobacterium balustinum S8B6. These two bacterial isolates were subjected to some environmental and nutritional parameters that affect the biodegradation process of Dursban. The optimum conditions includes :incubation period, 7 days; Dursban concentrations, 10 ml/l; inoculum size, 4 ml/l; incubation temperature, 35 degrees C; optimum pH value, 7; carbon source, fructose and ribose, respectively; nitrogen source, urea and peptone, respectively; amino acid, histidine; and vitamin, yeast extract, under shaking condition (200 rpm). Only the most potent microbial isolate Pseudomonas stutzeri was grown on their own mineral salts medium which contained 40 mlM/l in case of Dursban in the absence and presence of fructose as the best carbon source for two time intervals i.e. 7 and 15 days. Absence of phosphorus and the presence of many oxidized compounds revealed that the ability of P. stutzeri to biodegrade and detoxify Dursban using it as the sole phosphorus, carbon and energy sources. GC-MS analysis of all three treatments of Dursban-bioremediation process showed no detection of any phosphorus compounds especially Dursban in the three treatments, indicated that both bacterial strains i.e. P. stutzeri S7-B4 and F. balustinum S8B6 were able to utilize Dursban pesticide as carbon and phosphorus sources. Thus, it is possible to use both bacterial strains in the bioremediation of pesticides especially Dursban-contaminated sites.  
MESH HEADINGS: \*Biodegradation, Environmental  
MESH HEADINGS: Chlorpyrifos/\*metabolism  
MESH HEADINGS: Flavobacterium/\*metabolism  
MESH HEADINGS: Insecticides/\*metabolism  
MESH HEADINGS: Pseudomonas stutzeri/\*metabolism  
MESH HEADINGS: \*Soil Microbiology  
MESH HEADINGS: Soil Pollutants/metabolism  
MESH HEADINGS: Time Factors eng

99. Beamer, P I; Canales, R a; Bradman, a; Leckie, Jo, and Beamer, P I. Farmworker Children's Residential Non-Dietary Exposure Estimates From Micro-Level Activity Time Series. 2009 Nov; 35, (8): 1202-1209.   
Rec #: 44529  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Farmworkers' children may have increased pesticide exposure through dermal absorption and non-dietary ingestion, routes that are difficult to measure and model. The Cumulative Aggregate Simulation of Exposure (CASE) model, integrates the complexity of human behavior and variability of exposure processes by combining micro-level activity time series (MLATS) and mechanistic exposure equations. CASE was used to estimate residential non-dietary organophosphate pesticide exposure (i.e., inhalation, dermal, and non-dietary ingestion) to California farmworker children and evaluate the micro-activity approach. MLATS collected from children and distributions developed from pesticide measurements in farmworkers' residences served as inputs. While estimated diazinon exposure was greater for inhalation, chlorpyrifos exposure was greater for the other routes. Greater variability existed between children (s sub(B) super(2)=0.22-0.39) than within each child's simulations (s sub(W) super(2)=0.01-0.02) for dermal and non-dietary ingestion. Dermal exposure simulations were not significantly different than measured values from dosimeters worn by the children. Non-dietary ingestion exposure estimates were comparable to duplicate diet measurements, indicating this route may contribute substantially to aggregate exposure. The results suggest the importance of the micro-activity approach for estimating non-dietary exposure. Other methods may underestimate exposure via these routes. Model simulations can be used to identify at-risk children and target intervention strategies.  
Keywords: Inhalation  
Keywords: Diets  
Keywords: Pesticides (organophosphorus)  
Keywords: Skin  
Keywords: Mathematical models  
Keywords: Organophosphates  
Keywords: time series analysis  
Keywords: agriculture  
Keywords: Simulation  
Keywords: Children  
Keywords: Ingestion  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Models  
Keywords: Chlorpyrifos  
Keywords: Toxicology Abstracts; Environment Abstracts  
Keywords: Pesticides  
Keywords: Absorption  
Keywords: USA, California  
Keywords: X 24330:Agrochemicals  
Keywords: Diazinon  
Date revised - 2009-10-01  
Language of summary - English  
Location - USA, California  
Pages - 1202-1209  
ProQuest ID - 20947373  
SubjectsTermNotLitGenreText - Diets; Chlorpyrifos; Inhalation; Pesticides (organophosphorus); Mathematical models; Skin; Children; Diazinon; Models; Organophosphates; time series analysis; Pesticides; Absorption; agriculture; Simulation; Ingestion; USA, California  
Last updated - 2012-03-29  
British nursing index edition - Environment International [Environ. Int.]. Vol. 35, no. 8, pp. 1202-1209. Nov 2009.  
Corporate institution author - Beamer, P I; Canales, R A; Bradman, A; Leckie, JO  
DOI - MD-0010595982; 11035338; 0160-4120 English

100. Beamer, P I; Canales, R a; Ferguson, a C; Leckie, Jo; Bradman, a, and Beamer, P I. Relative Pesticide and Exposure Route Contribution to Aggregate and Cumulative Dose in Young Farmworker Children. 2012 Jan; 9, (1): 73-96.   
Rec #: 42939  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The Child-Specific Aggregate Cumulative Human Exposure and Dose (CACHED) framework integrates micro-level activity time series with mechanistic exposure equations, environmental concentration distributions, and physiologically-based pharmacokinetic components to estimate exposure for multiple routes and chemicals. CACHED was utilized to quantify cumulative and aggregate exposure and dose estimates for a population of young farmworker children and to evaluate the model for chlorpyrifos and diazinon. Micro-activities of farmworker children collected concurrently with residential measurements of pesticides were used in the CACHED framework to simulate 115,000 exposure scenarios and quantify cumulative and aggregate exposure and dose estimates. Modeled metabolite urine concentrations were not statistically different than concentrations measured in the urine of children, indicating that CACHED can provide realistic biomarker estimates. Analysis of the relative contribution of exposure route and pesticide indicates that in general, chlorpyrifos non-dietary ingestion exposure accounts for the largest dose, confirming the importance of the micro-activity approach. The risk metrics computed from the 115,000 simulations, indicate that greater than 95% of these scenarios might pose a risk to children's health from aggregate chlorpyrifos exposure. The variability observed in the route and pesticide contributions to urine biomarker levels demonstrate the importance of accounting for aggregate and cumulative exposure in establishing pesticide residue tolerances in food.  
Keywords: Bioindicators  
Keywords: Chemicals  
Keywords: Agriculture  
Keywords: time series analysis  
Keywords: Risk Abstracts; Health & Safety Science Abstracts  
Keywords: agriculture  
Keywords: Simulation  
Keywords: Children  
Keywords: Time series analysis  
Keywords: Chlorpyrifos  
Keywords: Urine  
Keywords: H 5000:Pesticides  
Keywords: Pesticides  
Keywords: R2 23050:Environment  
Date revised - 2012-04-01  
Language of summary - English  
Pages - 73-96  
ProQuest ID - 968166835  
SubjectsTermNotLitGenreText - Agriculture; Chemicals; Bioindicators; Chlorpyrifos; time series analysis; Urine; Pesticides; agriculture; Simulation; Time series analysis; Children  
Last updated - 2012-12-14  
British nursing index edition - International Journal of Environmental Research and Public Health [Int. J. Environ. Res. Public Health]. Vol. 9, no. 1, pp. 73-96. Jan 2012.  
Corporate institution author - Beamer, P I; Canales, R A; Ferguson, A C; Leckie, JO; Bradman, A  
DOI - MD-0018314646; 16435296; 1660-4601 English

101. Beamer, Paloma; Canales, Robert a; Leckie, James O, and Beamer, Paloma. Developing Probability Distributions for Transfer Efficiencies for Dermal Exposure. 2009 Mar; 19, (3): 274-283.   
Rec #: 44979  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Many dermal exposure models use stochastic techniques to sample parameter distributions derived from experimental data to more accurately represent variability and uncertainty. Transfer efficiencies represent the fraction of a surface contaminant transferred from the surface to the skin during a contact event. Although an important parameter for assessing dermal exposure, examination of the literature confirms that no single study is large enough to provide a basis for a transfer efficiency distribution for use in stochastic dermal exposure models. It is therefore necessary to combine data sets from multiple studies to achieve the largest data set possible for distribution analysis. A literature review was conducted to identify publications reporting transfer efficiencies. Data sets were compared using the Kruskal-Wallis test to determine whether they arise from the same distribution. Combined data were evaluated for several theoretical distributions using the Kolmogorov-Smirnov and chi super(2)-goodness-of-fit tests. Our literature review identified 35 studies comprising 25 different sampling methods, 25 chemicals, and 10 surface types. Distributions were developed for three different chemicals (chlorpyrifos, pyrethrin I, and piperonyl butoxide) on three different surface types (carpet, vinyl, and foil). Only the lognormal distribution was consistently accepted for each chemical and surface combination. Fitted distributions were significantly different (Kruskal-Wallis test; P<0.001) across chemicals and surface types. In future studies, increased effort should be placed on developing large studies, which more accurately represent transfer to human skin from surfaces, and on developing a normative transfer efficiency measure so that data from different methodologies can be compared.Journal of Exposure Science and Environmental Epidemiology (2009) 19, 274-283; doi:10.1038/jes.2008.16; published online 2 April 2008  
Keywords: Data processing  
Keywords: Skin  
Keywords: Piperonyl butoxide  
Keywords: Stochasticity  
Keywords: Models  
Keywords: Chlorpyrifos  
Keywords: Epidemiology  
Keywords: Carpets  
Keywords: Reviews  
Keywords: Sampling  
Keywords: Contaminants  
Keywords: X 24330:Agrochemicals  
Keywords: Pollution Abstracts; Toxicology Abstracts  
Keywords: pyrethrins  
Keywords: Internet  
Date revised - 2010-09-01  
Language of summary - English  
Pages - 274-283  
ProQuest ID - 754883700  
SubjectsTermNotLitGenreText - Skin; Data processing; Piperonyl butoxide; Stochasticity; Models; Chlorpyrifos; Epidemiology; Carpets; Reviews; Sampling; Contaminants; pyrethrins; Internet  
Last updated - 2011-12-14  
British nursing index edition - Journal of Exposure Science and Environmental Epidemiology [J. Exposure Sci. Environ. Epidemiol.]. Vol. 19, no. 3, pp. 274-283. Mar 2009.  
Corporate institution author - Beamer, Paloma; Canales, Robert A; Leckie, James O  
DOI - f57f43ba-bbb9-47ee-b47emfgefd108; 13443685; 1559-0631 English

102. Beauvais, S. L. Factors Affecting Cholinesterase Activity in Aquatic Animals. BCM,GRO. S.L.Beauvais, Iowa State Univ., Ames, IA//: 1997: 117 p. (Publ As 62050)(UMI# 9725392).   
Rec #: 450  
Keywords: PUBL AS,SURVEY  
Call Number: NO PUBL AS (ATZ,CPY,MTL), NO SURVEY (ATZ,CPY,MTL)  
Notes: Chemical of Concern: ATZ,CPY,MTL,Se

103. Bebe, F. N. and Panemangalore, M. Biosafety of Flavonoids in Rats: Effects on Copper and Zinc Homeostasis and Interaction with Low-Level Pesticide Exposure. frederick.bebe@kysu.edu//Nutrition and Health Program, Kentucky State University, Frankfort, KY 40601//: 2009; 129, (1-3): 200-212.   
Rec #: 2310  
Keywords: MIXTURE  
Call Number: NO MIXTURE (CPY,ES,THM)  
Notes: Chemical of Concern: CPY,ES,THM

104. Becker, Carol J and Becker, Carol J. A Reconnaissance of Selected Organic Compounds in Streams in Tribal Lands in Central Oklahoma, January-February 2009. 2010.  
Rec #: 48209  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The U.S. Geological Survey worked in cooperation with the U.S. Environmental Protection Agency and the Kickapoo Tribe of Oklahoma on two separate reconnaissance projects carried out concurrently. Both projects entailed the use of passive samplers as a sampling methodology to investigate the detection of selected organic compounds at stream sites in jurisdictional areas of several tribes in central Oklahoma during January-February 2009. The focus of the project with the U.S. Environmental Protection Agency was the detection of pesticides and pesticide metabolites using Semipermeable Membrane Devices at five stream sites in jurisdictional areas of several tribes. The project with the Kickapoo Tribe of Oklahoma focused on the detection of pesticides, pesticide metabolites, polycyclic aromatic hydrocarbons, polychlorinated biphenyl compounds, and synthetic organic compounds using Semipermeable Membrane Devices and Polar Organic Chemical Integrative Samplers at two stream sites adjacent to the Kickapoo tribal lands. The seven stream sites were located in central Oklahoma on the Cimarron River, Little River, North Canadian River, Deep Fork, and Washita River. Extracts from SPMDs submerged at five stream sites, in cooperation with the U.S. Environmental Protection Agency, were analyzed for 46 pesticides and 6 pesticide metabolites. Dacthal, a pre-emergent herbicide, was detected at all five sites. Pendimethalin, also a pre-emergent, was detected at one site. The insecticides chlorpyrifos and dieldrin were detected at three sites and p,p'-DDE, a metabolite of the insecticide DDT, also was detected at three sites. SPMDs and POCIS were submerged at the upstream edge and downstream edge of the Kickapoo tribal boundaries. Both sites are downstream from the Oklahoma City metropolitan area and multiple municipal wastewater treatment plants. Extracts from the passive samplers were analyzed for 62 pesticides, 10 pesticide metabolites, 3 polychlorinated biphenyl compounds, 35 polycyclic aromatic hydrocarbons, and 49 synthetic organic compounds. Ten pesticides and four pesticide metabolites were detected at the upstream site and seven pesticides and four pesticide metabolites were detected at the downstream site. Pesticides detected at both sites were atrazine, chlorpyrifos, dacthal, dieldrin, metolachlor, pendimethalin, and trans-nonachlor. Additionally at the upstream site, heptachlor, pentachlorophenol, and prometon were detected. The pesticide metabolites p,p'-DDE, cis-chlordane, and trans-chlordane also were detected at both sites. Polychlorinated biphenyl compounds aroclor-1016/1242, aroclor-1254, and aroclor-1260 were detected at both sites. The upstream site had 16 polycyclic aromatic hydrocarbon detections and the downstream site had 8 detections. Because of chromatographic interference during analysis, a positive identification of 17 polycyclic aromatic hydrocarbons could not be made. Consequently, there may have been a greater number of these compounds detected at both sites. A total of 36 synthetic organic compounds were detected at the two sites adjacent to the Kickapoo tribal lands. The upstream site had 21 synthetic organic compound detections: three detergent metabolites, two fecal indicators, three flame retardants, seven industrial compounds, five compounds related to personal care products, and beta-sitosterol, a plant sterol. Fifteen synthetic organic compounds were detected at the downstream site and included: one fecal indicator, three flame retardants, six industrial compounds, and five compounds related to personal care products.  
Start Page: 15  
End Page: 15  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: Rivers  
Keywords: Molecular structure  
Keywords: Polycyclic aromatic hydrocarbons  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: Aqualine Abstracts; ASFA 2: Ocean Technology Policy & Non-Living Resources; Water Resources Abstracts  
Keywords: USA, New Mexico, Canadian R.  
Keywords: Polychlorinated Biphenyls  
Keywords: Metabolites  
Keywords: Samplers  
Keywords: Streams  
Keywords: Environmental protection  
Keywords: USA, Oklahoma, Oklahoma City  
Keywords: USA, Oklahoma  
Keywords: Agricultural Chemicals  
Keywords: Pesticides  
Keywords: USA, Oklahoma, Washita R.  
Keywords: Aromatic hydrocarbons  
Keywords: Downstream  
Keywords: Q2 02184:Composition of water  
Keywords: Organic compounds  
Keywords: Organic Compounds  
Keywords: PCB  
Date revised - 2011-11-01  
Language of summary - English  
Location - USA, Oklahoma; USA, New Mexico, Canadian R.; USA, Oklahoma, Washita R.; USA, Oklahoma, Oklahoma City  
Pages - 15  
ProQuest ID - 907193668  
SubjectsTermNotLitGenreText - Molecular structure; Pesticides; Aromatic hydrocarbons; Metabolites; Organic compounds; Samplers; Streams; PCB; Environmental protection; Rivers; Polycyclic aromatic hydrocarbons; Agricultural Chemicals; Polychlorinated Biphenyls; Downstream; Organic Compounds; USA, Oklahoma; USA, New Mexico, Canadian R.; USA, Oklahoma, Washita R.; USA, Oklahoma, Oklahoma City  
Last updated - 2012-03-29  
British nursing index edition - Scientific Investigations Report. U.S. Geological Survey. no. 2010-5110, 15 pp. 2010.  
Corporate institution author - Becker, Carol J  
DOI - 05ec81de-184a-490b-bee4csaobj201; 16042138; NO1103361 English

105. Behera, P. C.; Bisoi, P. C., and Parija, S. C. Effect of chlorpyriphos on isolated chicken hepatocytes. 2007; 84, (10): 1035-1038.   
Rec #: 56479  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyriphos, O-O-diethyle-O-(3, 5, 6-trichloro - 2 pyridyle) phosphorothiocate, is widely used in agricultural pest management, control of vector born diseases and ectoparasites in animals and poultry birds. Liver, being the site of metabolism, detoxification and disposition gets affected directly either by spray in poultry farms and / indirectly by consumption of residual chlorpyriphos in feed. The toxic effect of chlorpyriphos was retained in mice indicating hepatocellular injury (Gomos et al., 1999). It exits as such or its metabolites in liver, kidney, and fat of animals (Crosslay, 2000). Poultry meat consumption is increasing day by day due to its low cholesterol content which elevates the probability of chlorpyriphos entry into human food chain. **The present work was designed to study the in vitro toxic effect of chlorpyriphos on isolated chicken hepatocytes.**  
Keywords: CARBON-TETRACHLORIDE, RAT HEPATOCYTES  
ISI Document Delivery No.: 243CX

106. Bempah, Crentsil Kofi; Asomaning, Jacob; Ansong, Daniel Ayirebi; Boateng, Juliana; Asabere, Stephen Boahen, and Bempah, Crentsil Kofi . Contamination Levels of Selected Organochlorine and Organophosphorous Pesticides in Ghanaian Fruits and Vegetables. 2012 Aug; 24, (4): 293.   
Rec #: 42629  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: **A study was conducted to obtain systematic monitoring data on the contamination levels of selected organochlorine and organophosphorous pesticide residues in fruits and vegetables sold on Ghanaian markets.** A total of 309 samples of fruits and vegetables were purchased from the main urban markets and supermarkets in Greater Accra through the months of July, 2009 to May, 2010. The analysis was carried out on GC-ECD employing multi residue analytical technique. The obtained results showed the predominance of methoxychlor in most of the analyzed samples. The detected concentrations of it in pineapple, lettuce, cabbage, cucumber and onion exceeded the European Commission Maximum Residue limits (EC MRLs), as did the concentrations of lindane in papaya, pineapple, cabbage and onion as well as dieldrin in papaya, banana, pineapple and cabbage. Residues of endrin in lettuce and carrot were higher than the EC MRL, as was chlorpyrifos in pineapple. Based on the observations made in these studies, it is proposed that more extensive investigations covering all foodstuffs in Ghana be carried out so as to generate data for policy making, development of consumer information laws and curtailment of the use of some of these pesticides.  
Keywords: Fruits  
Keywords: Ghana  
Keywords: Organochlorine compounds  
Keywords: Contamination  
Keywords: Pesticide residues  
Keywords: Consumer information  
Keywords: Dieldrin  
Keywords: Daucus  
Keywords: Lindane  
Keywords: Brassica  
Keywords: Chlorpyrifos  
Keywords: P 9999:GENERAL POLLUTION  
Keywords: Musa  
Keywords: Pesticides  
Keywords: Allium cepa  
Keywords: Pollution Abstracts  
Date revised - 2012-11-01  
Language of summary - English  
Location - Ghana  
Number of references - 26  
Pages - 293  
ProQuest ID - 1171885113  
SubjectsTermNotLitGenreText - Chlorpyrifos; Fruits; Organochlorine compounds; Contamination; Pesticide residues; Consumer information; Pesticides; Dieldrin; Lindane; Musa; Allium cepa; Daucus; Brassica; Ghana  
Last updated - 2012-12-03  
British nursing index edition - Emirates Journal of Agricultural Sciences [Emirates J. Agric. Sci.]. Vol. 24, no. 4, 293 p. Aug 2012.  
Corporate institution author - Bempah, Crentsil Kofi; Asomaning, Jacob; Ansong, Daniel Ayirebi; Boateng, Juliana; Asabere, Stephen Boahen  
DOI - b5c1c96c-6a57-4952-b472mfgefd107; 16968747; 1021-1357  
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Bempah, Crentsil Kofi, Donkor, Augustine 2011 "A preliminary assessment of consumer's exposure to organochlorine pesticides in fruits and vegetables and the potential health risk in Accra Metropolis, Ghana" Food Chemistry 128 4 1058-1065  
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Yamaguchi, N., Gazzard, D. 2003 "Concentrations and hazard assessment of PCBs, organochlorine pesticides and mercury in fish species from the upper thames: River pollution and its potential effects on top predators" Chemosphere 50 3 265-273 English

107. Ben Abdallah, F.; Gargouri, B.; Bejaoui, H.; Lassoued, S., and Ammar-Keskes, L. Dimethoate-Induced Oxidative Stress in Human Erythrocytes and the Protective Effect of Vitamins C and E In Vitro. 2011; 26, (3): 287-291.   
Rec #: 56519  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorus insecticides may induce oxidative stress leading to the generation of free radicals and alteration in the antioxidant system. The aim of this study was to examine the potency of Dimethoate (Dim) to induce oxidative stress response in human erythrocyte in vitro and the role of Vitamins C (Vit C) and E (Vit E) in alleviating the cytotoxic effects. Erythrocytes were divided into three groups. The first group, erythrocytes were incubated for 4 h at 37 degrees C with different concentrations (0, 20, 40, 60, 80, and 100 mM) of Dim. The second and third groups were preincubated with Vit C or Vit E, respectively, for 30 min and followed by Dim incubation for 4 h at 37 degrees C. Following in vitro exposure, Dim caused a significant increase in malondialdehyde (MDA) levels, superoxide dismutase (SOD), and catalase (CAT) in erythrocytes at different concentrations. Vit E or Vit C pretreated erythrocytes showed a significant protection against the cytotoxic effects inducted by Dim on the studied parameters. In conclusion, antioxidant Vit E and C could protect against Dim-induced oxidative stress by decreasing lipid peroxidation and hyperactivity of SOD and CAT in human erythrocytes. (C) 2010 Wiley Periodicals, Inc. Environ Toxicol 26: 287-291, 2011.  
Keywords: human erythrocytes, dimethoate, in vitro, antioxidants enzymes, lipid  
ISI Document Delivery No.: 762OO

108. Ben Cheikh, R.; Berticat, C.; Berthomieu, A.; Pasteur, N.; Ben Cheikh, H., and Weill, M. Characterization of a Novel High-Activity Esterase in Tunisian Populations of the Mosquito Culex pipiens. 2008; 101, (2): 484-491.   
Rec #: 52299  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the mosquito Culex pipiens (L.) (Diptera: Culicidae) esterases contribute to insecticide resistance by their increased activity. These esterases display a heterogeneous geographical distribution, particularly in Tunisia, where they are very diverse. In this study, we extended the characterization of a highly active esterase first detected in 1996: B12. Esterase B12 displayed the fastest electrophoretic mobility of all the previously described highly active esterases. We showed that it was encoded by the EsterB12 allele at the Ester locus, and we isolated a strain, TunB12, homozygous for this allele. **TunB12 displayed a low (approximately two- to three-fold) but significant resistance to the organophosphates temephos and chlorpyrifos, and to the pyrethroid permethrin.** Only temephos resistance was synergized by S,S,S-tributyl-phosphorotrithioate. Real-time quantitative polymerase chain reaction revealed that the EsterB12 allele was not amplified in TunB12 strain, indicating that B12 high activity could be due to a gene up-regulation mechanism. EsterB12 allele frequencies also were estimated in 20 Tunisian populations collected in 2005. Analyses revealed a large distribution of this allele all over the country. Finally, sequences of EsterB12 were acquired and genetic distance trees were constructed with the resistance Ester alleles already published, providing indications about allele's origins. The diverse array of highly active esterases in C. pipiens from Tunisia and the possible scenario of the origin of their coding alleles are discussed in the context of their possible evolution.  
Keywords: esterase B12  
Includes references 1022619809

109. Benedetto, A.; Abete, M. C.; Prearo, M.; Fioravanti, F., and Squadrone, S. Chlorpyrifos effects on rainbow trout (Oncorhynchus Mykiss): analysis of gene expression profiles. 2010; 150, (Supplement): 125-126.   
Rec #: 2500  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY  
Abstract: Biomarkers/ Real Time RT-PCR/ +ö+öCT method

110. Berger-Preiss, Edith; Koch, Wolfgang; Gerling, Susanne; Kock, Heiko; Appel, Klaus E, and Berger-Preiss, Edith. Use of Biocidal Products (Insect Sprays and Electro-Vaporizer) in Indoor Areas - Exposure Scenarios and Exposure Modeling. 2009 Sep; 212, (5): 505-518.   
Rec #: 44649  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Five commercially available insect sprays were applied in a model room. Spraying was performed in accordance with the manufacturers' instructions and in an overdosed manner in order to simulate worst-case conditions or an unforeseeable misuse. In addition, we examined electro-vaporizers. The Respicon[TM] aerosol monitoring system was applied to determine inhalation exposure. During normal spraying (10 seconds) and during the following 2-3 minutes, exposure concentrations ranged from 70 to 590 kg/m super(3) for the pyrethroids tetramethrin, d-phenothrin, cyfluthrin, bioallethrin, and the pyrethrins. Calculated inhalable doses were 2-16 kg. A concentration of approximately 850 kg chlorpyrifos/m super(3) (inhalable dose: approximately 20 kg) was determined when the "Contra insect fly spray" was applied. Highest exposure concentrations (1100-2100 kg/m super(3)) were measured for piperonyl butoxide (PBO), corresponding to an inhalation intake of 30-60 kg. When simulating worst-case conditions, exposure concentrations of 200-3400 kg/m super(3) and inhalable doses of 10-210 kg were determined for the various active substances. Highest concentrations (4800-8000 kg/m super(3)) were measured for PBO (inhalable: 290-480 kg). By applying the electro-vaporizer "Nexa Lotte" plug-in mosquito killer concentrations for d-allethrin were in the range of 5-12 kg/m super(3) and 0.5-2 kg/m super(3) for PBO while with the "Paral" plug-in mosquito killer concentrations of 0.4-5 kg/m super(3) for pyrethrins and 1-7 kg/m super(3) for PBO were measured. Potential dermal exposures were determined using exposure pads. Between 80 and 1000 kg active substance (tetramethrin, phenothrin, cyfluthrin, bioallethrin, pyrethrins, chlorpyrifos) were deposited on the clothing of the total body surface area of the spray user. Highest levels (up to 3000 kg) were determined for PBO. Worst-case uses of the sprays led to 5-9 times higher concentrations. Also a 2-hour stay nearby an operating electro-vaporizer led to a contamination of the clothing (total amounts on the whole body were 450 kg d-allethrin and 50 kg PBO for "Nexa Lotte" plug-in mosquito killer and 80 kg pyrethrins and 190 kg PBO for "Paral" plug-in mosquito killer). Human biomonitoring data revealed urine concentrations of the metabolite (E)-trans-chrysanthemum dicarboxylic acid ((E)-trans-CDCA) between 1.7 kg/l and 7.1 kg/l after 5 minutes of exposure to the different sprays. Also the use of electro-vaporizers led to (E)-trans-CDCA concentrations in the urine in the range of 1.0 kg/l to 6.2 kg/l (1-3 hours exposure period). The exposure data presented can be used for performing human risk assessment when these biocidal products were applied indoors. The airborne concentrations of the non-volatile active chemical compounds could be predicted from first principles using a deterministic exposure model (SprayExpo).  
Keywords: Inhalation  
Keywords: Risk assessment  
Keywords: Z 05300:General  
Keywords: Contamination  
Keywords: Piperonyl butoxide  
Keywords: Metabolites  
Keywords: Spraying  
Keywords: insects  
Keywords: tetramethrin  
Keywords: Models  
Keywords: H 5000:Pesticides  
Keywords: biomonitoring  
Keywords: R2 23060:Medical and environmental health  
Keywords: Entomology Abstracts; Toxicology Abstracts; Health & Safety Science Abstracts; Risk Abstracts; Environment Abstracts  
Keywords: Pyrethroids  
Keywords: X 24330:Agrochemicals  
Keywords: pyrethrins  
Keywords: Bioindicators  
Keywords: Aerosols  
Keywords: Data processing  
Keywords: Skin  
Keywords: Surface area  
Keywords: Sprays  
Keywords: Clothing  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Urine  
Keywords: Pesticides  
Keywords: Indoor environments  
Keywords: surface area  
Date revised - 2009-09-01  
Language of summary - English  
Pages - 505-518  
ProQuest ID - 20787918  
SubjectsTermNotLitGenreText - Inhalation; Risk assessment; Aerosols; Skin; Data processing; Contamination; Surface area; Piperonyl butoxide; Metabolites; Spraying; tetramethrin; Clothing; Models; Chlorpyrifos; Urine; biomonitoring; Pyrethroids; pyrethrins; Bioindicators; Sprays; insects; Pesticides; Indoor environments; surface area  
Last updated - 2012-03-29  
British nursing index edition - International Journal of Hygiene and Environmental Health [Int. J. Hyg. Environ. Health]. Vol. 212, no. 5, pp. 505-518. Sep 2009.  
Corporate institution author - Berger-Preiss, Edith; Koch, Wolfgang; Gerling, Susanne; Kock, Heiko; Appel, Klaus E  
DOI - MD-0010348004; 10830022; 1438-4639 English

111. Berhanu, Tarekegn; Megersa, Negussie; Solomon, Theodros; Jonsson, Jan Ake, and Berhanu, Tarekegn. A Novel Equilibrium Extraction Technique Employing Hollow Fibre Liquid Phase Microextraction for Trace Enrichment of Freely Dissolved Organophosphorus Pesticides in Environmental Waters. 2008 Nov; 88, (13): 933-945.   
Rec #: 45469  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A new design of equilibrium hollow fibre liquid phase microextraction (HF-LPME) was developed for the determination of three freely dissolved organophosphorus pesticides (OPPs), i.e. diazinon (O,O-diethyl-O-2-isopropyl-4-methyl-6-pyrimidyl thiophosphate), chlorpyrifos (O,O-diethyl-O-[3,5,6-trichloro-2-pyridyl] phosphorothioate), and fenthion (O,O-dimethyl-O-4-methylthio-m-tolyl phosphorothioate) as model compounds. In this new design a 1.2-1.4 cm length of a hollow fibre (HF), inserted to the end of 20 cm copper wire and impregnated with organic solvent, was used to extract the freely dissolved concentration of OPPs in various water samples. The limits of detection (LOD) in reagent water using gas chromatography-mass spectrometry in the selected ion monitoring (SIM) mode was in the range of 15-80 ng L-1. The relative standard deviations of the analysis (inter- and intra-day) were 8.7-30%. The method was applied to the extraction of spiked lake and ground water samples. The ground water sample was spiked at 0.1 and 0.2 mg L-1 concentrations of the analytes under study and the average extraction efficiency at the two concentrations was below 1% showing the non-depletive nature of the extraction, meaning that the freely dissolved concentrations are measured as opposed to total concentrations. Good linearity was obtained for all of the analytes in both reagent water and lake water samples with correlation coefficients, R2, ranging from 0.991 to 0.996, in the concentration ranges of 25-400 ng L-1. The method was found to be very simple and inexpensive, with the possibility of running hundreds of samples in parallel with very minimal expenses for the determination of freely dissolved OPPs.  
Keywords: Molecular structure  
Keywords: Reagents  
Keywords: Water sampling  
Keywords: ENA 09:Land Use & Planning  
Keywords: Water Analysis  
Keywords: Water Sampling  
Keywords: Groundwater Mining  
Keywords: SW 3030:Effects of pollution  
Keywords: Copper  
Keywords: Q5 01502:Methods and instruments  
Keywords: Mass spectroscopy  
Keywords: Models  
Keywords: Lakes  
Keywords: Efficiency  
Keywords: Toxicology Abstracts; Pollution Abstracts; Environment Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Organophosphorus Pesticides  
Keywords: Gas chromatography  
Keywords: Organic Solvents  
Keywords: Ground water  
Keywords: X 24330:Agrochemicals  
Keywords: Pesticides (organophosphorus)  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Running  
Keywords: Solvents  
Keywords: Fenthion  
Keywords: Water pollution  
Keywords: Spectrometry  
Keywords: Methodology  
Keywords: Chlorpyrifos  
Keywords: phosphorothioate  
Keywords: Standard deviation  
Keywords: Thiophosphate  
Keywords: Analytical techniques  
Keywords: Pesticides  
Keywords: Monitoring  
Keywords: Groundwater  
Keywords: Diazinon  
Date revised - 2009-08-01  
Language of summary - English  
Pages - 933-945  
ProQuest ID - 20770024  
SubjectsTermNotLitGenreText - Molecular structure; Analytical techniques; Pesticides; Water pollution; Methodology; Pesticides (organophosphorus); Running; Solvents; Copper; Fenthion; Mass spectroscopy; Models; Chlorpyrifos; phosphorothioate; Lakes; Standard deviation; Gas chromatography; Thiophosphate; Ground water; Diazinon; Efficiency; Water sampling; Groundwater; Spectrometry; Reagents; Organophosphorus Pesticides; Water Analysis; Water Sampling; Groundwater Mining; Organic Solvents; Monitoring  
Last updated - 2011-12-14  
British nursing index edition - International Journal of Environmental and Analytical Chemistry [Int. J. Environ. Anal. Chem.]. Vol. 88, no. 13, pp. 933-945. Nov 2008.  
Corporate institution author - Berhanu, Tarekegn; Megersa, Negussie; Solomon, Theodros; Jonsson, Jan Ake  
DOI - MD-0010233463; 10310883; CS0949021; 0306-7319 English

112. Berman, Tamar; Hochner-Celnikier, Drorit; Barr, Dana Boyd; Needham, Larry L; Amitai, Yona; Wormser, Uri; Richter, Elihu, and Berman, Tamar. Pesticide Exposure Among Pregnant Women in Jerusalem, Israel: Results of a Pilot Study. 2011 Jan; 37, (1): 198-203.   
Rec #: 43609  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticides have been shown to disrupt neurodevelopment in laboratory animals and in human populations. To date, there have been no studies on exposure to pesticides in pregnant women in Israel, despite reports of widespread exposure in other populations of pregnant women and the importance of evaluating exposure in this susceptible sub-population. We measured urinary concentrations of organophosphorus (OP) insecticide metabolites and plasma concentrations of OP and other pesticides in 20 pregnant women, recruited in Jerusalem, Israel in 2006, and collected questionnaire data on demographic factors and consumer habits from these women. We compared geometric mean concentrations in subgroups using the Mann-Whitney U-test for independent samples. We compared creatinine-adjusted OP pesticide metabolite concentrations, as well as plasma pesticide concentrations, with other populations of pregnant women. Creatinine-adjusted total dimethyl (DM) metabolite concentrations were between 4 and 6 times higher in this population compared to other populations of pregnant women in the United States while total diethyl (DE) metabolite concentrations were lower. Dimethylphosphate (DMP) was detected in 74% of the urine samples whereas dimethylthiophosphate (DMTP) was detected in 90% of the urine samples. The carbamate bendiocarb was detected in 89% of the plasma samples, while the OP insecticide chlorpyrifos was detected in 42% of the samples. Mean plasma concentrations of bendiocarb and chlorpyrifos in our sample were 4.4 and 3.9 times higher, respectively, than that of an urban minority cohort from New York City. Twelve women (63%) reported using some form of household pest control during their pregnancy and five (26%) reported using household pest control during the past month. Women with a graduate degree had significantly higher geometric mean concentrations of total urinary DM metabolite concentrations compared to other women (P=0.006). Finally, one woman in the study had exceptionally high concentrations of DMP, DMTP, DMDTP compared to the other women in the study, despite reporting no current occupational exposure to OP pesticides and no other significant exposure sources. Pregnant women in the Jerusalem area are exposed to OP pesticides and to the carbamate pesticide bendiocarb. It is unclear why total DM metabolites concentrations were much higher in this population compared to other populations of pregnant women in the United States and Netherlands. Finally, the finding of very high DM metabolite concentrations in one woman who reported being moved from her regular laboratory work to administrative work upon becoming pregnant, raises questions about the adequacy of measures to protect pregnant women from pesticide exposures during pregnancy.  
Keywords: Laboratory animals  
Keywords: Metabolites  
Keywords: Israel  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Demography  
Keywords: households  
Keywords: USA, New York, New York City  
Keywords: Insecticides  
Keywords: Israel, Jerusalem  
Keywords: H 5000:Pesticides  
Keywords: Consumers  
Keywords: Netherlands  
Keywords: X 24330:Agrochemicals  
Keywords: Occupational exposure  
Keywords: Inventories  
Keywords: Data processing  
Keywords: Health & Safety Science Abstracts; Toxicology Abstracts; Pollution Abstracts; Environment Abstracts  
Keywords: Pest control  
Keywords: Pesticides (carbamates)  
Keywords: Pregnancy  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Urine  
Keywords: Pesticides  
Keywords: human populations  
Date revised - 2011-02-01  
Language of summary - English  
Location - USA, New York, New York City; Israel, Jerusalem; Israel; Netherlands  
Pages - 198-203  
ProQuest ID - 853475176  
SubjectsTermNotLitGenreText - Inventories; Data processing; Laboratory animals; Metabolites; Pest control; Pesticides (carbamates); Pregnancy; Chlorpyrifos; Demography; Insecticides; Urine; Pesticides; Consumers; Occupational exposure; households; human populations; USA, New York, New York City; Israel, Jerusalem; Israel; Netherlands  
Last updated - 2012-03-29  
British nursing index edition - Environment International [Environ. Int.]. Vol. 37, no. 1, pp. 198-203. Jan 2011.  
Corporate institution author - Berman, Tamar; Hochner-Celnikier, Drorit; Barr, Dana Boyd; Needham, Larry L; Amitai, Yona; Wormser, Uri; Richter, Elihu  
DOI - d2f02393-8422-44b8-ad56csaobj202; 14041260; 0160-4120 English

113. Bermudez-Saldana, J. M.; Escuber-Gilabert, L.; Medina-Hernandez, M. J.; Villaneuva-Camanas, R. M., and Sagrado, S. Chromatographic Evaluation of the Toxicity in Fish of Pesticides. 2005; 814, 115-125.   
Rec #: 50  
Keywords: MODELING,REFS CHECKED  
Call Number: NO MODELING (24D,24DXY,ADC,BMY,CBF,CBL,CMPH,CPY,CPYM,DCB,DCF,DCNA,DMT,DU,DZ,ES2,FNPP,LNR,MCPB,MCPP1,MDT,MLN,MLNR,MLT,MOM,MP,OML,PCBZ,PIRM,PMT,PPX,PRO,PSM,SZ,TBZ,TCF), NO REFS CHECKED (24D,24DXY,ADC,BMY,CBF,CBL,CMPH,CPY,CPYM,DCB,DCF,DCNA,DMT,DU,DZ,ES2,FNPP,LNR,MCPB,MCPP1,MDT,MLN,MLNR,MLT,MOM,MP,OML,PCBZ,PIRM,PMT,PPX,PRO,PSM,SZ,TBZ,TCF)  
Notes: Chemical of Concern: 24D,24DXY,ADC,AMTR,BMY,CBF,CBL,CMPH,CPY,CPYM,CZE,DCB,DCF,DCNA,DMT,DU,DZ,ES2,FMU,FNPP,FNTH,LNR,MCPA,MCPB,MCPP1,MDT,MLN,MLNR,MLT,MOM,MP,OML,PCBZ,PEB,PHSL,PIM,PIRM,PMT,PPX,PRO,PSM,SZ,TBZ,TCF,TCM

114. Beutler, B. A. Tlrs and Innate Immunity.   
Rec #: 50939  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: One of the most fundamental questions in immunology pertains to the recognition of non-self, which for the most part means microbes. How do we initially realize that we have been inoculated with microbes, and how is the immune response ignited? Genetic studies have made important inroads into this question during the past decade, and we now know that in mammals, a relatively small number of receptors operate to detect signature molecules that herald infection. One or more of these signature molecules are displayed by almost all microbes. These receptors and the signals they initiate have been studied in depth by random germline mutagenesis and positional cloning (forward genetics). Herein is a concise description of what has been learned about the Toll-like receptors, which play an essential part in the perception of microbes and shape the complex host responses that occur during infection.  
MESH HEADINGS: Animals  
MESH HEADINGS: Bacteria/\*immunology  
MESH HEADINGS: Bacterial Infections/\*immunology  
MESH HEADINGS: Humans  
MESH HEADINGS: Immune Tolerance/\*immunology  
MESH HEADINGS: Toll-Like Receptors/\*immunology eng

115. Bhagobaty, R. K. Comments on the manuscript "Fungal degradation of chlorpyrifos by Acremonium sp.strain (GFRC-1) isolated from a laboratory-enriched red agricultural soil". 2011; 47, (2): 235-235.   
Rec #: 56609  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: ISI Document Delivery No.: 709TL

116. Bhat, a R; Wani, Ma; Kirmani, a R, and Bhat, A R. Brain Cancer and Pesticide Relationship in Orchard Farmers of Kashmir. 2010 Dec; 14, (3): 78-86.   
Rec #: 47599  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: The increasing trend in the incidence of primary malignant brain tumors in orchard farmers and their families in Kashmir. Aim: To determine the relationship between the patients of primary malignant brain tumors and their occupation. Materials and Methods: Retrospectively, case files along with death certificates of 432 patients of primary malignant brain tumors and 457 controls (non-tumor neurologic diseases), admitted for treatment simultaneously over a period of 4 years from January 2005 to December 2008, to the Neurosurgery, Sher-i-Kashmir Institute of Medical Sciences (SKIMS), Kashmir, were studied. Follow-up and family interaction was established. Results: Analysis revealed that 90.04% (389 out of 432) patients were orchard farm workers, orchard residents and orchard playing children exposed to the high levels of multiple types of neurotoxic and carcinogenic (chlorpyriphos, dimethoate, mancozeb and captan) chemicals for more than 10 years [relative risk (RR) = 10.6; odds ratio (OR) = > 10; 95% confidence interval (CI) = > 25-40], The 9.96% (43 out of 432) patients were not exposed to pesticides. On the other hand, only 19 patients out of 457 controls had recorded history of pesticide exposure and 438 were unrelated to pesticides. Out of 389 patients, 71.7% (279 out of 389) were males and 28.3% (110 out of 389), including six members of three families, were females (one male child). Conclusion: All orchard-related 389 patients had high-grade tumors as compared to the non-pesticide tumors. Mortality in pesticide-exposed tumors was 12%. The higher or upper-normal levels of serum cholinesterase (AChE) were observed in 54.7% (213 out of 389) patients and decreased levels were found in only 45.3% (176 out of 389) orchard-related patients (RR = 19.4; OR = > 5; 95% CI = > 1-10). Although serum AChE levels were a routine investigation in malignant brain tumors, this was not a routine in other neurological conditions (hospitalized controls). The familial gliomas have shown an emerging trend in the orchard residents of valley of Kashmir.  
Keywords: Risk assessment  
Keywords: Pakistan, Kashmir  
Keywords: Neurological diseases  
Keywords: Farms  
Keywords: Mancozeb  
Keywords: tumors  
Keywords: Cholinesterase  
Keywords: Orchards  
Keywords: Neurosurgery  
Keywords: orchards  
Keywords: farms  
Keywords: Glioma  
Keywords: N3 11027:Neurology & neuropathology  
Keywords: brain tumors  
Keywords: Captan  
Keywords: Mortality  
Keywords: valleys  
Keywords: H 1000:Occupational Safety and Health  
Keywords: Children  
Keywords: Cancer  
Keywords: Brain tumors  
Keywords: Fungicides  
Keywords: Neurotoxicity  
Keywords: Pesticides  
Keywords: Dimethoate  
Keywords: CSA Neurosciences Abstracts; Health & Safety Science Abstracts  
Date revised - 2011-12-01  
Language of summary - English  
Location - Pakistan, Kashmir  
Pages - 78-86  
ProQuest ID - 911163952  
SubjectsTermNotLitGenreText - Risk assessment; Mortality; Neurological diseases; Farms; Mancozeb; Children; Cholinesterase; Orchards; Neurosurgery; Cancer; Brain tumors; Pesticides; Neurotoxicity; Glioma; Dimethoate; Captan; orchards; valleys; farms; Fungicides; tumors; brain tumors; Pakistan, Kashmir  
Last updated - 2012-04-23  
British nursing index edition - Indian Journal of Occupational & Environmental Medicine [Indian J. Occup. Environ. Med.]. Vol. 14, no. 3, pp. 78-86. Sep-Dec 2010.  
Corporate institution author - Bhat, A R; Wani, MA; Kirmani, A R  
DOI - MD-0017879059; 16084101; 0973-2284 English

117. Bhatia, S.; Tykodi, S. S., and Thompson, J. A. Treatment of Metastatic Melanoma: an Overview.   
Rec #: 50859  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Clin Oncol. 2002 Mar 15;20(6):1600-7 (medline /11896110)  
COMMENTS: Cites: J Clin Oncol. 2004 Mar 15;22(6):1118-25 (medline /15020614)  
COMMENTS: Cites: Cancer. 2006 Jan 15;106(2):375-82 (medline /16342250)  
COMMENTS: Cites: J Clin Oncol. 2006 Mar 1;24(7):1188-94 (medline /16505439)  
COMMENTS: Cites: J Clin Oncol. 1987 Apr;5(4):574-8 (medline /3031224)  
COMMENTS: Cites: Cancer Treat Rep. 1986 May;70(5):619-24 (medline /3518925)  
COMMENTS: Cites: Cancer. 1984 Mar 15;53(6):1299-305 (medline /6362841)  
COMMENTS: Cites: Cancer Treat Rep. 1984 Nov;68(11):1403-5 (medline /6541973)  
COMMENTS: Cites: J Am Coll Surg. 1995 Sep;181(3):193-201 (medline /7670677)  
COMMENTS: Cites: Cancer Invest. 1994;12(4):414-20 (medline /8032964)  
COMMENTS: Cites: Surgery. 1993 Apr;113(4):389-94 (medline /8456394)  
COMMENTS: Cites: Melanoma Res. 1993 Apr;3(2):133-8 (medline /8518552)  
COMMENTS: Cites: Ann Oncol. 1996 Oct;7(8):827-35 (medline /8922197)  
COMMENTS: Cites: J Clin Oncol. 1998 May;16(5):1743-51 (medline /9586887)  
COMMENTS: Cites: Am J Surg. 1998 May;175(5):413-7 (medline /9600290)  
COMMENTS: Cites: J Clin Oncol. 1999 Mar;17(3):968-75 (medline /10071291)  
COMMENTS: Cites: J Clin Oncol. 1999 Sep;17(9):2745-51 (medline /10561349)  
COMMENTS: Cites: J Clin Oncol. 2000 Jan;18(1):158-66 (medline /10623706)  
COMMENTS: Cites: Cancer J Sci Am. 2000 Feb;6 Suppl 1:S11-4 (medline /10685652)  
COMMENTS: Cites: J Clin Oncol. 2000 Nov 15;18(22):3782-93 (medline /11078491)  
COMMENTS: Cites: Cancer. 2000 Jan 1;88(1):79-87 (medline /10618609)  
COMMENTS: Cites: J Clin Oncol. 1999 Jul;17(7):2105-16 (medline /10561265)  
COMMENTS: Cites: J Clin Oncol. 1998 Sep;16(9):2921-9 (medline /9738559)  
COMMENTS: Cites: J Clin Oncol. 1998 Mar;16(3):1103-11 (medline /9508197)  
COMMENTS: Cites: Melanoma Res. 1995 Oct;5(5):365-9 (medline /8541728)  
COMMENTS: Cites: J Clin Oncol. 2001 Aug 15;19(16):3635-48 (medline /11504745)  
COMMENTS: Cites: J Clin Oncol. 1994 Apr;12(4):806-11 (medline /8151323)  
COMMENTS: Cites: J Natl Cancer Inst Monogr. 1993;(15):185-7 (medline /7912525)  
COMMENTS: Cites: J Clin Oncol. 1984 Apr;2(4):316-9 (medline /6707719)  
COMMENTS: Cites: Cancer Treat Rep. 1987 Feb;71(2):171-2 (medline /3542209)  
COMMENTS: Cites: Cancer. 1989 Nov 15;64(10):2024-9 (medline /2804890)  
COMMENTS: Cites: Oncologist. 2007 Sep;12(9):1114-23 (medline /17914081)  
COMMENTS: Cites: J Clin Oncol. 2007 Apr 20;25(12):1562-9 (medline /17443000)  
COMMENTS: Cites: J Clin Oncol. 2002 Apr 15;20(8):2045-52 (medline /11956264)  
COMMENTS: Cites: Am J Clin Oncol. 2002 Jun;25(3):283-6 (medline /12040289)  
COMMENTS: Cites: J Clin Oncol. 2005 Dec 10;23(35):9001-7 (medline /16260697)  
COMMENTS: Cites: Ann Oncol. 2006 Apr;17(4):571-7 (medline /16469753)  
COMMENTS: Cites: N Engl J Med. 2006 Jul 6;355(1):51-65 (medline /16822996)  
COMMENTS: Cites: J Clin Oncol. 2006 Oct 10;24(29):4738-45 (medline /16966688)  
COMMENTS: Cites: J Clin Oncol. 2007 Sep 1;25(25):3802-7 (medline /17761969)  
COMMENTS: Cites: Cancer Treat Rev. 2007 Dec;33(8):665-80 (medline /17919823)  
COMMENTS: Cites: Clin Cancer Res. 2007 Nov 15;13(22 Pt 1):6681-8 (medline /17982122)  
COMMENTS: Cites: CA Cancer J Clin. 2008 Mar-Apr;58(2):71-96 (medline /18287387)  
COMMENTS: Cites: N Engl J Med. 2008 Jun 19;358(25):2698-703 (medline /18565862)  
COMMENTS: Cites: J Clin Oncol. 2008 Nov 10;26(32):5233-9 (medline /18809613)  
COMMENTS: Cites: J Clin Oncol. 2008 Dec 10;26(35):5748-54 (medline /19001327)  
COMMENTS: Cites: J Clin Oncol. 2007 Dec 1;25(34):5426-34 (medline /18048825)  
COMMENTS: Cites: J Clin Oncol. 2008 May 1;26(13):2178-85 (medline /18445842)  
COMMENTS: Cites: Clin Cancer Res. 2008 Sep 1;14(17):5610-8 (medline /18765555)  
COMMENTS: Comment in: Oncology (Williston Park). 2009 May;23(6):496, 498, 500 (medline /19544690)  
COMMENTS: Comment in: Oncology (Williston Park). 2009 May;23(6):509, 515 (medline /19544692)  
COMMENTS: Comment in: Oncology (Williston Park). 2009 May;23(6):500, 508 (medline /19544691)  
ABSTRACT: The 10-year survival rate for patients with metastatic melanoma is less than 10%. Although surgery and radiation therapy have a role in the treatment of metastatic disease, systemic therapy is the mainstay of treatment for most patients. Single-agent chemotherapy is well tolerated but is associated with response rates of only 5% to 20%. Combination chemotherapy and biochemotherapy may improve objective response rates but do not extend survival and are associated with greater toxicity. Immunotherapeutic approaches such as high-dose interleukin-2 are associated with durable responses in a small percentage of patients. In this article, we review the treatments for metastatic melanoma including promising investigational approaches.  
MESH HEADINGS: Adoptive Transfer  
MESH HEADINGS: Antibodies, Monoclonal/therapeutic use  
MESH HEADINGS: Antigens, CD/immunology  
MESH HEADINGS: Antineoplastic Agents/therapeutic use  
MESH HEADINGS: Antineoplastic Combined Chemotherapy Protocols/therapeutic use  
MESH HEADINGS: Cancer Vaccines  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunotherapy  
MESH HEADINGS: Interferon-alpha/therapeutic use  
MESH HEADINGS: Interleukin-2/therapeutic use  
MESH HEADINGS: Melanoma/mortality/pathology/\*therapy  
MESH HEADINGS: Prognosis  
MESH HEADINGS: Recombinant Proteins  
MESH HEADINGS: Skin Neoplasms/mortality/pathology/\*therapy eng

118. Bhattacharjee, Shubhra; Fakhruddin, Anm; Chowdhury, Maz; Rahman, Ma; Alam, M K, and Bhattacharjee, Shubhra. Monitoring of Selected Pesticides Residue Levels in Water Samples of Paddy Fields and Removal of Cypermethrin and Chlorpyrifos Residues From Water Using Rice Bran. 2012 Aug; 89, (2): 348-353.   
Rec #: 38609  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Consumption of pesticides associated foods increased in recent decades in Bangladesh. Most of the pesticides come from paddy, as rice is the main food items here and about 70 % pesticides are used only on paddy fields. Water samples of paddy fields and Kaliganga River of Manikganj district were analyzed to provide base line data on cypermethrin, chlorpyrifos and diazinon residue by using high performance liquid chromatography. Levels of Cypermethrin, chlorpyrifos and diazinon detected in the paddy field water samples were (0.605 plus or minus 0.011 mu g/L), (0.06 plus or minus 0.001 mu g/L) and (0.039 plus or minus 0.002 mu g/L), respectively. 0.11 plus or minus 0.003 mu g/L of cypermethrin and 0.012 plus or minus 0.0006 mu g/L of chlorpyrifos were also identified in the water samples of Kaligonga River. Diazinon residue was not detected in the river water samples. The detected concentrations of pesticide residues in the river water were below the accepted maximum residue limit (MRL) value of drinking water (0.1 mu g/l) adopted by the FAO/WHO Codex Alimentarius Commission. Cypermethrin and chlorpyrifos were chosen for decontamination through rice bran, as it was found in river water. Two gm rice bran could easily decontaminated 95.6 % and 96.4 % of cypermethrin and chlorpyrifos. The result of this study showed that pesticide residue was detected in water samples were below the MRLs value, which can easily be decontaminated through absorption of rice bran.  
Keywords: High-performance liquid chromatography  
Keywords: Pollution monitoring  
Keywords: Q5 01520:Environmental quality  
Keywords: Water sampling  
Keywords: Pesticide residues  
Keywords: Food  
Keywords: Decontamination  
Keywords: Freshwater  
Keywords: Environmental Studies  
Keywords: Drinking Water  
Keywords: Rice fields  
Keywords: Codex standards  
Keywords: Absorption  
Keywords: X 24330:Agrochemicals  
Keywords: Bangladesh  
Keywords: Toxicology  
Keywords: Rivers  
Keywords: HPLC  
Keywords: Data processing  
Keywords: Cypermethrin  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Oryza sativa  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Environment Abstracts; Aqualine Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Pollution Abstracts; Toxicology Abstracts  
Keywords: River water  
Keywords: Food absorption  
Keywords: Pesticides  
Keywords: Drinking water  
Keywords: Diazinon  
Date revised - 2012-11-01  
Language of summary - English  
Location - Bangladesh  
Pages - 348-353  
ProQuest ID - 1223128332  
SubjectsTermNotLitGenreText - HPLC; Pollution monitoring; Drinking Water; Food absorption; River water; Rice fields; Codex standards; Pesticides; Toxicology; High-performance liquid chromatography; Rivers; Chlorpyrifos; Data processing; Cypermethrin; Pesticide residues; Food; Decontamination; Drinking water; Diazinon; Water sampling; Absorption; Oryza sativa; Bangladesh; Freshwater  
Last updated - 2012-12-06  
Corporate institution author - Bhattacharjee, Shubhra; Fakhruddin, ANM; Chowdhury, MAZ; Rahman, MA; Alam, M K  
DOI - OB-b26b1572-b056-42b2-a5d3mfgefd101; 16922162; CS1252210; 0007-4861; 1432-0800 English

119. Bian, W. J.; Xu, Y.; Li, S. N., and Zhu, G. N. Desulfuration of Chlorpyrifos, Parathion, and Malathion by Hepatic Cytochrome P450 in Four Species of Fish. The Institution of Pesticide and Environmental Toxicology, Zhejiang University, Hangzhou 310029, China,//: 2011; 30, (7): 1282-1288(CHI) (ENG ABS).   
Rec #: 2510  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY,MLN)  
Notes: Chemical of Concern: CPY,EPRN,MLN,PRN

120. Bidwell, Joseph R; Becker, Carol; Hensley, Steve; Stark, Richard; Meyer, Michael T, and Bidwell, Joseph R. Occurrence of Organic Wastewater and Other Contaminants in Cave Streams in Northeastern Oklahoma and Northwestern Arkansas. 2010 Feb; 58, (2): 286-298.   
Rec #: 48089  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The prevalence of organic wastewater compounds in surface waters of the United States has been reported in a number of recent studies. In karstic areas, surface contaminants might be transported to groundwater and, ultimately, cave ecosystems, where they might impact resident biota. In this study, polar organic chemical integrative samplers (POCISs) and semipermeable membrane devices (SPMDs) were deployed in six caves and two surface-water sites located within the Ozark Plateau of northeastern Oklahoma and northwestern Arkansas in order to detect potential chemical contaminants in these systems. All caves sampled were known to contain populations of the threatened Ozark cavefish (Amblyopsis rosae). The surface-water site in Oklahoma was downstream from the outfall of a municipal wastewater treatment plant and a previous study indicated a hydrologic link between this stream and one of the caves. A total of 83 chemicals were detected in the POCIS and SPMD extracts from the surface-water and cave sites. Of these, 55 chemicals were detected in the caves. Regardless of the sampler used, more compounds were detected in the Oklahoma surface-water site than in the Arkansas site or the caves. The organic wastewater chemicals with the greatest mass measured in the sampler extracts included sterols (cholesterol and beta -sitosterol), plasticizers [diethylhexylphthalate and tris(2-butoxyethyl) phosphate], the herbicide bromacil, and the fragrance indole. Sampler extracts from most of the cave sites did not contain many wastewater contaminants, although extracts from samplers in the Oklahoma surface-water site and the cave hydrologically linked to it had similar levels of diethylhexyphthalate and common detections of carbamazapine, sulfamethoxazole, benzophenone, N-diethyl-3-methylbenzamide (DEET), and octophenol monoethoxylate. Further evaluation of this system is warranted due to potential ongoing transport of wastewater-associated chemicals into the cave. Halogenated organics found in caves and surface-water sites included brominated flame retardants, organochlorine pesticides (chlordane and nonachlor), and polychlorinated biphenyls. The placement of samplers in the caves (near the cave mouth compared to farther in the system) might have influenced the number of halogenated organics detected due to possible aerial transport of residues. Guano from cave-dwelling bats also might have been a source of some of these chlorinated organics. **Seven-day survival and growth bioassays with fathead minnows (Pimephales promelas) exposed to samples of cave water indicated initial toxicity in water from two of the caves, but these effects were transient, with no toxicity observed in follow-up tests.**  
Keywords: Guano  
Keywords: Ecosystems  
Keywords: Environmental Engineering Abstracts; Environment Abstracts; Water Resources Abstracts; Pollution Abstracts; Aqualine Abstracts; Toxicology Abstracts  
Keywords: SW 3030:Effects of pollution  
Keywords: Biota  
Keywords: Insecticides  
Keywords: Sterols  
Keywords: PCB  
Keywords: Sulfamethoxazole  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Cholesterol  
Keywords: cholesterol  
Keywords: Outfalls  
Keywords: polychlorinated biphenyls  
Keywords: Bioassays  
Keywords: DEET  
Keywords: Water Pollution Effects  
Keywords: USA, Arkansas  
Keywords: Organic Compounds  
Keywords: Contaminants  
Keywords: Groundwater  
Keywords: Wastewater  
Keywords: Surface water  
Keywords: caves  
Keywords: Plasticizers  
Keywords: USA, Arkansas, Ozark Plateau  
Keywords: Survival  
Keywords: Fire retardant chemicals  
Keywords: Wastewater treatment  
Keywords: Streams  
Keywords: Environmental Studies  
Keywords: USA, Oklahoma  
Keywords: Amblyopsis rosae  
Keywords: Pollutants  
Keywords: Ground water  
Keywords: bromacil  
Keywords: Municipal wastes  
Keywords: Chemical pollution  
Keywords: Mouth  
Keywords: X 24330:Agrochemicals  
Keywords: PCB compounds  
Keywords: Benzophenone  
Keywords: Chlordane  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Pesticides (organochlorine)  
Keywords: Herbicides  
Keywords: Toxicity  
Keywords: Samplers  
Keywords: Pimephales promelas  
Keywords: Phosphates  
Keywords: Phosphate  
Keywords: Indole  
Keywords: indoles  
Keywords: Caves  
Keywords: Fire retardants  
Keywords: Waste water  
Keywords: Fragrances  
Date revised - 2010-02-01  
Language of summary - English  
Location - USA, Oklahoma; USA, Arkansas, Ozark Plateau; USA, Arkansas  
Pages - 286-298  
ProQuest ID - 809709874  
SubjectsTermNotLitGenreText - Guano; Surface water; Plasticizers; Survival; Fire retardant chemicals; Streams; Wastewater treatment; Sterols; bromacil; Ground water; Mouth; PCB; Benzophenone; Sulfamethoxazole; Chlordane; Pesticides (organochlorine); Herbicides; Toxicity; Cholesterol; Samplers; polychlorinated biphenyls; DEET; Phosphate; Indole; Caves; Waste water; Contaminants; Fragrances; Ecosystems; caves; cholesterol; Outfalls; Biota; Insecticides; Phosphates; Bioassays; indoles; Municipal wastes; Fire retardants; Chemical pollution; Groundwater; PCB compounds; Pollutants; Water Pollution Effects; Organic Compounds; Wastewater; Pimephales promelas; Amblyopsis rosae; USA, Oklahoma; USA, Arkansas, Ozark Plateau; USA, Arkansas  
Last updated - 2011-11-03  
Corporate institution author - Bidwell, Joseph R; Becker, Carol; Hensley, Steve; Stark, Richard; Meyer, Michael T  
DOI - OB-c31f69b7-9bf6-4f15-a22fmfgefd108; 12588281; 0090-4341; 1432-0703 English

121. Biello, D. Bad for Bugs and Brains? A Common Pesticide May Interfere With a Child's Brain Development.   
Rec #: 74109  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: MESH HEADINGS: Brain/\*growth &amp  
MESH HEADINGS: development  
MESH HEADINGS: Child  
MESH HEADINGS: Chlorpyrifos/\*adverse effects  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: Insecticides/\*adverse effects  
MESH HEADINGS: Male  
MESH HEADINGS: Pregnancy  
MESH HEADINGS: Prenatal Exposure Delayed Effects eng

122. Bintintan, I. and Meyers, G. A New Type of Signal Peptidase Cleavage Site Identified in an Rna Virus Polyprotein.   
Rec #: 50639  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Pestiviruses, a group of enveloped positive strand RNA viruses belonging to the family Flaviviridae, express their genes via a polyprotein that is subsequently processed by proteases. The structural protein region contains typical signal peptidase cleavage sites. Only the site at the C terminus of the glycoprotein E(rns) is different because it does not contain a hydrophobic transmembrane region but an amphipathic helix functioning as the E(rns) membrane anchor. Despite the absence of a hydrophobic region, the site between the C terminus of E(rns) and E1, the protein located downstream in the polyprotein, is cleaved by signal peptidase, as demonstrated by mutagenesis and inhibitor studies. Thus, E(rns)E1 is processed at a novel type of signal peptidase cleavage site showing a different membrane topology. Prevention of glycosylation or introduction of mutations into the C-terminal region of E(rns) severely impairs processing, presumably by preventing proper membrane interaction or disturbing a conformation critical for the protein to be accepted as a substrate by signal peptidase.  
MESH HEADINGS: Amino Acid Sequence  
MESH HEADINGS: Animals  
MESH HEADINGS: Cell Line  
**MESH HEADINGS: Cricetinae**  
MESH HEADINGS: Glycoproteins/chemistry  
MESH HEADINGS: Glycosylation  
MESH HEADINGS: Membrane Proteins/\*chemistry  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Mutagenesis  
MESH HEADINGS: Mutation  
MESH HEADINGS: Plasmids/metabolism  
MESH HEADINGS: Polyproteins/\*chemistry  
MESH HEADINGS: Protein Structure, Tertiary  
MESH HEADINGS: RNA Viruses/\*chemistry  
MESH HEADINGS: Serine Endopeptidases/\*chemistry eng

123. Bishnu, A.; Saha, T.; Mazumdar, D.; Chakrabarti, K., and Chakraborty, A. Assessment of the impact of pesticide residues on microbiological and biochemical parameters of tea garden soils in India. 2008; 43, (8): 723-731.   
Rec #: 56739  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The main aim of this study was to assess the impact of pesticidal residues on soil microbial and biochemical parameters of the tea garden soils. The microbial biomass carbon (MBC), basal (BSR) and substrate induced respirations (SIR), beta-glucosidase activity and fluorescein diacetate hydrolyzing activity (FDHA) of six tea garden soils, along with two adjacent forest soils (control) in West Bengal, India were measured. The biomass and its activities and biochemical parameters were generally lower in the tea garden soils than the control soils. The MBC of the soils ranged from 295.5 to 767.5 mu g g(-1). The BSR and SIR ranged from 1.65 to 3.08 mu g CO(2)-C g(-1) soil h(-1) and 3.08 to 10.76 mu g CO(2)-C g(-1)h(-1) respectively. The beta-glucosidase and FDHA of the soils varied from 33.3 and 76.3 mu g para-nitrophenol g-1 soil h-1 and 60.5 to 173.5 mu g fluorescein g(-1)h(-1) respectively. The tea garden soils contained variable residues of organophosphorus and organochlorine pesticides, which negatively affected the MBC, BSR, SIR, FDHA and beta-glucosidase activity. Ethion and chlorpyriphos pesticide residues in all the tea garden soils varied from 5.00 to 527.8 ppb and 17.6 to 478.1 ppb respectively. The alpha endosulfan, beta endosulfan and endosulfan sulfate pesticide residues in the tea garden soils ranged from 7.40 to 81.40 ppb, 8.50 to 256.1 ppb and 55 to 95.9 ppb respectively. Canonical correlation analysis shows that 93% of the total variation was associated with the negative impact of chlorpyriphos, beta and alpha endosulfan and endosulfan sulfate on MBC, BSR and FDHA. At the same time ethion had negative impact on SIR and beta-glucosidase. Data demonstrated that the pesticide residues had a strong impact on the microbial and biochemical components of soil quality.  
Keywords: Tea, pesticide residues, microbial biomass carbon, soil respiration,  
ISI Document Delivery No.: 362XF

124. Bishnu, Avhik; Chakrabarti, Kalyan; Chakraborty, Ashis; Saha, Tapan, and Bishnu, Avhik. Pesticide Residue Level in Tea Ecosystems of Hill and Dooars Regions of West Bengal, India. 2009 Feb; 149, (1-4): 457-464.   
Rec #: 45059  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the present study we quantified the residues of organophosphorus (e.g. ethion and chlorpyrifos), organochlorine (e.g. heptachlor, dicofol, alpha -endosulfan, beta -endosulfan, endosulfan sulfate) and synthetic pyrethroid (e.g. cypermethrin and deltamethrin) pesticides in made tea, fresh tea leaves, soils and water bodies from selected tea gardens in the Dooars and Hill regions of West Bengal, India during April and November, 2006. The organophosphorus (OP) pesticide residues were detected in 100% substrate samples of made tea, fresh tea leaves and soil in the Dooars region. In the Hill region, 20% to 40% of the substrate samples contained residues of organophosphorus (OP) pesticides. The organochlorine (OC) pesticide residues were detected in 33% to 100% of the substrate samples, excluding the water bodies in the Dooars region and 0% to 40% in the Hill region. The estimated mean totals of studied pesticides were higher in fresh tea leaves than in made tea and soils. The synthetic pyrethroid (SP) pesticide residues could not be detected in the soils of both the regions and in the water bodies of the Dooars. Sixteen percent and 20% of the made tea samples exceeded the MRL level of chlorpyrifos in Dooars and Hill regions respectively. The residues of heptachlor exceeded the MRL in 33% (April) and 100% (November) in the Dooars and 40% (April) and 20% (November) in the Hill region. Based on the study it was revealed that the residues of banned items like heptachlor and chlorpyrifos in made tea may pose health hazards to the consumers.  
Keywords: Sulfates  
Keywords: hills  
Keywords: Organochlorine compounds  
Keywords: Ecosystems  
Keywords: water bodies  
Keywords: ENA 09:Land Use & Planning  
Keywords: Pesticide residues  
Keywords: P 5000:LAND POLLUTION  
Keywords: tea  
Keywords: India, West Bengal  
Keywords: Deltamethrin  
Keywords: Endosulfan  
Keywords: Chlorpyrifos  
Keywords: Soil  
Keywords: cypermethrin  
Keywords: Heptachlor  
Keywords: Pesticides  
Keywords: Pollution Abstracts; Environment Abstracts  
Keywords: Pyrethroids  
Date revised - 2010-01-01  
Language of summary - English  
Location - India, West Bengal  
Pages - 457-464  
ProQuest ID - 21290231  
SubjectsTermNotLitGenreText - Sulfates; hills; Organochlorine compounds; water bodies; Ecosystems; Pesticide residues; tea; Deltamethrin; Endosulfan; Soil; Chlorpyrifos; cypermethrin; Heptachlor; Pesticides; Pyrethroids; India, West Bengal  
Last updated - 2011-12-14  
British nursing index edition - Environmental Monitoring and Assessment [Environ. Monit. Assess.]. Vol. 149, no. 1-4, pp. 457-464. Feb 2009.  
Corporate institution author - Bishnu, Avhik; Chakrabarti, Kalyan; Chakraborty, Ashis; Saha, Tapan  
DOI - MD-0010934143; 11715389; 0167-6369; 1573-2959 English

125. Bishop, C. A.; Ashpole, S. L.; Edwards, A. M.; Van Aggelen, G., and Elliott, J. E. Hatching Success and Pesticide Exposures in Amphibians Living in Agricultural Habitats of the South Okanagan Valley, British Columbia, Canada (2004-2006). 2010; 29, (7): 1593-1603.   
Rec #: 2110  
Keywords: MIXTURE  
Call Number: NO MIXTURE (24D,24DXY,ATZ,AZ,CPY,CYP,DEATZ,DMB,DZ,ES1,ES2,ESS,HXZ,LNR,MCPP1,MTM,PDM,PMR,SZ)  
Notes: Chemical of Concern: 24D,24DXY,ATZ,AZ,CPY,CYP,DEATZ,DMB,DZ,ES1,ES2,ESS,HXZ,LNR,MCPA,MCPP1,MTM,PDM,PMR,SZ

126. Blair, A.; Thomas, K.; Coble, J.; Sandler, D. P.; Hines, C. J.; Lynch, C. F.; Knott, C.; Purdue, M. P.; Zahm, S. H.; Alavanja, M. C. R.; Dosemeci, M.; Kamel, F.; Hoppin, J. A.; Freeman, L. B., and Lubin, J. H. Impact of pesticide exposure misclassification on estimates of relative risks in the Agricultural Health Study. 2011; 68, (7): 537-541.   
Rec #: 56759  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background The Agricultural Health Study (AHS) is a prospective study of licensed pesticide applicators and their spouses in Iowa and North Carolina. We evaluate the impact of occupational pesticide exposure misclassification on relative risks using data from the cohort and the AHS Pesticide Exposure Study (AHS/PES). Methods We assessed the impact of exposure misclassification on relative risks using the range of correlation coefficients observed between measured post-application urinary levels of 2,4-dichlorophenoxyacetic acid (2,4-D) and a chlorpyrifos metabolite and exposure estimates based on an algorithm from 83 AHS pesticide applications. Results Correlations between urinary levels of 2,4-D and a chlorpyrifos metabolite and algorithm estimated intensity scores were about 0.4 for 2,4-D (n=64), 0.8 for liquid chlorpyrifos (n=4) and 0.6 for granular chlorpyrifos (n=12). Correlations of urinary levels with kilograms of active ingredient used, duration of application, or number of acres treated were lower and ranged from -0.36 to 0.19. These findings indicate that a priori expert-derived algorithm scores were more closely related to measured urinary levels than individual exposure determinants evaluated here. Estimates of potential bias in relative risks based on the correlations from the AHS/PES indicate that non-differential misclassification of exposure using the algorithm would bias estimates towards the null, but less than that from individual exposure determinants. Conclusions Although correlations between algorithm scores and urinary levels were quite good (ie, correlations between 0.4 and 0.8), exposure misclassification would still bias relative risk estimates in the AHS towards the null and diminish study power.  
Keywords: FARM APPLICATORS, CANCER INCIDENCE, RELIABILITY, DISEASE, CHLORPYRIFOS,  
ISI Document Delivery No.: 773KY

127. Blanco-Munoz, J.; Morales, M. M.; Lacasana, M.; Aguilar-Garduno, C.; Bassol, S., and Cebrian, M. E. Exposure to organophosphate pesticides and male hormone profile in floriculturist of the state of Morelos, Mexico. 2010; 25, (7): 1787-1795.   
Rec #: 56769  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: Studies on experimental animals have found that organophosphate (OP) pesticides may act as endocrine disruptors; however, their effects on the human hormonal profile have not yet been adequately characterized. We evaluate the association between exposure to OP pesticides, measured through dialkyl phosphate (DAP) metabolites urinary levels, and the male hormone profile. METHODS: A cross-sectional study was performed in 104 floriculturists of Morelos, Mexico. A structured questionnaire was applied to get information on sociodemographic characteristics, anthropometry, clinical history, alcohol and tobacco consumption, and work history. DAP metabolites [dimethylphosphate (DMP), dimethylthiophosphate, dimethyldithiophosphate, diethylphosphate (DEP), diethylthiophosphate (DETP) and diethyldithiophosphate] were determined using gas-liquid chromatography. Serum levels of FSH, LH, prolactin, testosterone, inhibin B and estradiol were determined using enzyme-linked immunosorbent assay. Multiple linear regression was used to study the association between DAP metabolite levels and male hormonal profile. Data were adjusted by p,p'-dichlorodiphenyldichloroethene serum levels and other potential confounders. RESULTS: There was a negative association between inhibin B and urinary levels of DMP, DEP, DETP and total DAP metabolites. DEP levels were negatively associated with serum FSH concentrations, but marginally and positively associated with those of testosterone. DETP was marginally associated with lower LH serum levels. There were no other significant associations among OP metabolites and serum hormone levels. CONCLUSIONS: Inhibin B and FSH vary according to levels of DAP metabolites in men occupationally exposed to OP pesticides. These results suggest that OP pesticides could act as endocrine disruptors in humans; however, most hormonal values fell within the wide normal range and associations were small. There is, therefore, a need for further investigation to elucidate their biological and clinical relevance.  
Keywords: flowergrowers, male hormonal profile, pesticides, organophosphates,  
ISI Document Delivery No.: 628SU

128. Blankschien, M. D.; Potrykus, K.; Grace, E.; Choudhary, A.; Vinella, D.; Cashel, M., and Herman, C. Trar, a Homolog of a Rnap Secondary Channel Interactor, Modulates Transcription.   
Rec #: 50979  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Infect Immun. 2003 Jan;71(1):384-92 (medline /12496188)  
COMMENTS: Cites: Cell. 2003 Apr 4;113(1):61-71 (medline /12679035)  
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COMMENTS: Cites: J Mol Biol. 2001 Jan 26;305(4):673-88 (medline /11162084)  
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COMMENTS: Cites: Mol Microbiol. 2008 Mar;67(6):1223-41 (medline /18284577)  
COMMENTS: Cites: Mol Microbiol. 2008 Feb;67(3):619-32 (medline /18086212)  
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COMMENTS: Cites: J Biol Chem. 2006 Oct 6;281(40):30112-21 (medline /16905537)  
COMMENTS: Cites: Curr Biol. 2006 Sep 5;16(17):R705-10 (medline /16950097)  
COMMENTS: Cites: Mol Microbiol. 2006 Jul;61(1):194-205 (medline /16824105)  
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COMMENTS: Cites: Cell. 2004 Aug 6;118(3):297-309 (medline /15294156)  
COMMENTS: Cites: Cell. 2004 Aug 6;118(3):281-4 (medline /15294154)  
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ABSTRACT: Recent structural and biochemical studies have identified a novel control mechanism of gene expression mediated through the secondary channel of RNA Polymerase (RNAP) during transcription initiation. Specifically, the small nucleotide ppGpp, along with DksA, a RNAP secondary channel interacting factor, modifies the kinetics of transcription initiation, resulting in, among other events, down-regulation of ribosomal RNA synthesis and up-regulation of several amino acid biosynthetic and transport genes during nutritional stress. Until now, this mode of regulation of RNAP was primarily associated with ppGpp. Here, we identify TraR, a DksA homolog that mimics ppGpp/DksA effects on RNAP. First, expression of TraR compensates for dksA transcriptional repression and activation activities in vivo. Second, mutagenesis of a conserved amino acid of TraR known to be critical for DksA function abolishes its activity, implying both structural and functional similarity to DksA. Third, unlike DksA, TraR does not require ppGpp for repression of the rrnB P1 promoter in vivo and in vitro or activation of amino acid biosynthesis/transport genes in vivo. Implications for DksA/ppGpp mechanism and roles of TraR in horizontal gene transfer and virulence are discussed.  
MESH HEADINGS: Amino Acid Sequence  
MESH HEADINGS: Amino Acids  
MESH HEADINGS: DNA-Directed RNA Polymerases/chemistry/genetics/\*metabolism  
MESH HEADINGS: Escherichia coli/\*genetics/metabolism  
MESH HEADINGS: Escherichia coli Proteins/chemistry/genetics/\*metabolism  
MESH HEADINGS: \*Gene Expression Regulation, Bacterial  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Protein Conformation  
MESH HEADINGS: Protein Structure, Secondary  
MESH HEADINGS: RNA, Bacterial/metabolism  
MESH HEADINGS: Transcription Factors/chemistry/genetics/\*metabolism  
MESH HEADINGS: \*Transcription, Genetic eng

129. Bolbrinker, J.; Beige, J.; Huber, M.; Sharma, A. M.; Thomas, A.; Deter, H. C., and Kreutz, R. Role of Cyp2c9 Genetic Variants for Salt Sensitivity and the Regulation of the Renin-Angiotensin-Aldosterone System in Normotensive Men.   
Rec #: 50369  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Comment in: J Hypertens. 2011 Jan;29(1):29-31 (medline /21160360)  
ABSTRACT: OBJECTIVE: Cytochrome P450 (CYP) 2C9 gene polymorphisms have been implicated in regulation of the renin-angiotensin-aldosterone system (RAAS) and salt sensitivity in hypertensive patients. We tested the relevance of CYP2C9 genotypes for regulation of plasma renin activity (PRA), plasma aldosterone concentrations and blood pressure (BP) in response to changes in salt intake in normotensive individuals.  
ABSTRACT: METHODS: Three hundred and ten normotensive men (mean age 24.9 &plusmn; 0.1) were studied after a standardized low = 20 mmol/day or high = 220 mmol/day sodium intake for 7 days. Individuals were classified as salt sensitive when the mean arterial BP was more than 3 mmHg higher after high compared with low-salt exposure.  
ABSTRACT: RESULTS: CYP2C9\*2 and CYP2C9\*3 alleles were not associated with salt-sensitivity status or BP phenotypes; CYP2C9\*2 had no effect on PRA or plasma aldosterone. CYP2C9\*3 carriers showed a significantly lower PRA compared with CYP2C9\*1/\*1 individuals in the overall study cohort (high salt: 0.39 &plusmn; 0.05 vs. 0.62 &plusmn; 0.04 ng/ml per h, P = 0.009; low salt: 2.19 &plusmn; 0.27 vs. 2.87 &plusmn; 0.13 ng/ml per h, P = 0.013). Salt-sensitive CYP2C9\*3 carriers exhibited the lowest PRA values and significantly lower 24 h sodium excretion rates during high-salt intake (P = 0.005 vs. CYP2C9\*1/\*1). Lower plasma aldosterone concentrations were only observed in salt-resistant CYP2C9\*3 carriers under low salt (P = 0.039).  
ABSTRACT: CONCLUSION: The present study confirms an association between CYP2C9 polymorphism and activity of the RAAS. Specifically, we detected an overall effect of CYP2C9\*3 on lower PRA, but not on salt-sensitive BP regulation in normotensive men. Further studies are needed to analyze the long-term effects of CYP2C9\*3 for salt sensitivity and hypertensive diseases.  
MESH HEADINGS: Alleles  
MESH HEADINGS: Aryl Hydrocarbon Hydroxylases/\*genetics  
MESH HEADINGS: \*Blood Pressure  
MESH HEADINGS: Cohort Studies  
MESH HEADINGS: Humans  
MESH HEADINGS: Male  
MESH HEADINGS: \*Renin-Angiotensin System  
MESH HEADINGS: Sodium Chloride, Dietary/\*adverse effects eng

130. Bollmohr, S.; van den Brink, P. J.; Wade, P. W.; Day, J. A., and Schulz, R. Environmental variables, pesticide pollution and meiofaunal community structure in two contrasting temporarily open/closed False Bay estuaries. 2011; 37, (3): 391-400.   
Rec #: 56849  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Environmental variables (including natural and anthropogenic stressors) and meiobenthic communities were sampled in a 'natural' (Rooiels) and a 'disturbed' (Lourens) estuary in the Western Cape, South Africa, bimonthly for 20 months. A primary aim of the study was to assess if the meiobenthic community structure is driven by different variables when comparing 'natural' versus 'disturbed' system. Due to the much smaller catchment of the Rooiels Estuary, many environmental variables were significantly different (p<0.001) from the variables in the Lourens Estuary, e. g. salinity, temperature, pH, total suspended solids, nitrate and depth. No pesticide concentrations were expected in the Rooiels Estuary due to the absence of agricultural development in the catchment. However, chlorpyrifos (8.9 mu g/kg), prothiofos (22.0 mu g/kg) and cypermethrin concentrations (0.42 mu g/kg) were detected frequently, with the highest concentrations recorded during the summer months. Principal response curve analysis showed that temporal variability between sampling dates explained 42% of the variance in environmental variables and pesticide concentrations and spatial variability between the 2 estuaries explained 58%. Variables contributing most to the differences were higher concentrations of endosulfan, p,p-DDE and nitrate concentrations in the Lourens Estuary and larger grain size and higher salinity at the bottom in the Rooiels Estuary. In general the meiofaunal community in the Rooiels Estuary showed a significantly higher number of taxa (p<0.001), a significantly higher Shannon Wiener Diversity Index (p<0.001) and a generally lower meiofaunal abundance with less variability than in the Lourens Estuary. The differences were mostly explained by a higher abundance of Cypretta and Darcythompsonia in the Rooiels Estuary and a higher abundance of Thermocyclops and Canthocamptus in the Lourens Estuary. The variables explaining a significant part (14%) of the variance in meiofaunal abundance in the Rooiels Estuary were salinity and temperature, with the Redundancy Analysis indicating that the abundance of most of the taxa increased with higher salinity and temperature, e. g. Upogebia, Nereis, Uroma and nematodes were clearly positively correlated to salinity and temperature. The variables explaining a significant part of the variance in the dataset (43%) within the Lourens Estuary were also salinity and temperature but included chlorpyrifos, nitrate and flow (including river and tidal flow).  
Keywords: particle-associated insecticides, meiofauna, estuaries, South Africa  
ISI Document Delivery No.: 800EB

131. Bollmohr, S.; Van den Brink, P. J.; Wade, P. W.; Day, J. A., and Schulz, R. Spatial and Temporal Variability in Particle-Bound Pesticide Exposure and Their Effects on Benthic Community Structure in a Temporarily Open Estuary. 2009; 82, 50-60.   
Rec #: 60  
Keywords: MIXTURE  
Call Number: NO MIXTURE (CPY,CYP,ES,FNV)  
Notes: Chemical of Concern: CPY,CYP,ES,FNV

132. Bollmohr, Silke; Schulz, Ralf, and Bollmohr, Silke. Seasonal Changes of Macroinvertebrate Communities in a Western Cape River, South Africa, Receiving Nonpoint-Source Insecticide Pollution. 2009 Apr; 28, (4): 809-817.   
Rec #: 44889  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: A field study was conducted at three different sites along the Lourens River (South Africa) to assess aquatic macroinvertebrate abundances and community structures in relation to seasonal changes in rainfall and particle-associated organophosphorous (OP) insecticide contamination. Redundancy analysis indicated OP insecticide contamination (azinphos-methyl and chlorpyrifos) as the only significant variable determining the community composition. Principal response curves indicated that the invertebrate community dynamics of the Lourens River at the most-contaminated site, Lourens River 3 (38 c 23.0 kg total OP/kg suspended particles), differed significantly from the less-contaminated site, Lourens River 2 (8.0 c 4.9 kg total OP/kg in suspended particles) during the dry season (October-December; pesticide application period), whereas no difference was found during the wet season (July-September). Ephemeroptera abundances increased significantly (p = 0.0021) at the control site, Lourens River 1, from the wet to dry season, whereas abundances significantly decreased (p = 0.0011) at Lourens River 3. Two-by-three factorial analysis of variance demonstrated a significant interaction of site and season for the three most abundant mayfly taxa, Baetis sp., Demoreptus sp., and Castanophlebia sp., confirming a possible OP effect. Lourens River 3, however, differed significantly from the other two sites in flow, ortho-phosphate, and algae growth, which may partly explain the lower abundance of sensitive species. Apart from the OP contamination, only flow velocities showed significant differences between the wet and dry season at some sites. In conclusion, the present study suggests that particle-associated OPs affected community structure in the Lourens River at levels greater than 30 kg total OP/kg, whereas levels less then 10 kg total OP/kg yielded no significant effects. [PUBLICATION ABSTRACT]  
Keywords: Contamination  
Keywords: Ecosystems  
Keywords: South Africa, Lourens R.  
Keywords: ASFA 3: Aquatic Pollution & Environmental Quality; Aqualine Abstracts; Water Resources Abstracts; ASFA 1: Biological Sciences & Living Resources; Environment Abstracts  
Keywords: Macroinvertebrates  
Keywords: Particulates  
Keywords: Insecticides  
Keywords: Agricultural Chemicals  
Keywords: Sulfur dioxide  
Keywords: Demoreptus  
Keywords: Ephemeroptera  
Keywords: Baetis  
Keywords: Aquatic insects  
Keywords: Seasonal variations  
Keywords: Algae  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: Rivers  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: South Africa, Western Cape  
Keywords: Castanophlebia  
Keywords: dry season  
Keywords: Q5 01504:Effects on organisms  
Keywords: Suspended particulate matter  
Keywords: Publications  
Keywords: Q1 01485:Species interactions: pests and control  
Keywords: Insects  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Community composition  
Keywords: Community structure  
Keywords: Pesticides  
Keywords: Zoobenthos  
Keywords: Dry season  
Date revised - 2010-03-01  
Language of summary - English  
Location - South Africa, Lourens R.; South Africa, Western Cape  
Pages - 809-817  
ProQuest ID - 21348806  
SubjectsTermNotLitGenreText - Community composition; Insecticides; Contamination; Pesticides; Suspended particulate matter; Zoobenthos; Dry season; Aquatic insects; Seasonal variations; Chlorpyrifos; Sulfur dioxide; Community structure; dry season; Particulates; Rivers; Agricultural Chemicals; Ecosystems; Publications; Macroinvertebrates; Insects; Demoreptus; Ephemeroptera; Castanophlebia; Baetis; Algae; South Africa, Lourens R.; South Africa, Western Cape  
Last updated - 2012-11-20  
British nursing index edition - Environmental Toxicology and Chemistry [Environ. Toxicol. Chem.]. Vol. 28, no. 4, pp. 809-17. Apr 2009.  
Corporate institution author - Bollmohr, Silke; Schulz, Ralf  
DOI - 8cafb5f3-8b1e-4cf3-a8e6csamfg301; 12119843; CS1207663; 0730-7268 English

133. Bonacci, S. ; Corsi, I., and Focardi, S. Cholinesterases in the Antarctic scallop Adamussium colbecki: Characterization and sensitivity to pollutants. 2009; 72, (5): 1481-1488.   
Rec #: 56859  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Antarctica is affected by man-made contamination and development of sensitive ecotoxicological tools for impact assessment is a priority task. The aims of the present study were to characterize cholinesterase (ChE) activities in an Antarctic key species, the scallop Adamussium colbecki, and to investigate their sensitivity as biological markers (biomarkers) of exposure to pollutants and of their effects. Our results show that ChEs in gills share most characteristics with true acetylcholinesterase. The present results show that ChE activities in A. colbecki are significantly inhibited by organophosphates (OPs) and somehow **affected by in vitro exposure to mixtures of marine** contaminants such as polycyclic aromatic hydrocarbons (PAHs), even if no concentration-dependent pattern of response was observed and no effect was elicited by polychlorinated biphenyls (PCBs). The present results do not demonstrate ChEs in A. colbecki as sensitive tools to measure exposure to the above chemicals, but they may be worthy of further study considering the importance of the scallop in Antarctic marine ecosystems and its suitability as a sentinel species. (C) 2009 Elsevier Inc. All rights reserved.  
Keywords: Cholinesterases, Antarctic scallop, Adamussium colbecki,  
ISI Document Delivery No.: 455KU

134. Bonansea, Roc+ o In+ s; Am+\_, Mar+ a Valeria, and Wunderlin, Daniel Alberto. Determination of priority pesticides in water samples combining SPE and SPME coupled to GCÇôMS. A case study: Suqu+ˇa River basin (Argentina). 2013 Feb; 90, (6): 1860-1869.   
Rec #: 4450  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: This study reports a combined method using solid phase extraction (SPE), followed by solid phase microextraction (SPME) to concentrate different pesticides, including chlorinated, organophosphorus, triazines, pyretroids and chloroacetamides, present at trace levels in water samples. Identification and quantification was carried out by gas chromatography coupled to Mass Spectrometry (GCÇôMS). The optimized methodology showed LOQs at ng LęĆ1 levels (ranging 0.2Çô3.5 ng LęĆ1) in addition to acceptable precision and robustness (recoveries ranged 63Çô104%, RSD from 4% to 23%), presenting a novel method to reach trace levels, similar to that obtainable using EC detector, with structural confirmation by MS during the analysis of a wide range of environmental pollutants. Pesticides/ Freshwater/ SPE/ SPME/ GCÇôMS/ Priority pollutants

135. Bonnechă¨Re, Aurore; Hanot, Vincent; Jolie, Ruben; Hendrickx, Marc; Bragard, Claude; Bedoret, Thomas, and Van Loco, Joris. Processing Factors of Several Pesticides and Degradation Products in Carrots by Household and Industrial Processing. 2012 Aug; 1, (3): 68-83.   
Rec #: 46579  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: To quantify the effect of household and industrial processing on the pesticide residues, **carrots (Daucus carota) were sprayed during cultivation with three fungicides (boscalid, difenoconazole and tebuconazole), two insecticides (chlorpyrifos and dimethoate) and one herbicide (linuron).** The most concentrated formulations were applied pursuant to Good Agricultural Practices, to ensure sufficiently high levels of residues. The subsequent processing conditions were established to correspond as close as possible to the actual conditions that are normally used in industrial practice. The effects of household and industrial processing on the levels of the six pesticide residues and eight associated degradation products were quantified. The washing step allowed decreasing the concentration of residues for all pesticides up to -- 90%. It was the most effective step to remove pesticide residues from carrots. The second process, peeling, results in a reduction comparable to washing. The blanching step, combining heat with a large quantity of water, enhanced the elimination of residues (maximum 50%).  
Keywords: 9130:Experiment/theoretical treatment  
Keywords: 8640:Chemical industry  
Keywords: 9180:International  
Keywords: FOOD AND FOOD INDUSTRIES  
Keywords: 8610:Food processing industry  
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Language of summary - English  
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ProQuest ID - 1056122979  
Document feature - Tables; Graphs; Diagrams; References  
Last updated - 2012-09-22  
Place of publication - Toronto  
Corporate institution author - BonnechĂ¨re, Aurore; Hanot, Vincent; Jolie, Ruben; Hendrickx, Marc; Bragard, Claude; Bedoret, Thomas; Van Loco, Joris  
DOI - 2768170661; 72069952; 174144; FDRR; INNNFDRR0001060440  
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Al-Sayeda, H. (2007). Transfert d'un insecticide systĂ©mique, l'imidaclopride, chez la tomate: implication duu transport phloĂ©mien. Retrieved from http://ethesis.inp-toulouse.fr/archive/00000579/01/al\_sayeda.pdf  
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136. Bootharaju, M. S. and Pradeep, T. Understanding the Degradation Pathway of the Pesticide, Chlorpyrifos by Noble Metal Nanoparticles.   
Rec #: 74569  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Application of nanoparticles (NPs) in environmental remediation such as water purification requires a detailed understanding of the mechanistic aspects of the interaction between the species involved. Here, an attempt was made to understand the chemistry of noble metal nanoparticle-pesticide interaction, as these nanosystems are being used extensively for water purification. Our model pesticide, chlorpyrifos (CP), belonging to the organophosphorothioate group, is shown to decompose to 3,5,6-trichloro-2-pyridinol (TCP) and diethyl thiophosphate at room temperature over Ag and Au NPs, in supported and unsupported forms. The degradation products were characterized by absorption spectroscopy and electrospray ionization mass spectrometry (ESI MS). These were further confirmed by ESI tandem mass spectrometry. The interaction of CP with NP surfaces was investigated using transmission electron microscopy, energy dispersive analysis of X-rays, Raman spectroscopy, and X-ray photoelectron spectroscopy (XPS). XPS reveals no change in the oxidation state of silver after the degradation of CP. It is proposed that the degradation of CP proceeds through the formation of AgNP-S surface complex, which is confirmed by Raman spectroscopy. In this complex, the P-O bond cleaves to yield a stable aromatic species, TCP. The rate of degradation of CP increases with increase of temperature and pH. Complete degradation of 10 mL of 2 ppm CP solution is achieved in 3 h using 100 mg of supported Ag@citrate NPs on neutral alumina at room temperature at a loading of &sim;0.5 wt %. The effect of alumina and monolayer protection of NPs on the degradation of CP is also investigated. The rate of degradation of CP by Ag NPs is greater than that of Au NPs. The results have implications to the application of noble metal NPs for drinking water purification, as pesticide contamination is prevalent in many parts of the world. Study shows that supported Ag and Au NPs may be employed in sustainable environmental remediation, as they can be used at room temperature in aqueous solutions without the use of additional stimulus such as UV light.  
MESH HEADINGS: Aluminum Oxide/chemistry  
MESH HEADINGS: Chlorpyrifos/\*chemistry  
MESH HEADINGS: Gold/\*chemistry  
MESH HEADINGS: Metal Nanoparticles/\*chemistry  
MESH HEADINGS: Molecular Structure  
MESH HEADINGS: Particle Size  
MESH HEADINGS: Silver/\*chemistry  
MESH HEADINGS: Solutions  
MESH HEADINGS: Surface Properties  
MESH HEADINGS: Water/chemistry eng

137. Borr+ís, E.; S+ínchez, P.; Mu+\_oz, A., and Tortajada-Genaro, L. A. Development of a gas chromatographyÇômass spectrometry method for the determination of pesticides in gaseous and particulate phases in the atmosphere. 2011 Aug 5-; 699, (1): 57-65.   
Rec #: 4800  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: A reliable multi-residue method for determining gaseous and particulate phase pesticides in atmospheric samples has been developed. This method, based on full scan gas chromatographyÇômass spectrometry (GCÇôMS), allowed the proper determination of sixteen relevant pesticides, in a wide range of concentrations and without the influence of interferences. The pesticides were benfluralin, bitertanol, buprofezin, chlorfenvinphos, chlorpyrifos, chlorpyrifos-methyl, ethalfluralin, fenthion, lindane, malathion, methidathion, propachlor, propanil, pyriproxifen, tebuconazol and trifluralin. Comparisons of two types of sampling filters (quartz and glass fibre) and four types of solid-phase cartridges (XAD-2, XAD-4, Florisil and Orbo-49P) showed that the most suitable supports were glass fibre filter for particulate pesticides and XAD-2 and XAD-4 cartridges for gaseous pesticides (&gt;95% recovery). Evaluations of elution solvents for ultrasonic-assisted extraction demonstrated that isooctane is better than ethylacetate, dichloromethane, methanol or a mixture of acetone:hexane (1:1). Pesticides/ Atmospheric samples/ Gas chromatographyÇômass spectrometry

138. Borras, E; Sanchez, P; Munoz, a; Tortajada-Genaro, La, and Borras, E. Development of a Gas Chromatography-Mass Spectrometry Method for the Determination of Pesticides in Gaseous and Particulate Phases in the Atmosphere. 2011 Aug 5; 699, (1): 57-65.   
Rec #: 43219  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A reliable multi-residue method for determining gaseous and particulate phase pesticides in atmospheric samples has been developed. This method, based on full scan gas chromatography-mass spectrometry (GC-MS), allowed the proper determination of sixteen relevant pesticides, in a wide range of concentrations and without the influence of interferences. The pesticides were benfluralin, bitertanol, buprofezin, chlorfenvinphos, chlorpyrifos, chlorpyrifos-methyl, ethalfluralin, fenthion, lindane, malathion, methidathion, propachlor, propanil, pyriproxifen, tebuconazol and trifluralin. Comparisons of two types of sampling filters (quartz and glass fibre) and four types of solid-phase cartridges (XAD-2, XAD-4, Florisil and Orbo-49P) showed that the most suitable supports were glass fibre filter for particulate pesticides and XAD-2 and XAD-4 cartridges for gaseous pesticides (95% recovery). Evaluations of elution solvents for ultrasonic-assisted extraction demonstrated that isooctane is better than ethylacetate, dichloromethane, methanol or a mixture of acetone:hexane (1:1). Recovery assays and the standard addition method were performed to validate the proposed methodology. Moreover, large simulator chamber experiments allowed the best study of the gas-particle partitioning of pesticides for testing the sampling efficiency for the validation of an analytical multiresidue method for pesticides in air. Satisfactory analytical parameters were obtained, with a repeatability of 5 +/- 1%, a reproducibility of 13 +/- 3% and detection limits of 0.05-0.18 pg m super(-3 for the particulate phase and 26-88 pg m) super(-)3 for the gaseous phase. Finally, the methodology was successfully applied to rural and agricultural samples in the Mediterranean area.  
Keywords: Solvents  
Keywords: Lindane  
Keywords: Particulates  
Keywords: M2 551.508:Instruments (551.508)  
Keywords: Spectrometry  
Keywords: Filters  
Keywords: Chlorpyrifos  
Keywords: Environment Abstracts; Meteorological & Geoastrophysical Abstracts  
Keywords: MED  
Keywords: Pesticides  
Keywords: Air sampling  
Keywords: Trifluralin  
Keywords: ENA 01:Air Pollution  
Date revised - 2011-08-01  
Language of summary - English  
Location - MED  
Pages - 57-65  
ProQuest ID - 883046341  
SubjectsTermNotLitGenreText - Spectrometry; Chlorpyrifos; Filters; Pesticides; Solvents; Air sampling; Trifluralin; Lindane; Particulates; MED  
Last updated - 2012-03-29  
British nursing index edition - Analytica Chimica Acta [Anal. Chim. Acta]. Vol. 699, no. 1, pp. 57-65. 5 Aug 2011.  
Corporate institution author - Borras, E; Sanchez, P; Munoz, A; Tortajada-Genaro, LA  
DOI - 9f67d2c5-439c-4dfd-bc05csaobj201; 15309616; 0003-2670 English

139. Bosgra, S.; van der Voet, H.; Boon, P. E., and Slob, W. An integrated probabilistic framework for cumulative risk assessment of common mechanism chemicals in food: An example with organophosphorus pesticides. 2009; 54, (2): 124-133.   
Rec #: 56909  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This paper presents a framework for integrated probabilistic risk assessment of chemicals in the diet which accounts for the possibility of cumulative exposure to chemicals with a common mechanism of action. Variability between individuals in the population with respect to food consumption, concentrations of chemicals in the consumed foods, food processing habits and sensitivity towards the chemicals is addressed by Monte Carlo simulations. A large number of individuals are simulated, for which the individual exposure (iEXP), the individual critical effect dose (iCED) and the ratio between these values (the individual margin of exposure, iMoE) are calculated by drawing random values for all variable parameters from databases or specified distributions. This results in a population distribution of the iMoE, and the fraction of this distribution below 1 indicates the fraction of the population that may be at risk. Uncertainty in the assessment is treated as a separate dimension by repeating the Monte Carlo simulations many times, each time drawing random values for all uncertain parameters. In this framework, the cumulative exposure to common mechanism chemicals is addressed by incorporation of the relative potency factor (RPF) approach. The framework is demonstrated by the cumulative risk assessment of organophosphorus pesticides (OPs). By going through this example, the various choices and assumptions underlying the cumulative risk assessment are made explicit. The problems faced and the solutions chosen may be more generic than the present example with OPs. This demonstration may help to familiarize risk assessors and risk managers with the somewhat more complex output of probabilistic risk assessment. (C) 2009 Elsevier Inc. All rights reserved.  
Keywords: Cumulative, Relative potency factor, Probabilistic, Risk assessment,  
ISI Document Delivery No.: 457NW

140. Bosgra, S.; van Eijkeren, J. C. H., and Slob, W. Dose addition and the isobole method as approaches for predicting the cumulative effect of non-interacting chemicals: A critical evaluation. 2009; 39, (5): 418-426.   
Rec #: 56919  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The prediction of the effect of cumulative exposure to similarly acting chemicals is commonly done by dose addition, such as in the relative potency factor approach. This can only be done under the assumption of zero interaction between the chemicals. The related, but not equivalent, isobole method is the most common criterion to judge whether interactions between similarly acting chemicals have taken place in a mixture experiment. Many who apply this latter method assume that it is applicable to any combination of substances, regardless of the shape of the dose-response curves of the individual substances or their underlying mechanism of action. Proponents commonly refer to the work of Berenbaum, who claimed to have proven the general applicability of the isobole method based on zero interaction. In this article, we argue that his argumentation is not generally valid. We further demonstrate that the isobole method, just like dose addition, has limited applicability. Using a physiologically based mathematical model, we provide a theoretical example of a combination of chemicals with zero interaction where the isobole method would result in the decision that they do interact. We discuss the implications for research focusing on detecting or defining interactions, and for the prediction of effects from combined exposures assuming zero interaction.  
Keywords: Antagonism, cumulative risk, mechanistic model, mixture, relative  
ISI Document Delivery No.: 541BH

141. Bosgra, S.; van Eijkeren, J. C. H.; van der Schans, M. J.; Langenberg, J. P., and Slob, W. Toxicodynamic analysis of the combined cholinesterase inhibition by paraoxon and methamidophos in human whole blood. 2009; 236, (1): 9-15.   
Rec #: 56929  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Theoretical work has shown that the isobole method is not generally valid as a method for testing the absence or presence of interaction (in the biochemical sense) between chemicals. The present study illustrates how interaction can be tested by fitting a toxicodynamic model to the results of a mixture experiment. The inhibition of cholinesterases (ChE) in human whole blood by various dose combinations of paraoxon and methamidophos was measured in vitro. A toxicodynamic model describing the processes related to both OPs in inhibiting AChE activity was developed, and fit to the observed activities. This model, not containing any interaction between the two OPs, described the results from the mixture experiment well, and it was concluded that the Of's did not interact in the whole blood samples. While this approach of toxicodynamic modeling is the most appropriate method for predicting combined effects, it is not rapidly applicable. Therefore, we illustrate how toxicodynamic modeling can be used to explore under which conditions dose addition would give an acceptable approximation of the combined effects from various chemicals. In the specific case of paraoxon and methamidophos in whole blood samples, it was found that dose addition gave a reasonably accurate prediction of the combined effects, despite considerable difference in some of their rate constants, and mildly non-parallel dose-response curves. Other possibilities of validating dose-addition using toxicodynamic modeling are briefly discussed. (C) 2009 Elsevier Inc. All rights reserved.  
Keywords: Organophosphorus pesticides, Mixtures, Interactions, Toxicodynamic, Dose  
ISI Document Delivery No.: 424ZO

142. ---. Toxicodynamic analysis of the inhibition of isolated human acetylcholinesterase by combinations of methamidophos and methomyl in vitro. 2009; 236, (1): 1-8.   
Rec #: 56939  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The applicability of dose addition to combinations of OP-esters and carbamates has been questioned based on theoretical considerations, but these have not been well supported by experimental findings. In the present Study, the inhibition of AChE by combinations of methamidophos (an OP-ester) and methomyl (a carbamate) was examined in vitro. AChE inhibition was measured by the Ellman assay. We addressed the question of interaction between the OP-ester and carbamate by a toxicodynamic (TD) model reflecting the mechanism of action of the individual chemicals, Without incorporating any interactions between them. The model was extended by including the experimental actions in the Ellman assay to correct for the difference in reactivation rates between phosphorylated and carbamylated AChE, Which Caused a bias in the observations from the assay. This zero-interactive TD model described the observations well, indicating that the OP-ester and carbamate did not interact. The applicability of dose addition was further explored by applying dose addition to the predicted inhibition by the TD model. Despite the differences in dynamics between methamidophos and methomyl, their dose-response curves were close to parallel, and dose addition gave a reasonably accurate prediction of the combined effects. (C) 2009 Elsevier Inc. All rights reserved.  
Keywords: Organophosphorus pesticides, N-methyl carbamates, Cholinesterase  
ISI Document Delivery No.: 424ZO

143. Bossard, R. L.; Hinkle, N. C., and Rust, M. K. Review of Insecticide Resistance in Cat Fleas (Siphonaptera: Pulicidae). 1998; 35, (4): 415-422.   
Rec #: 1960  
Keywords: REVIEW  
Call Number: NO REVIEW (CBL,CPY,CYF,CYP,DZ,FNT,FNV,FVL,MLN,PFF,PMR,PPX,PTP,RSM,SMT,TBF,TLM)  
Notes: EcoReference No.: 117710  
Chemical of Concern: BDC,CBL,CPY,CYF,CYP,DZ,FNT,FNTH,FNV,FVL,IFP,MLN,PFF,PMR,PPX,PTP,RSM,SMT,TBF,TLM

144. Bott+\_, E.; Negri, A.; King, S. Codi; Gagliano, M.; Smith-Keune, C., and Jerry, D. Are Damsels in Distress? Combined effects of chlorpyrifos and temperature stress on the tropical damselfish Acanthochromis polyacanthus from the Great Barrier Reef (Australia): 27th Congress of the newEuropean Society of Comparative Biochemistry and Physiology, Alessandria, Italy, September 5-9, 2010 Biological effects of climatic changes and pollution: from biomarkers to system biology. 2010 Sep; 157, Supplement 1, (0): S16.   
Rec #: 2620  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

145. Bouchard, M.; Carrier, G., and Brunet, R. C. Assessment of absorbed doses of carbaryl and associated health risks in a group of horticultural greenhouse workers. 2008; 81, (3): 355-370.   
Rec #: 56959  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Objective This study was undertaken to estimate the absorbed doses of carbaryl and the associated health risks in a group of horticultural greenhouse workers in the Province of Quebec, Canada, using a toxicokinetic modeling approach. Methods A mathematical model was developed to relate the absorbed dose of carbaryl, the evolution of its body burden and that of its metabolites and the urinary excretion rate of biomarkers. The free parameters of this model were determined using published time course data in volunteers exposed to carbaryl under controlled conditions. The model was used to determine cumulative urinary amounts of 1-naphthol that would be excreted by a typical worker exposed to a pre-established no-observed-adverse-effect level (NOAEL) dose; this biomarker amount was then taken as a biological reference value below which the risks of health effects were considered negligible. As a measure of the applicability of this approach to practical situations, the model was used to estimate the dose of carbaryl absorbed by each greenhouse worker, starting from his/her cumulative urinary excretion time courses of 1-naphthol over a 24-h period following the onset of a work exposure. Their cumulative 1-naphthol levels were then compared to the biological reference value obtained from the model and the NOAEL dose. Results Following the onset of a work exposure to carbaryl, a clear increase in the urinary excretion rate of 1-naphthol was observed in most workers. The reconstructed absorbed doses were found to vary between 3.3 and 143 nmol/kg of body weight (bw) depending on the working conditions. Simulations of the observed cumulative urinary excretion time course of each worker also showed that exposure appeared to occur mainly (a) through inhalation for the applicators and individuals without direct contact with treated plants and (b) through the dermal route for individuals manipulating treated plants. Although the workers under study clearly appeared to have been exposed to carbaryl in the greenhouses, 24-h cumulative 1-naphthol levels ranged from 4.8 to 65.1% of the proposed biological reference value of 32 nmol/kg bw in 24-h urine collections following the onset of a work exposure. Conclusion This suggests that the workers under study probably did not incur a serious health risk under the normal exposure conditions prevailing during the study period.  
Keywords: carbaryl, 1-naphthol, urinary biomarker, risk assessment, toxicokinetic  
ISI Document Delivery No.: 234HQ

146. Bousova, I. and Skalova, L. Inhibition and induction of glutathione S-transferases by flavonoids: possible pharmacological and toxicological consequences. 2012; 44, (4): 267-286.   
Rec #: 56979  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Many studies reviewed herein demonstrated the potency of some flavonoids to modulate the activity and/or expression of glutathione S-transferases (GSTs). Because GSTs play a crucial role in the detoxification of xenobiotics, their inhibition or induction may significantly affect metabolism and biological effects of many drugs, industrials, and environmental contaminants. The effect of flavonoids on GSTs strongly depends on flavonoid structure, concentration, period of administration, as well as on GST isoform and origin. Moreover, the results obtained in vitro are often contrary to the vivo results. Based on these facts, the revelation of important flavonoid-drug or flavonoid-pollutant interaction has been complicated. However, it should be borne in mind that ingestion of certain flavonoids in combination with drugs or pollutants (e.g., acetaminophen, simvastatin, cyclophosphamide, cisplatine, polycyclic aromatic hydrocarbons, chlorpyrifos, acrylamide, and isocyanates), which are GST substrates, could have significant pharmacological and toxicological consequences. Although reasonable consumptions of a flavonoids-rich diet (that may lead to GST induction) are mostly beneficial, the uncontrolled intake of high concentrations of certain flavonoids (e.g., quercetin and catechins) in dietary supplements (that may cause GST inhibition) may threaten human health.  
Keywords: GST, drug-flavonoid interaction, dietary supplement, cytostatics,  
ISI Document Delivery No.: 052SL

147. Bowman, J. S. and Barry, D. W. Control of Lepidopterous Larvae on Late Season Sweet Corn with Foliar Sprays, 1987. SOIL; 1988; 13, 113-114 (37E).   
Rec #: 460  
Keywords: NO DURATION  
Call Number: NO DURATION (CPY,FNV)  
Notes: Chemical of Concern: CPY,FNV

148. Bozlaker, a ; Muezzinoglu, a; Odabasi, M, and Bozlaker, A. Processes Affecting the Movement of Organochlorine Pesticides (Ocps) Between Soil and Air in an Industrial Site in Turkey . 2009 Nov; 77, (9): 1168-1176.   
Rec #: 44519  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Soil and atmospheric concentrations, dry deposition and soil-air gas exchange of organochlorine pesticides (OCPs) were investigated at an industrial site in Aliaga, Izmir, Turkey. Current-use pesticides, endosulfan and chlorpyrifos, had the highest atmospheric levels in summer and winter. Summertime total (gas+particle) OCP concentrations in air were higher, probably due to increased volatilization at higher temperatures and seasonal local/regional applications of current-use pesticides. Particle deposition fluxes were generally higher in summer than in winter. Overall average dry particle deposition velocity for all the OCPs was 4.9+/-4.1cm s super(-) super(1) (average+/-SD). DDXs (sum of p,p'-DDT, p,p'-DDD, and p,p'-DDE) were the most abundant OCPs in Aliaga soils (n=48), probably due to their heavy historical use and persistence. Calculated fugacity ratios and average net gas fluxes across the soil-air interface indicated volatilization for a-CHL, g-CHL, heptachlorepoxide, cis-nonachlor, trans-nonachlor, and p,p'-DDT in summer, and for a-CHL, g-CHL, trans-nonachlor, endosulfan sulfate, and p,p'-DDT in winter. For the remaining OCPs, soil acted as a sink during both seasons. Comparison of the determined fluxes showed that dry particle, gas-phase, and wet deposition are significant OCP input mechanisms to the soil in the study area.  
Keywords: Gas exchange  
Keywords: Organochlorine pesticides  
Keywords: Particulates  
Keywords: Air temperature  
Keywords: Industrial sites  
Keywords: Toxicology Abstracts; Pollution Abstracts; Environment Abstracts; Meteorological & Geoastrophysical Abstracts  
Keywords: Soil  
Keywords: Sulfur dioxide  
Keywords: M2 551.5:General (551.5)  
Keywords: Seasonal variability  
Keywords: X 24330:Agrochemicals  
Keywords: Seasonal variations  
Keywords: P 0000:AIR POLLUTION  
Keywords: Temperature  
Keywords: Velocity  
Keywords: Turkey  
Keywords: Pesticides (organochlorine)  
Keywords: Volatilization  
Keywords: Wet deposition  
Keywords: Endosulfan  
Keywords: Chlorpyrifos  
Keywords: winter  
Keywords: Pesticides  
Keywords: Turkey, Anatolia, Izmir  
Keywords: summer  
Keywords: Particle deposition  
Keywords: Dry deposition  
Keywords: ENA 01:Air Pollution  
Keywords: gas exchange  
Date revised - 2009-11-01  
Language of summary - English  
Location - Turkey, Anatolia, Izmir; Turkey  
Pages - 1168-1176  
ProQuest ID - 21093763  
SubjectsTermNotLitGenreText - Chlorpyrifos; Gas exchange; Soil; Volatilization; Pesticides (organochlorine); Air temperature; Industrial sites; Endosulfan; Seasonal variability; Particle deposition; Wet deposition; Dry deposition; Organochlorine pesticides; Temperature; Velocity; Particulates; winter; Sulfur dioxide; Pesticides; summer; Seasonal variations; gas exchange; Turkey, Anatolia, Izmir; Turkey  
Last updated - 2012-09-10  
British nursing index edition - Chemosphere [Chemosphere]. Vol. 77, no. 9, pp. 1168-1176. Nov 2009.  
Corporate institution author - Bozlaker, A; Muezzinoglu, A; Odabasi, M  
DOI - MD-0010937391; 11186317; 0045-6535 English

149. Bradman, A.; Castorina, R.; Barr, D. B.; Chevrier, J.; Harnly, M. E.; Eisen, E. A.; McKone, T. E.; Harley, K.; Holland, N., and Eskenazi, B. Determinants of Organophosphorus Pesticide Urinary Metabolite Levels in Young Children Living in an Agricultural Community. 2011; 8, (4): 1061-1083.   
Rec #: 57019  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorus (OP) pesticides are used in agriculture and several are registered for home use. As young children age they may experience different pesticide exposures due to varying diet, behavior, and other factors. We measured six OP dialkylphosphate (DAP) metabolites (three dimethyl alkylphosphates (DMAP) and three diethyl alkylphosphates (DEAP)) in urine samples collected from similar to 400 children living in an agricultural community when they were 6, 12, and 24 months old. We examined bivariate associations between DAP metabolite levels and determinants such as age, diet, season, and parent occupation. To evaluate independent impacts, we then used generalized linear mixed multivariable models including interaction terms with age. The final models indicated that DMAP metabolite levels increased with age. DMAP levels were also positively associated with daily servings of produce at 6- and 24-months. Among the 6-month olds, DMAP metabolite levels were higher when samples were collected during the summer/spring versus the winter/fall months. Among the 12-month olds, DMAP and DEAP metabolites were higher when children lived <= 60 meters from an agricultural field. Among the 24-month-olds, DEAP metabolite levels were higher during the summer/spring months. Our findings suggest that there are multiple determinants of OP pesticide exposures, notably dietary intake and temporal and spatial proximity to agricultural use. The impact of these determinants varied by age and class of DAP metabolite.  
Keywords: children, organophosphorus, pesticides, exposure, agriculture,  
ISI Document Delivery No.: 755WQ

150. Brain, R. A. and Solomon, K. R. Comparison of the Hazards Posed to Amphibians by the Glyphosate Spray Control Program Versus the Chemical and Physical Activities of Coca Production in Colombia. richard.brain@syngenta.com//: 2009; 72, (15/16): 937-948.   
Rec #: 1730  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (24D,24DXY,ATZ,CBD,CBF,CBL,CPY,CYP,DZ,ES,GYP,LCYT,MLN,MOM,MP,MZB,PQT), NO REVIEW (24D,24DXY,ATZ,CBD,CBF,CBL,CPY,CYP,DZ,ES,GYP,LCYT,MLN,MOM,MP,MZB,PQT)  
Notes: Chemical of Concern: 24D,24DXY,ATZ,CBD,CBF,CBL,CPY,CYP,DZ,ES,GYP,LCYT,MLN,MOM,MP,MZB,PQT

151. Branco, R.; Francisco, R.; Chung, A. P., and Morais, P. V. Identification of an Aox System That Requires Cytochrome C in the Highly Arsenic-Resistant Bacterium Ochrobactrum Tritici Scii24.   
Rec #: 78239  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Microbial biotransformations have a major impact on environments contaminated with toxic elements, including arsenic, resulting in an increasing interest in strategies responsible for how bacteria cope with arsenic. In the present work, we investigated the metabolism of this metalloid in the bacterium Ochrobactrum tritici SCII24. This heterotrophic organism contains two different ars operons and is able to oxidize arsenite to arsenate. The presence of arsenite oxidase genes in this organism was evaluated, and sequence analysis revealed structural genes for an As(III) oxidase (aoxAB), a c-type cytochrome (cytC), and molybdopterin biosynthesis (moeA). Two other genes coding for a two-component signal transduction pair (aoxRS) were also identified upstream from the previous gene cluster. The involvement of aox genes in As(III) oxidation was confirmed by functionally expressing them into O. tritici 5bvl1, a non-As(III) oxidizer. Experiments showed that the As(III) oxidation process in O. tritici requires not only the enzyme arsenite oxidase but also the cytochrome c encoded in the operon. The fundamental role of this cytochrome c, reduced in the presence of arsenite in strain SCII24 but not in an O. tritici DeltaaoxB mutant, is surprising, since to date this feature has not been found in other organisms. In this strain the presence of an aox system does not seem to confer an additional arsenite resistance capability; however, it might act as part of an As(III)-detoxifying strategy. Such mechanisms may have played a crucial role in the development of early stages of life on Earth and may one day be exploited as part of a potential bioremediation strategy in toxic environments.  
MESH HEADINGS: Anti-Bacterial Agents/metabolism/\*pharmacology  
MESH HEADINGS: Arsenates/metabolism/pharmacology  
MESH HEADINGS: Arsenic/metabolism/\*pharmacology  
MESH HEADINGS: Arsenites/metabolism/pharmacology  
MESH HEADINGS: Bacterial Proteins/genetics/metabolism  
MESH HEADINGS: Biotransformation  
MESH HEADINGS: Cytochromes c/\*metabolism  
MESH HEADINGS: DNA, Bacterial/chemistry/genetics  
MESH HEADINGS: \*Drug Resistance, Bacterial  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Multigene Family  
MESH HEADINGS: Ochrobactrum/\*drug effects/genetics/\*metabolism  
MESH HEADINGS: Operon  
MESH HEADINGS: Oxidation-Reduction  
MESH HEADINGS: Oxidoreductases/genetics/metabolism  
MESH HEADINGS: Sequence Analysis, DNA  
MESH HEADINGS: Sulfurtransferases/genetics/metabolism eng

152. Brechbuhler, C. and Colmar, I. T. V. Pest Control in Alsatian Vineyards. C.Brechbuhler, Inst. Tech. Vigne Vin, Colmar, Fr//: 1988; 40, (7): 275-276(GER).   
Rec #: 470  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

153. Brice+\_o, G.; Fuentes, M. S.; Palma, G.; Amoroso, M. J., and Diez, M. C. Chlorpyrifos degradation by consortium of actinobacteria isolated from contaminated environment: Abstracts of the 15th European Congress on Biotechnology. 1923; 29, Supplement, (0): S179.   
Rec #: 2400  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY

154. Briceno, G; Fuentes; Palma, G; Jorquera, Ma; Amoroso, Mj; Diez, M C, and Briceno, G. Chlorpyrifos Biodegradation and 3,5,6-Trichloro-2-Pyridinol Production by Actinobacteria Isolated From Soil. 2012 Sep 1; 73, 1-7.   
Rec #: 38559  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos (CP) is a widely used agricultural insecticide that is hazardous to both the environment and human health. Therefore, it is an essential to develop approaches to remove this compound from contaminated soils, water and sediments. In this study, actinobacteria were isolated from an agricultural soil that had received continuous applications of CP. Four strains were selected as a result of their tolerance to 50 mg La1 of CP in agar plate and they were identified as Streptomyces sp. based on 16S rDNA. According to relationship of CP degradation and microbial growth studies, two isolates were selected and were named Streptomyces sp. strain AC5 and Streptomyces sp. strain AC7. The strains were cultivated in liquid medium with CP at concentrations of 25 mg La1 and 50 mg La1 for 72 h. The results indicated that both strains were able to rapidly degrade CP with about 90% degradation after 24 h of incubation. A different pattern of CP degradation was observed when its main metabolite, 3,5,6-trichloro-2-pyridinol (TCP) was monitored. A maximum concentration of 0.46 mg La1 of TCP was produced by Streptomyces sp. strain AC5 and its concentration decreased as a function of time. In contrast, TCP production by Streptomyces sp. AC7 increased over time from 1.31 mg La1 to 4.32 mg La1. CP degradation was associated to microbial growth of the strains, pH modification, glucose consumption and organic acids excretion in the liquid medium. This work constitutes one of the few reports of Streptomyces as CP-degraders. Given the high CP degradation observed here, the Streptomycetes strains show a good potential as CP-degrading actinobacteria.  
Keywords: A 01340:Antibiotics & Antimicrobials  
Keywords: Agar  
Keywords: Biodeterioration  
Keywords: Biodegradation  
Keywords: Glucose  
Keywords: Metabolites  
Keywords: Sediments  
Keywords: Soil pollution  
Keywords: Soil  
Keywords: Chlorpyrifos  
Keywords: organic acids  
Keywords: W 30950:Waste Treatment & Pollution Clean-up  
Keywords: Insecticides  
Keywords: Streptomyces  
Keywords: Actinobacteria  
Keywords: Microbiology Abstracts A: Industrial & Applied Microbiology; Biotechnology and Bioengineering Abstracts  
Keywords: Excretion  
Keywords: Streptomycetes  
Keywords: rRNA 16S  
Keywords: pH effects  
Keywords: Biology  
Date revised - 2012-11-01  
Language of summary - English  
Pages - 1-7  
ProQuest ID - 1223040228  
SubjectsTermNotLitGenreText - Biodeterioration; Agar; Biodegradation; Glucose; Metabolites; Sediments; Chlorpyrifos; Soil; Soil pollution; organic acids; Insecticides; Excretion; rRNA 16S; pH effects; Streptomyces; Actinobacteria; Streptomycetes  
Last updated - 2012-12-06  
Corporate institution author - Briceno, G; Fuentes; Palma, G; Jorquera, MA; Amoroso, MJ; Diez, M C  
DOI - OB-1bfe4db3-e571-4315-a18d-69bc99813c26; 17076306; 0964-8305 English

155. Brock, T. C. M. and Van Wijngaarden, R. P. A. Acute Toxicity Tests with Daphnia magna, Americamysis bahia, Chironomus riparius and Gammarus pulex and Implications of New EU Requirements for the Aquatic Effect Assessment of Insecticides. theo.brock@wur.nl//Alterra, Wageningen University and Research Centre, P.O. Box 47, 6700 AA Wageningen, Netherlands//: 2012; 19, (8): 3610-3618.   
Rec #: 2450  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (AZ,BFT,CBF,CBL,CPY,CYP,DFZ,DM,EFV,FBD,FNT,FNV,FYC,GCYH,IMC,LCYT,PSM,SPM), NO REVIEW (AZ,BFT,CBF,CBL,CPY,CYP,DFZ,DM,EFV,FBD,FNT,FNV,FYC,GCYH,IMC,LCYT,PSM,SPM)  
Notes: Chemical of Concern: ABM,AZ,BFT,CBF,CBL,CPY,CTD,CYP,DFZ,DM,EFV,EPRN,FBD,FNT,FNV,FYC,GCYH,HCCH,IMC,LCYT,MXC,NVL,PHSL,PPCP,PRN,PSM,PYX,SPM,TAP,TMX

156. Brownbridge, M; Ferguson, C; Saville, D J; Swaminathan, J; Hurst, Mrh; Jackson, T a, and Brownbridge, M. Potential for Biological Control of Porina (Wiseana Spp.) With a Novel Insecticidal Bacterium, Yersinia N. Sp. (Mh96) En65 Strain. 2008; 61, 229-235.   
Rec #: 46349  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Porina (Wiseana spp. larvae) are endemic pests of pasture. If detected early, young larvae can be controlled with **diflubenzuron**, but generally damage is not predicted and organophosphate insecticides (e.g. d**iazinon, chlorpyrifos, chlorfon**) are required. Yersinia n. sp. (MH96) cf. entomophaga (EN65 strain) - a novel bacterium with insecticidal properties - is pathogenic to late instar Wiseana spp. larvae in laboratory assays and has potential as a biopesticide. **This trial measured the effect of two formulations of EN65 and a commercial formulation of Bacillus thuringiensis var. kurstaki (Btk) against late instar porina.** EN65 was formulated in a sprayable biopolymer and on to a kibbled wheat bait. Both EN65 formulations caused significant mortality of porina larvae and reduced feeding damage on white clover; efficacy was superior to Btk. Survival of the bacterium in the sprayable biopolymer formulation was enhanced compared to a non-formulated broth culture. Bacterial survival on the kibbled wheat bait was better when stored at 4 degree C compared to 20 degree C over 3 months.  
Keywords: A 01380:Plant Protection, Fungicides & Seed Treatments  
Keywords: K 03410:Animal Diseases  
Keywords: Biological control  
Keywords: Feeding  
Keywords: Mortality  
Keywords: Entomophaga  
Keywords: Wiseana  
Keywords: Diflubenzuron  
Keywords: Plant protection  
Keywords: Bacillus thuringiensis  
Keywords: Biopolymers  
Keywords: Survival  
Keywords: organophosphates  
Keywords: Pasture  
Keywords: Yersinia  
Keywords: J 02410:Animal Diseases  
Keywords: Chlorpyrifos  
Keywords: Triticum aestivum  
Keywords: Insecticides  
Keywords: Microbiology Abstracts B: Bacteriology; Microbiology Abstracts C: Algology, Mycology & Protozoology; Microbiology Abstracts A: Industrial & Applied Microbiology  
Keywords: Pests  
Keywords: Diazinon  
Keywords: Bruton's tyrosine kinase  
Date revised - 2008-12-01  
Language of summary - English  
Pages - 229-235  
ProQuest ID - 290222496  
SubjectsTermNotLitGenreText - Wiseana; Yersinia; Triticum aestivum; Entomophaga; Bacillus thuringiensis; Survival; Biopolymers; Bruton's tyrosine kinase; Biological control; Feeding; Chlorpyrifos; Mortality; Pasture; Pests; organophosphates; Diflubenzuron; Insecticides; Diazinon; Plant protection  
Last updated - 2011-11-07  
Corporate institution author - Brownbridge, M; Ferguson, C; Saville, D J; Swaminathan, J; Hurst, MRH; Jackson, T A  
DOI - OB-MD-0008901874; 8690179; 1175-9003 English

157. Bryant, D. G. Balsam Woolly Aphid Adelges piceae (Ratz.). 1975: 250-254.   
Rec #: 480  
Keywords: NO DURATION  
Call Number: NO DURATION (CBF,CPY,DZ,FNT)  
Notes: Chemical of Concern: CBF,CPY,DZ,FNT

158. Buchanan, I.; Liang, H. C.; Liu, Z. K.; Razaviarani, V., and Rahman, M. Z. Pesticides and Herbicides. 2010; 82, (10): 1594-1693.   
Rec #: 57139  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This is a review of literature published in 2009 that covered issues related to the presence of pesticides and herbicides in the environment. The review is divided into nine sections, including analytical methods, toxicology, monitoring, ecology, fate and transport, modeling, risk assessment, management and minimization, and treatment strategies.  
Keywords: pesticides, herbicides, insecticides, trace organic compounds,  
ISI Document Delivery No.: 675OI

159. Buckley, T. J.; Geer, L. A.; Connor, T. H.; Robertson, S.; Sammons, D.; Smith, J.; Snawder, J., and Boeniger, M. A Pilot Study of Workplace Dermal Exposures to Cypermethrin at a Chemical Manufacturing Plant. 2011; 8, (10): 600-608.   
Rec #: 57149  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Exposure during the manufacture of pesticides is of particular concern due to their toxicity and because little is known about worker exposure, since most studies have focused on end-use application within agriculture or buildings. Even though dermal exposure can be expected to dominate for pesticides, little is known about workplace dermal exposures or even appropriate methods for their assessment. The current study begins to address this gap by evaluating alternative methods for assessing dermal exposure at a chemical manufacturing plant. For this pilot study, eight workers were recruited from a U. S. plant that produced the pesticide cypermethrin. Exposure was evaluated using three approaches: (1) survey assessment (questionnaire), (2) biological monitoring, and (3) workplace environmental sampling including ancillary measurements of glove contamination (interior and exterior). In each case, cypermethrin was quantified by enzyme-linked immunosorbent assay (ELISA). Environmental measurements identified two potential pathways of cypermethrin exposure: glove and surface contamination. Workplace exposure was also indicated by urine levels (specific gravity adjusted) of the parent compound, which ranged from 35 to 253 mu g/L (median of 121 mu g/L) with no clear trend in levels from pre- to post-shift. An exploratory analysis intended to guide future studies revealed a positive predictive association (Spearman correlation, p <= 0.10) between post-shift urine concentrations and a subset of survey questions evaluating worker knowledge, attitudes, and perceptions (KAP) of workplace dermal hazards, i.e., personal protective equipment self-efficacy, and inverse associations with behavior belief and information belief scales. These findings are valuable in demonstrating a variety of dermal exposure methods (i.e., behavioral attributes, external contamination, and biomarker) showing feasibility and providing measurement ranges and preliminary associations to support future and more complete assessments. Although these pilot data are useful for supporting design and sample size considerations for larger exposure and health studies, there is a need for validation studies of the ELISA assay for quantification of cypermethrin and its metabolites in urine.  
Keywords: attitudes, behavior, beliefs, biological monitoring, personal protective  
ISI Document Delivery No.: 829QD

160. Budd, Robert; O'geen, Anthony; Goh, Kean S; Bondarenko, Svetlana; Gan, Jay, and Budd, Robert. Efficacy of Constructed Wetlands in Pesticide Removal From Tailwaters in the Central Valley, California. 2009 Mar 17; 43, (8): 2925-2930.   
Rec #: 44929  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pollutants in agricultural irrigation return flow (tailwater) constitute a significant nonpoint source of pollution in intensive agricultural regions such as the Central Valley of California. Constructed wetlands (CWs) represent a feasible mitigation option to remove pollutants including pesticides in the tailwater. In this study, we evaluated two CWs in the Central Valley for their performance in removing pyrethroid and organophosphate insecticides under field-scale production conditions. Both CWs were found to be highly effective in reducing pyrethroid concentrations in the tailwater, with season-average concentration reductions ranging from 52 to 94%. The wetlands also reduced the flow volume by 68-87%, through percolation and evapotranspiration. When both concentration and volume reductions were considered, the season-average removal of pyrethroids ranged from 95 to 100%. The primary mechanism for pyrethroid removal was through sedimentation of pesticide-laden particles, which was influenced by hydraulic residence time and vegetation density. Temporal analysis indicates a potential efficiency threshold during high flow periods. The season-average removal of chlorpyrifos ranged 52-61%. The wetlands, however, were less effective at removing diazinon, likely due to its limited sorption to sediment particles. Analysis of pesticide partitioning showed that pyrethroids were enriched on suspended particles in the tailwater. Monitoring of pesticide association with suspended solids and bed sediments suggested an increased affinity of pyrethroids for lighter particles with the potential to move further downstream before subject to sedimentation. Results from this study show that flow-through CWs, when properly designed, are an effective practice for mitigating hydrophobic pesticides in the irrigation tailwater.  
Keywords: Hydraulics  
Keywords: Organophosphates  
Keywords: Artificial wetlands  
Keywords: intensive farming  
Keywords: Particulates  
Keywords: Aqualine Abstracts; Pollution Abstracts; Environment Abstracts; Water Resources Abstracts  
Keywords: Artificial Wetlands  
Keywords: mitigation  
Keywords: Insecticides  
Keywords: Agricultural Chemicals  
Keywords: Wetlands  
Keywords: USA, California  
Keywords: Pyrethroids  
Keywords: Sedimentation  
Keywords: Sorption  
Keywords: Sediment pollution  
Keywords: Tailwater  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Irrigation  
Keywords: Nonpoint Pollution Sources  
Keywords: Vegetation  
Keywords: Evapotranspiration  
Keywords: AQ 00003:Monitoring and Analysis of Water and Wastes  
Keywords: Suspended particulate matter  
Keywords: Nonpoint pollution  
Keywords: ENA 06:Food & Drugs  
Keywords: Chlorpyrifos  
Keywords: SW 1030:Use of water of impaired quality  
Keywords: Pesticides  
Keywords: Irrigation-return Flow  
Keywords: Diazinon  
Keywords: USA, California, Central Valley  
Date revised - 2010-08-01  
Language of summary - English  
Location - USA, California; USA, California, Central Valley  
Pages - 2925-2930  
ProQuest ID - 754541534  
SubjectsTermNotLitGenreText - Sediment pollution; Hydraulics; Sorption; Organophosphates; Artificial wetlands; Irrigation; Vegetation; Evapotranspiration; Suspended particulate matter; intensive farming; Particulates; Nonpoint pollution; Chlorpyrifos; mitigation; Insecticides; Pesticides; Pyrethroids; Sedimentation; Diazinon; Tailwater; Agricultural Chemicals; Nonpoint Pollution Sources; Wetlands; Irrigation-return Flow; Artificial Wetlands; USA, California; USA, California, Central Valley  
Last updated - 2012-12-03  
British nursing index edition - Environmental Science & Technology [Environ. Sci. Technol.]. Vol. 43, no. 8, pp. 2925-2930. 17 Mar 2009.  
Corporate institution author - Budd, Robert; O'Geen, Anthony; Goh, Kean S; Bondarenko, Svetlana; Gan, Jay  
DOI - e0d9e2f6-7c9d-47ac-a59ccsamfg201; 13267221; 0013-936X English

161. ---. Removal Mechanisms and Fate of Insecticides in Constructed Wetlands. 2011 Jun; 83, (11): 1581-1587.   
Rec #: 43289  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Constructed wetlands (CWs), along with other vegetative systems, are increasingly being promoted as a mitigation practice to treat non-point source runoff to reduce contaminants such as pesticides. However, studies so far have mostly focused on demonstrating contaminant removal efficiency. In this study, using two operational CWs located in the Central Valley of California, we explored the mechanisms underlying the removal of pyrethroids and chlorpyrifos from agricultural runoff water, and further evaluated the likelihood for the retained pesticides to accumulate within the CWs over time. In the runoff water passing through the CWs, pyrethroids were associated overwhelmingly with suspended solids >0.7 mu m, and the sorbed fraction accounted for 38-100% of the total concentrations. The derived K sub(d) values for the suspended solids were in the order of 10 super(4)-10 super(5), substantially greater than those reported for bulk soils and sediments. Distribution of pyrethroids in the wetland sediments was found to mimic organic carbon distribution, and was enriched in large particles that were partially decomposed plant materials, and clay-size particles (250 mu m) and the very fine particles, is thus essential in removing pyrethroids and chlorpyrifos in CWs. Under flooded and anaerobic conditions, most pyrethroids and chlorpyrifos showed moderate persistence, with DT50 values between 106-353d. However, the retained pyrethroids were very stable in dry and aerobic sediments between irrigation seasons, suggesting a possibility for accumulation over time. Therefore, the long-term ecological risks of CWs should be further understood before their wide adoption.  
Keywords: Suspended solids  
Keywords: Pollutant removal  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Irrigation  
Keywords: Artificial wetlands  
Keywords: Environment Abstracts; Pollution Abstracts; Toxicology Abstracts  
Keywords: Adoption  
Keywords: Particulates  
Keywords: Anaerobic conditions  
Keywords: Sediments  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos  
Keywords: Soil  
Keywords: Insecticides  
Keywords: Carbon  
Keywords: Pesticides  
Keywords: Wetlands  
Keywords: USA, California  
Keywords: Contaminants  
Keywords: Pyrethroids  
Keywords: X 24330:Agrochemicals  
Keywords: USA, California, Central Valley  
Keywords: Runoff  
Date revised - 2011-10-01  
Language of summary - English  
Location - USA, California; USA, California, Central Valley  
Pages - 1581-1587  
ProQuest ID - 886117164  
SubjectsTermNotLitGenreText - Irrigation; Adoption; Anaerobic conditions; Sediments; Chlorpyrifos; Soil; Carbon; Insecticides; Pesticides; Wetlands; Pyrethroids; Contaminants; Runoff; Pollutant removal; Suspended solids; Artificial wetlands; Particulates; USA, California; USA, California, Central Valley  
Last updated - 2011-12-09  
Corporate institution author - Budd, Robert; O'geen, Anthony; Goh, Kean S; Bondarenko, Svetlana; Gan, Jay  
DOI - OB-e85b63bf-8148-4684-91f4csaobj201; 14893535; 0045-6535 English

162. Budd, Robert Livingston and Gan, Jianying. Constructed Wetlands as a Mitigation Strategy to Reduce Pesticide Loads in Agricultural Tailwater. 2009: (UMI# 3389647 ).   
Rec #: 51829  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pyrethroid and organophosphate pesticides have been found in numerous waterways throughout the United States. Monitoring studies within the San Diego Creek watershed in Orange County, California, confirmed that runoff from agricultural fields are a primary contributor to pesticide loads within these waterways. As a mitigation option for non-point pesticide pollution, constructed wetlands were investigated in this study to reduce pesticide loading in agricultural tailwaters. Multiple wetlands located along the San Joaquin River in the Stanilaus County were observed over two consecutive irrigation seasons. The wetlands were found to be very effective at reducing pyrethroid concentrations (52-100%) and moderately effective at reducing chlorpyrifos concentrations (52-61%) under two flow regimes, with loads reduced by 95-100% in the outgoing water. Vertical transport of pyrethroids was found to be negligible, and less than 10% of chlorpyrifos was found to leach below 16 cm in the wetland floors. A significant increase in removal efficiencies between seasons within one portion of the wetland was observed, and was attributed to a dramatic increase in vegetation and decreased flow rates. Pyrethroids overwhelmingly sorbed to suspended solids greater than 0.7 ÎĽm (62-93%), with resulting apparent partitioning coefficients (K d a ) ranging from 1.9 Ă— 104 to 3.1 Ă— 105 . The freely dissolved concentrations of permethrin represented approximately 26-39% of its total mass in water samples with a decreasing trend in concentrations toward the outlet, signaling a decrease in the bioavailable fraction in the outgoing flow. Pesticide concentrations mimicked organic carbon content of the deposited sediment particle fractions. The highest concentrations were associated with larger particles comprised of aggregates of organic and decomposed plant material, which are less susceptible to sedimentation. This observation helps explain why the sediment basin was not effective at removing pesticides from the tailwater. Effective wetland lengths (L 1/2 ) necessary to reduce pesticide concentrations by 50% were estimated to be less than 100 m for cyhalothrin, cypermethrin and permethrin under low flow (0.03 m3 s -1 ), but reaching 267 m under high flow conditions (0.07 m -3 s-1 ). The degradation studies indicate that the pesticides have the potential for persisting within the wetland system between irrigation seasons. While the half-lives of Î»-cyhalothrin, cypermethrin, esfenvalerate, and permethrin were less than 1 yr (r2 > 0.48) under anaerobic conditions, no detectable dissipation occurred for most pesticides in situ during the dry season. Bifenthrin was found to be relatively stable in all sediments, indicating its potential for prolonged persistence within the wetland systems. The results from this study indicate that constructed wetlands may act as a sink for most pyrethroids, and the removal is achieved through sedimentation and sediment trapping by vegetation and gravity. However, accumulation of pesticides over time, and the associated environmental risks of the accumulated pesticide residues, should be further understood if constructed wetlands are to be widely used as a management practice.  
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0768: Environmental science  
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Health and environmental sciences  
Agricultural tailwater English

163. Buratti, S.; Fabbri, E.; Bacchi, S., and Pasteris, A. Combined Effects of Salinity and Chlorpyrifos on the Earthworm Eisenia andrei. Univ Bologna, CIRSA, I-40126 Bologna, Italy//: 2012; 163, (1): S6(ABS).   
Rec #: 2440  
Keywords: ABSTRACT  
Call Number: NO ABSTRACT (CPY)  
Notes: Chemical of Concern: CPY

164. Buratti, S. ; Fabbri, E.; Bacchi, S., and Pasteris, A. Combined effects of salinity and chlorpyrifos on the earthworm Eisenia andrei: 28th Congress - European Society for Comparative Physiology and Biochemistry - Cellular and molecular mechanisms for physiological adaptation to multiple stress Bilbao, 2-5 September 2012. 2012 Sep; 163, Supplement, (0): S6.   
Rec #: 2490  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

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Rec #: 2560  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

166. Burns, K. A. and Vanden Heuvel, J. P. Modulation of Ppar Activity Via Phosphorylation.   
Rec #: 51419  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Biol Chem. 1999 Jan 29;274(5):2672-81 (medline /9915797)  
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ABSTRACT: Peroxisome proliferator-activated receptors (PPARs) are members of the nuclear receptor superfamily of transcription factors that respond to specific ligands by altering gene expression in a cell-, developmental- and sex-specific manner. Three subtypes of this receptor have been discovered (PPARalpha, beta and gamma), each apparently evolving to fulfill different biological niches. PPARs control a variety of target genes involved in lipid homeostasis, diabetes and cancer. Similar to other nuclear receptors, the PPARs are phosphoproteins and their transcriptional activity is affected by cross-talk with kinases and phosphatases. Phosphorylation by the mitogen-activated protein kinases (ERK- and p38-MAPK), Protein Kinase A and C (PKA, PKC), AMP Kinase (AMPK) and glycogen synthase kinase-3 (GSK3) affect their activity in a ligand-dependent or -independent manner. The effects of phosphorylation depend on the cellular context, receptor subtype and residue metabolized which can be manifested at several steps in the PPAR activation sequence including ligand affinity, DNA binding, coactivator recruitment and proteasomal degradation. The review will summarize the known PPAR kinases that directly act on these receptors, the sites affected and the result of this modification on receptor activity.  
MESH HEADINGS: Animals  
MESH HEADINGS: Cyclic AMP-Dependent Protein Kinases/metabolism  
MESH HEADINGS: Extracellular Signal-Regulated MAP Kinases/metabolism  
MESH HEADINGS: Growth Substances/physiology  
MESH HEADINGS: Humans  
MESH HEADINGS: Mitogen-Activated Protein Kinase Kinases/metabolism  
MESH HEADINGS: PPAR alpha/metabolism  
MESH HEADINGS: PPAR delta/metabolism  
MESH HEADINGS: PPAR gamma/metabolism  
MESH HEADINGS: PPAR-beta/metabolism  
MESH HEADINGS: Peroxisome Proliferator-Activated Receptors/\*metabolism  
MESH HEADINGS: Phosphorylation  
MESH HEADINGS: Signal Transduction  
MESH HEADINGS: Transcription Factors/metabolism eng

167. Butchi, N. B.; Woods, T.; Du, M.; Morgan, T. W., and Peterson, K. E. Tlr7 and Tlr9 Trigger Distinct Neuroinflammatory Responses in the Cns .   
Rec #: 50089  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY   
Abstract: COMMENTS: Cites: Nat Rev Drug Discov. 2006 Jun;5(6):471-84 (medline /16763660)  
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ABSTRACT: Toll-like receptors (TLRs) 7 and 9 recognize nucleic acid determinants from viruses and bacteria and elicit the production of type I interferons and proinflammatory cytokines. TLR7 and TLR9 are similar regarding localization and signal transduction mechanisms. However, stimulation of these receptors has differing effects in modulating viral pathogenesis and in direct toxicity in the central nervous system (CNS). In the present study, we examined the potential of the TLR7 agonist imiquimod and the TLR9 agonist cytosine-phosphate-guanosine oligodeoxynucleotide (CpG-ODN) to induce neuroinflammation after intracerebroventricular inoculation. CpG-ODN induced a more robust inflammatory response than did imiquimod after inoculation into the CNS, with higher levels of several proinflammatory cytokines and chemokines. The increase in cytokines and chemokines correlated with breakdown of the blood-cerebrospinal fluid barrier and recruitment of peripheral cells to the CNS in CpG-ODN-inoculated mice. In contrast, TLR7 agonists induced a strong interferon &beta; response in the CNS but only low levels of other cytokines. The difference in response to these agonists was not due to differences in distribution or longevity of the agonists but rather was correlated with cytokine production by choroid plexus cells. These results indicate that despite the high similarity of TLR7 and TLR9 in binding nucleic acids and inducing similar downstream signaling, the neuroinflammation response induced by these receptors differs dramatically due, at least in part, to activation of cells in the choroid plexus.  
MESH HEADINGS: Animals  
MESH HEADINGS: Animals, Newborn  
MESH HEADINGS: Brain/metabolism/pathology  
MESH HEADINGS: Central Nervous System/\*metabolism  
MESH HEADINGS: Chemokines/metabolism  
MESH HEADINGS: Choroid Plexus/metabolism  
MESH HEADINGS: CpG Islands  
MESH HEADINGS: Cytokines/metabolism  
MESH HEADINGS: Immunohistochemistry/methods  
MESH HEADINGS: In Situ Hybridization  
MESH HEADINGS: Inflammation/\*metabolism  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred C57BL  
MESH HEADINGS: Mice, Transgenic  
MESH HEADINGS: Real-Time Polymerase Chain Reaction/methods  
MESH HEADINGS: Toll-Like Receptor 7/\*metabolism  
MESH HEADINGS: Toll-Like Receptor 9/\*metabolism eng

168. Buzanska, Leonora; Sypecka, Joanna; Nerini-Molteni, Silvia; Compagnoni, Anna; Hogberg, Helena T; Del Torchio, Riccardo; Domanska-Janik, Krystyna; Zimmer, Jens, and Coecke, Sandra. A Human Stem Cell-Based Model for Identifying Adverse Effects of Organic and Inorganic Chemicals on the Developing Nervous System. 2009 Oct; 27, (10): 2591-2601.   
Rec #: 44599  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The aim of our study was to investigate whether a human neural stem cell line derived from umbilical cord blood (HUCB-NSC) can serve as a reliable test model for developmental neurotoxicity (DNT). We assessed the sensitivity of HUCB-NSCs at different developmental stages to a panel of neurotoxic (sodium tellurite, methylmercury chloride, cadmium chloride, chlorpyrifos, and L-glutamate) and non-neurotoxic (acetaminophen, theophylline, and D-glutamate) compounds. In addition, we investigated the effect of some compounds on key neurodevelopmental processes like cell proliferation, apoptotic cell death, and neuronal and glial differentiation. Less differentiated HUCB-NSCs were generally more sensitive to neurotoxicants, with the notable exception of L-glutamate, which showed a higher toxicity to later stages. The relative potencies of the compounds were: cadmium chloride > methylmercury chloride >> chlorpyrifos >> L-glutamate. Fifty nanomolar methylmercury chloride (MeHgCl) inhibited proliferation and induced apoptosis in early-stage cells. At the differentiated stage, 1 muM MeHgCl induced selective loss of S100 beta-expressing astrocytic cells. One millimolar L-glutamate did not influence the early stages of HUCB-NSC development, but it affected late stages of neuronal differentiation. A valuable system for in vitro DNT assessment should be able to discriminate between neurotoxic and non-neurotoxic compounds and show different susceptibilities to chemicals according to developmental stage and cell lineage. Although not exhaustive, this work shows that the HUCB-NSC model fulfils these criteria and may serve as a human in vitro model for DNT priority setting.  
Keywords: 2921-88-2  
Keywords: Sensitivity and Specificity  
Keywords: Nerve Growth Factors -- metabolism  
Keywords: Glutamic Acid  
Keywords: Neurons -- drug effects  
Keywords: Humans  
Keywords: Nervous System -- drug effects  
Keywords: S100 Proteins -- analysis  
Keywords: Nerve Growth Factors  
Keywords: Biological Markers -- analysis  
Keywords: S100 Proteins  
Keywords: S-100 calcium-binding protein beta subunit  
Keywords: Methylmercury Compounds  
Keywords: Apoptosis -- drug effects  
Keywords: Toxicity Tests -- methods  
Keywords: Nervous System -- growth & development  
Keywords: S100 Proteins -- metabolism  
Keywords: 10108-64-2  
Keywords: Cell Differentiation -- drug effects  
Keywords: Fetal Blood -- cytology  
Keywords: Cell Proliferation -- drug effects  
Keywords: Embryonic Stem Cells -- cytology  
Keywords: Neurons -- metabolism  
Keywords: RWZ4L3O1X0  
Keywords: Dose-Response Relationship, Drug  
Keywords: Nerve Growth Factors -- analysis  
Keywords: Predictive Value of Tests  
Keywords: Neuroglia -- drug effects  
Keywords: 56-86-0  
Keywords: Neurotoxins -- toxicity  
Keywords: Methylmercury Compounds -- toxicity  
Keywords: Cadmium Chloride  
Keywords: Neuroglia -- metabolism  
Keywords: Chlorpyrifos  
Keywords: Embryonic Stem Cells -- drug effects  
Keywords: Embryonic Stem Cells -- metabolism  
Keywords: Glutamic Acid -- toxicity  
Keywords: 0  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Cell Differentiation -- physiology  
Keywords: methylmercuric chloride  
Keywords: Cadmium Chloride -- toxicity  
Keywords: Neurotoxins  
Keywords: Cell Line  
Keywords: Biological Markers  
Keywords: Biological Markers -- metabolism  
Date completed - 2010-02-17  
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Date revised - 2012-12-20  
Language of summary - English  
Pages - 2591-2601  
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Last updated - 2013-01-19  
British nursing index edition - Stem cells (Dayton, Ohio), October 2009, 27(10):2591-2601  
Corporate institution author - Buzanska, Leonora; Sypecka, Joanna; Nerini-Molteni, Silvia; Compagnoni, Anna; Hogberg, Helena T; del Torchio, Riccardo; Domanska-Janik, Krystyna; Zimmer, Jens; Coecke, Sandra  
DOI - MEDL-19609937; 19609937; 1549-4918 eng

169. Buznikov, G. A.; Nikitina, L. A.; Bezuglov, V. V.; Milosevic, I.; Lazarevic, L.; Rogac, L.; Ruzdijic, S.; Slotkin, T. A., and Rakic, L. M. Sea urchin embryonic development provides a model for evaluating therapies against beta-amyloid toxicity. 2008; 75, (1): 94-100.   
Rec #: 57259  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Accumulation of P-amyloid protein is an Alzheimer's disease hallmark but also may be mechanistically involved in neurodegeneration. One of its cleavage peptides, A beta 42, has been used to evaluate the mechanisms underlying amyloid-induced cytotoxicity and targeting of acetylcholine systems. We studied Sphaerechinus granularis sea urchin embryos which utilize acetylcholine and other neurotransmitters as morphogens. At a threshold concentration of 0.1 mu M A beta 42, there was damage to the larval skeleton, accumulation of ectodermal cells in the blastocoele and underdevelopment of larval arms. Raising the A beta 42 concentration to 0.2-0.4 mu M produced anomalies depending on the stage at which A beta 42 was introduced: at the first cleavage divisions, abnormalities appeared within 1-2 cell cycles; at the mid-blastula stage, the peak period of sensitivity to A beta 42, gastrulation was blocked; at later stages, there was progressive damage to the larval skeleton, digestive tract and larval spicules, as well as regression of larval arms. Each of these anomalies could be offset by the addition of lipid-permeable analogs of acetylcholine (arachidonoyl dimethylaminoethanol), serotonin (arachidonoyl serotonin) and cannabinoids (arachidonoyl vanillylamine), with the greatest activity exhibited by the acetylcholine analog. These results indicate that sea urchin embryos provide a model suitable to characterize the mechanisms underlying the cytotoxicity of A beta 42, as well as providing a system that enables the rapid screening of potential therapeutic interventions. The protection provided by neurotransmitter analogs, especially that for acetylcholine, points to unsuspected advantages of existing therapies that enhance cholinergic function, as well as indicating novel approaches that may prove protective in Alzheimer's disease. (C) 2007 Elsevier Inc. All rights reserved.  
Keywords: acetylcholine, Alzheimer's disease, beta-amyloid, cannabinoids,  
ISI Document Delivery No.: 253AO

170. Buznikov, Gennady a; Nikitina, Lyudmila a; Seidler, Frederic J; Slotkin, Theodore a; Bezuglov, Vladimir V; Miloseviä‡, Ivan; Lazareviä‡, Lidija; Rogac, Ljubica; Ruzdijiä‡, Sabera, and Rakiä‡, Ljubisa M. Amyloid Precursor Protein 96-110 and Beta-Amyloid 1-42 Elicit Developmental Anomalies in Sea Urchin Embryos and Larvae That Are Alleviated by Neurotransmitter Analogs for Acetylcholine, Serotonin and Cannabinoids. 2008; 30, (6): 503-509.   
Rec #: 45489  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Amyloid precursor protein (APP) is overexpressed in the developing brain and portions of its extracellular domain, especially **amino acid residues 96-110**, play an important role in neurite outgrowth and neural cell differentiation. In the current study, we evaluated the developmental abnormalities caused by administration of exogenous APP(96-110) in sea urchin embryos and larvae, which, like the developing mammalian brain, utilize acetylcholine and other neurotransmitters as morphogens; effects were compared to those of beta-amyloid 1-42 (Abeta42), the neurotoxic APP fragment contained within neurodegenerative plaques in Alzheimer's Disease. Although both peptides elicited dysmorphogenesis, Abeta42 was far more potent; in addition, whereas Abeta42 produced abnormalities at developmental stages ranging from early cleavage divisions to the late pluteus, APP(96-110) effects were restricted to the intermediate, mid-blastula stage. For both agents, anomalies were prevented or reduced by addition of lipid-permeable analogs of acetylcholine, serotonin or cannabinoids; physostigmine, a carbamate-derived cholinesterase inhibitor, was also effective. In contrast, agents that act on NMDA receptors (memantine) or alpha-adrenergic receptors (nicergoline), and that are therapeutic in Alzheimer's Disease, were themselves embryotoxic, as was tacrine, a cholinesterase inhibitor from a different chemical class than physostigmine. Protection was also provided by agents acting downstream from receptor-mediated events: increasing cyclic AMP with caffeine or isobutylmethylxanthine, or administering the antioxidant, a-tocopherol, were all partially effective. Our findings reinforce a role for APP in development and point to specific interactions with neurotransmitter systems that act as morphogens in developing sea urchins as well as in the mammalian brain.  
Keywords: 2921-88-2  
Keywords: Animals  
Keywords: Drug Interactions  
Keywords: Sea Urchins -- drug effects  
Keywords: Serotonin -- analogs & derivatives  
Keywords: amyloid beta-protein (1-42)  
Keywords: Chlorpyrifos -- pharmacology  
Keywords: 50-67-9  
Keywords: Acetylcholine -- metabolism  
Keywords: Peptide Fragments  
Keywords: Acetylcholine -- analogs & derivatives  
Keywords: Cannabinoids  
Keywords: Amyloid beta-Peptides  
Keywords: Peptide Fragments -- pharmacology  
Keywords: Amyloid beta-Peptides -- pharmacology  
Keywords: Amyloid beta-Protein Precursor -- pharmacology  
Keywords: Serotonin -- metabolism  
Keywords: Time Factors  
Keywords: Amyloid beta-Protein Precursor  
Keywords: Larva -- drug effects  
Keywords: 51-84-3  
Keywords: Serotonin -- pharmacology  
Keywords: Dose-Response Relationship, Drug  
Keywords: Cannabinoids -- metabolism  
Keywords: Embryo, Nonmammalian  
Keywords: Cannabinoids -- pharmacology  
Keywords: Serotonin  
Keywords: Chlorpyrifos  
Keywords: 0  
Keywords: Cannabinoids -- agonists  
Keywords: Acetylcholine  
Keywords: Embryonic Development -- drug effects  
Keywords: Sea Urchins -- growth & development  
Date completed - 2009-01-13  
Date created - 2008-10-20  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 503-509  
ProQuest ID - 69691552  
SuppNotes - Cites: Neurosci Biobehav Rev. 2003 Sep;27(4):351-63[12946688]; Cites: Brain Res Bull. 2008 Jan 31;75(1):94-100[18158101]; Cites: Curr Alzheimer Res. 2005 Jan;2(1):37-45[15977988]; Cites: EMBO J. 2005 Dec 7;24(23):3996-4006[16252002]; Cites: Neurosci Lett. 2006 Sep 1;404(3):342-6[16837132]; Cites: Toxicology. 2006 Oct 3;227(1-2):173-83[16956707]; Cites: Prog Neurobiol. 2007 May;82(1):11-32[17428603]; Cites: Environ Health Perspect. 2007 Sep;115(9):1306-13[17805420]; Cites: J Neurosci. 2007 Dec 26;27(52):14459-69[18160654]; Cites: J Embryol Exp Morphol. 1970 Jun;23(3):549-69[4394387]; Cites: Exp Cell Res. 1970 Sep;62(1):102-17[4394736]; Cites: J Embryol Exp Morphol. 1968 Aug;20(1):119-28[5687734]; Cites: J Neurosci. 1994 Apr;14(4):2117-27[8158260]; Cites: J Neurochem. 1997 Oct;69(4):1389-97[9326267]; Cites: Toxicol Appl Pharmacol. 1997 Oct;146(2):227-36[9344890]; Cites: J Neurosci. 1998 Feb 15;18(4):1240-9[9454834]; Cites: Crit Rev Neurobiol. 1998;12(3):177-204[9847054]; Cites: Environ Health Perspect. 1999 Feb;107 Suppl 1:59-64[10229707]; Cites: Environ Health Perspect. 1999 Feb;107 Suppl 1:65-9[10229708]; Cites: Brain Res. 1999 Aug 28;839(2):313-22[10519055]; Cites: Perspect Dev Neurobiol. 1998;5(4):469-80[10533532]; Cites: Neurosci Behav Physiol. 2000 Jan-Feb;30(1):53-62[10768372]; Cites: Biol Psychiatry. 2001 Feb 1;49(3):221-32[11230873]; Cites: Environ Health Perspect. 2001 Jul;109(7):651-61[11485862]; Cites: Neuroscience. 2002;111(3):649-56[12031351]; Cites: Ann N Y Acad Sci. 2002 Jun;965:473-8[12105122]; Cites: Prog Neurobiol. 2003 May;70(1):1-32[12927332]; Cites: Environ Health Perspect. 2003 Nov;111(14):1730-5[14594623]; Cites: Brain Res Bull. 2004 Mar 1;63(1):57-63[15121239]; Cites: Toxicol Sci. 2004 Dec;82(2):545-54[15342957]; Cites: Neurochem Res. 2005 Jun-Jul;30(6-7):825-37[16187217]; Cites: J Neurobiol. 2006 Apr;66(5):476-87[16470685]; Cites: J Neurosci. 2006 Jul 5;26(27):7212-21[16822978]; Cites: Exp Gerontol. 2006 Oct;41(10):1007-13[16930903]; Cites: Methods Enzymol. 2006;412:234-55[17046662]; Cites: Science. 2006 Nov 10;314(5801):941-52[17095691]; Cites: Brain Res Bull. 2007 Sep 28;74(4):221-31[17720543]; Cites: Chem Res Toxicol. 2004 Aug;17(8):983-98[15310231]  
Last updated - 2013-01-19  
British nursing index edition - Neurotoxicology and teratology, November 2008, 30(6):503-509  
Corporate institution author - Buznikov, Gennady A; Nikitina, Lyudmila A; Seidler, Frederic J; Slotkin, Theodore A; Bezuglov, Vladimir V; MiloseviÄ‡, Ivan; LazareviÄ‡, Lidija; Rogac, Ljubica; RuzdijiÄ‡, Sabera; RakiÄ‡, Ljubisa M  
DOI - MEDL-18565728; 18565728; NIHMS75298; PMC2579926; 0892-0362 eng

171. Byford, R. L.; Lockwood, J. A.; Smith, S. M.; Harmon, C. W.; Johnson, C. C.; Luther, D. G.; Morris, H. F. Jr., and Penny, A. J. Insecticide Residues in Cattle Treated with a Cypermethrin, Chlorpyrifos, Piperonyl Butoxide-Impregnated Ear Tag. 1986; 37, (5): 692-697.   
Rec #: 490  
Keywords: NO CONC  
Call Number: NO CONC (CPY,CYP,PPB)  
Notes: Chemical of Concern: CPY,CYP,PPB

172. Cacciatore, Luis Claudio; Kristoff, Gisela; Verrengia Guerrero, Noemi R; Cochon, Adriana C, and Cacciatore, Luis Claudio. Binary Mixtures of Azinphos-Methyl Oxon and Chlorpyrifos Oxon Produce in Vitro Synergistic Cholinesterase Inhibition in Planorbarius Corneus. 2012 Jul; 88, (4): 450-458.   
Rec #: 38699  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In this study, the cholinesterase (ChE) and carboxylesterase (CES) activities present in whole organism homogenates from Planorbarius corneus and their in vitro sensitivity to organophosphorous (OP) pesticides were studied. Firstly, a characterization of ChE and CES activities using different substrates and selective inhibitors was performed. Secondly, the effects of azinphos-methyl oxon (AZM-oxon) and chlorpyrifos oxon (CPF-oxon), the active oxygen analogs of the OP insecticides AZM and CPF, on ChE and CES activities were evaluated. Finally, it was analyzed whether binary mixtures of the pesticide oxons cause additive, antagonistic or synergistic ChE inhibition in P. corneus homogenates. The results showed that the extracts of P. corneus preferentially hydrolyzed acetylthiocholine (AcSCh) over propionylthiocholine (PrSCh) and butyrylthiocholine (BuSCh). Besides, AcSCh hydrolyzing activity was inhibited by low concentrations of BW284c51, a selective inhibitor of AChE activity, and also by high concentrations of substrate. These facts suggest the presence of a typical AChE activity in this species. However, the different dose-response curves observed with BW284c51 when using PrSCh or BuSCh instead of AcSCh suggest the presence of at least another ChE activity. This would probably correspond to an atypical BuChE. Regarding CES activity, the highest specific activity was obtained when using 2-naphthyl acetate (2-NA), followed by 1-naphthyl acetate (1-NA); p-nitrophenyl acetate (p-NPA), and p-nitrophenyl butyrate (p-NPB). The comparison of the IC50 values revealed that, regardless of the substrate used, CES activity was approximately one order of magnitude more sensitive to AZM-oxon than ChE activity. Although ChE activity was very sensitive to CPF-oxon, CES activity measured with 1-NA, 2-NA, and p-NPA was poorly inhibited by this pesticide. In contrast, CES activity measured with p-NPB was equally sensitive to CPF-oxon than ChE activity. Several specific binary combinations of AZM-oxon and CPF-oxon caused a synergistic effect on the ChE inhibition in P. corneus homogenates. The degree of synergism tended to increase as the ratio of AZM-oxon to CPF-oxon decreased. These results suggest that synergism is likely to occur in P. corneus snails exposed in vivo to binary mixtures of the OPs AZM and CPF.  
Keywords: Environmental Engineering Abstracts (EN); CSA / ASCE Civil Engineering Abstracts (CE)  
Date revised - 2012-08-01  
Language of summary - English  
Pages - 450-458  
ProQuest ID - 1020844906  
Last updated - 2012-11-06  
British nursing index edition - Chemosphere [Chemosphere]. Vol. 88, no. 4, pp. 450-458. Jul 2012.  
Corporate institution author - Cacciatore, Luis Claudio; Kristoff, Gisela; Verrengia Guerrero, Noemi R; Cochon, Adriana C  
DOI - 9b113754-62b3-47fe-9514csamfg201; 16792851; 0045-6535 English

173. Caceres, Tanya; Megharaj, Mallavarapu; Venkateswarlu, Kadiyala; Sethunathan, Nambrattil; Naidu, Ravi, and Caceres, Tanya. Fenamiphos and Related Organophosphorus Pesticides: Environmental Fate and Toxicology. 2010; 205, 117-162.   
Rec #: 44379  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorus (OP) compounds are among the most common chemical classes used in crop and livestock protection and account for an estimated 34% of worldwide insecticide sales (Singh and Walker 2006). During the last 60 yr, approximately 150 different OP chemicals have been used to protect crops, livestock, and human health (Casida and Quistad 2004). In recent years, the OP compounds have been the most widely used group of insecticides in Australia. In addition to fenamiphos (nematicide), isofenphos, and coumaphos (insecticides), the most commonly used OP pesticides include parathion methyl, chlorpyrifos, dimethoate, and profenfos. Approximately 500 t of OP-active ingredients comprising about 30 distinct compounds have been used annually in Australia for many years (Australian Academy of Technological Sciences and Engineering 2002).  
Keywords: Chlorpyrifos  
Keywords: fenamiphos  
Keywords: Pesticides (organophosphorus)  
Keywords: Insecticides  
Keywords: Coumaphos  
Keywords: Dimethoate  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Crops  
Keywords: Parathion  
Keywords: Livestock  
Date revised - 2010-03-01  
Language of summary - English  
Pages - 117-162  
ProQuest ID - 21395145  
SubjectsTermNotLitGenreText - Chlorpyrifos; fenamiphos; Pesticides (organophosphorus); Insecticides; Coumaphos; Dimethoate; Crops; Parathion; Livestock  
Last updated - 2012-03-29  
British nursing index edition - Reviews of Environmental Contamination and Toxicology [Rev. Environ. Contam. Toxicol.]. Vol. 205, pp. 117-162. 2010.  
Corporate institution author - Caceres, Tanya; Megharaj, Mallavarapu; Venkateswarlu, Kadiyala; Sethunathan, Nambrattil; Naidu, Ravi  
DOI - MD-0012838028; 12490718; 0179-5953 English

174. Canesi, L.; Borghi, C.; Gallo, G.; Capri, F.; Viarengo, A., and Dondero, F. Effects of the Organophosphate Pesticide Chlorpyriphos on the Responses of Mytilus Digestive Gland to the Natural Estrogen 17[beta]-Estradiol. 2008; 151, (Suppl. 1.1): S3(ABS).   
Rec #: 500  
Keywords: ABSTRACT  
Call Number: NO ABSTRACT (CPY)  
Notes: Chemical of Concern: CPY

175. Cao, L.; Liu, H. M.; Zhang, H.; Huang, K.; Gu, T.; Ni, H. Y.; Hong, Q., and Li, S. P. Characterization of a Newly Isolated Highly Effective 3,5,6-Trichloro-2-pyridinol Degrading Strain Cupriavidus pauculus P2. 2012; 65, (3): 231-236.   
Rec #: 57339  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A bacterial strain P2 capable of degrading 3,5,6-trichloro-2-pyridinol (TCP) was isolated and characterized. Phylogenetic analysis based on 16S rRNA gene sequence indicated that it belonged to the genus of Cupriavidus, because it showed the highest sequence similarity to Cupriavidus pauculus LMG 3413(T) (99.7 %) and DNA-DNA relatedness value between strain P2 and C. pauculus LMG 3413(T) was 76.8 %. In combination with morphological, physiological and biochemical characters, strain P2 was identified as C. pauculus. It could use TCP as the sole carbon source and energy source for its growth. It showed a high average degradation rate of 10 mg/L h in mineral salt medium amended with TCP (50-800 mg/L). During TCP degradation, chloridion was released into the medium in two obvious discontinuous stages. Along with this, two colorful metabolites were produced. Finally, the molarity of the total released chloridion was three times that of the initial TCP in the medium. This is the first report of TCP-degrading strain from the genus of Cupriavidus and the detection of two colorful metabolites during TCP degradation. Strain P2 might be a promising candidate for its application in the bioremediation of TCP-polluted environments.  
Keywords: CHLORPYRIFOS DEGRADATION, BIODEGRADATION, BACTERIUM, TOXICITY, EXPOSURE,  
ISI Document Delivery No.: 977RJ

176. Cao, S. and Chen, S. J. Biphasic Folding Kinetics of Rna Pseudoknots and Telomerase Rna Activity.   
Rec #: 51439  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Biochemistry. 1999 Oct 26;38(43):14214-23 (medline /10571995)  
COMMENTS: Cites: Biochemistry. 1972 Nov 7;11(23):4368-74 (medline /4562591)  
COMMENTS: Cites: Nature. 1968 Apr 20;218(5138):232-3 (medline /4869713)  
COMMENTS: Cites: Curr Biol. 1994 Jun 1;4(6):488-98 (medline /7922369)  
COMMENTS: Cites: Science. 1994 Aug 12;265(5174):918-24 (medline /8052848)  
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COMMENTS: Cites: RNA. 2000 Mar;6(3):325-38 (medline /10744018)  
COMMENTS: Cites: J Mol Biol. 2000 Apr 28;298(2):167-85 (medline /10764589)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 2001 May 8;98(10):5584-9 (medline /11320222)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 2002 Feb 19;99(4):1931-6 (medline /11842187)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2002 Dec 24;99(26):16998-7003 (medline /12482936)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2003 Jan 21;100(2):449-54 (medline /12525685)  
COMMENTS: Cites: RNA. 2003 Feb;9(2):168-74 (medline /12554858)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2003 Feb 18;100(4):1574-9 (medline /12574513)  
COMMENTS: Cites: J Comput Chem. 2003 Oct;24(13):1664-77 (medline /12926009)  
COMMENTS: Cites: J Am Chem Soc. 2004 Jan 28;126(3):808-13 (medline /14733555)  
COMMENTS: Cites: RNA. 2004 Mar;10(3):335-43 (medline /14970378)  
COMMENTS: Cites: Trends Biochem Sci. 2004 Apr;29(4):183-92 (medline /15082312)  
COMMENTS: Cites: Nature. 2004 May 13;429(6988):201-5 (medline /15141216)  
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COMMENTS: Cites: J Mol Biol. 2005 Apr 22;348(1):27-42 (medline /15808851)  
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COMMENTS: Cites: Annu Rev Biophys Biomol Struct. 2005;34:221-43 (medline /15869389)  
COMMENTS: Cites: Curr Opin Genet Dev. 2005 Jun;15(3):249-57 (medline /15917199)  
COMMENTS: Cites: Curr Opin Struct Biol. 2005 Jun;15(3):324-30 (medline /15922592)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2005 Sep 6;102(36):12694-9 (medline /16123125)  
COMMENTS: Cites: RNA. 2005 Oct;11(10):1494-504 (medline /16199760)  
COMMENTS: Cites: RNA. 2005 Dec;11(12):1884-97 (medline /16251382)  
COMMENTS: Cites: Biophys J. 2006 Feb 1;90(3):765-77 (medline /16272440)  
COMMENTS: Cites: J Mol Biol. 2006 Jan 13;355(2):282-93 (medline /16303138)  
COMMENTS: Cites: J Mol Biol. 2006 Mar 17;357(1):292-312 (medline /16413034)  
COMMENTS: Cites: J Mol Graph Model. 2006 Oct;25(2):261-74 (medline /16481205)  
COMMENTS: Cites: RNA. 2006 Mar;12(3):323-31 (medline /16495231)  
COMMENTS: Cites: J Chem Phys. 2006 Apr 21;124(15):154903 (medline /16674261)  
COMMENTS: Cites: Nucleic Acids Res. 2006;34(9):2634-52 (medline /16709732)  
COMMENTS: Cites: Curr Opin Struct Biol. 2006 Jun;16(3):307-18 (medline /16713250)  
COMMENTS: Cites: Curr Opin Struct Biol. 2006 Jun;16(3):270-8 (medline /16713706)  
COMMENTS: Cites: Biopolymers. 1990 May-Jun;29(6-7):1105-19 (medline /1695107)  
COMMENTS: Cites: J Mol Biol. 1990 Jul 20;214(2):437-53 (medline /1696318)  
COMMENTS: Cites: J Mol Biol. 1990 Jul 20;214(2):455-70 (medline /1696319)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2006 Sep 19;103(38):14003-8 (medline /16966612)  
COMMENTS: Cites: Curr Opin Cell Biol. 1990 Dec;2(6):1099-103 (medline /2099803)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1999 Dec 7;96(25):14234-9 (medline /10588689)  
ABSTRACT: Using a combined master equation and kinetic cluster approach, we investigate RNA pseudoknot folding and unfolding kinetics. The energetic parameters are computed from a recently developed Vfold model for RNA secondary structure and pseudoknot folding thermodynamics. The folding kinetics theory is based on the complete conformational ensemble, including all the native-like and non-native states. The predicted folding and unfolding pathways, activation barriers, Arrhenius plots, and rate-limiting steps lead to several findings. First, for the PK5 pseudoknot, a misfolded 5' hairpin emerges as a stable kinetic trap in the folding process, and the detrapping from this misfolded state is the rate-limiting step for the overall folding process. The calculated rate constant and activation barrier agree well with the experimental data. Second, as an application of the model, we investigate the kinetic folding pathways for human telomerase RNA (hTR) pseudoknot. The predicted folding and unfolding pathways not only support the proposed role of conformational switch between hairpin and pseudoknot in hTR activity, but also reveal molecular mechanism for the conformational switch. Furthermore, for an experimentally studied hTR mutation, whose hairpin intermediate is destabilized, the model predicts a long-lived transient hairpin structure, and the switch between the transient hairpin intermediate and the native pseudoknot may be responsible for the observed hTR activity. Such finding would help resolve the apparent contradiction between the observed hTR activity and the absence of a stable hairpin.  
MESH HEADINGS: Base Sequence  
MESH HEADINGS: Humans  
MESH HEADINGS: Kinetics  
MESH HEADINGS: Models, Molecular  
MESH HEADINGS: Mutagenesis, Site-Directed  
MESH HEADINGS: Nucleic Acid Conformation  
MESH HEADINGS: RNA/\*chemistry/genetics/metabolism  
MESH HEADINGS: Telomerase/chemistry/genetics/\*metabolism  
MESH HEADINGS: Thermodynamics eng

177. Carafa, Roberta; Faggiano, Leslie; Real, Montserrat; Munne, Antoni; Ginebreda, Antoni; Guasch, Helena; Flo, Monica; Tirapu, Luis; Der Ohe, Peter Carsten Von, and Carafa, Roberta. Water Toxicity Assessment and Spatial Pollution Patterns Identification in a Mediterranean River Basin District. Tools for Water Management and Risk Analysis. 2011 Sep 15; 409, (20): 4269-4279.   
Rec #: 47109  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In compliance with the requirements of the EU Water Framework Directive, monitoring of the ecological and chemical status of Catalan river basins (NE Spain) is carried out by the Catalan Water Agency.The large amount of data collected and the complex relationships among the environmental variables monitored often mislead data interpretation in terms of toxic impact, especially considering that even pollutants at very low concentrations might contribute to the total toxicity.The total dataset of chemical monitoring carried out between 2007 and 2008 (232 sampling stations and 60 pollutants) has been analyzed using sequential advanced modeling techniques. Data on concentrations of contaminants in water were pre-treated in order to calculate the bioavailable fraction, depending on substance properties and local environmental conditions.The resulting values were used to predict the potential impact of toxic substances in complex mixtures on aquatic biota and to identify hot spots. Exposure assessment with Species Sensitivity Distribution (SSD) and mixture toxicity rules were used to compute the multi-substances Potentially Affected Fraction (msPAF).The combined toxicity of the pollutants analyzed in the Catalan surface waters might potentially impact more than 50% of the species in 10% of the sites.In order to understand and visualize the spatial distribution of the toxic risk, Self Organising Map (SOM), based on the Kohonen's Artificial Neural Network (ANN) algorithm, was applied on the output data of these models. Principal Component Analysis (PCA) was performed on top of Neural Network results in order to identify main influential variables which account for the pollution trends. **Finally, predicted toxic impacts on biota have been linked and correlated to field data on biological quality indexes using macroinvertebrate and diatom communities (IBMWP and IPS).** The methodology presented could represent a suitable tool for water managers in environmental risk assessment and management.  
Keywords: Artificial intelligence  
Keywords: Principal component analysis  
Keywords: Risk analysis  
Keywords: M2 556:General (556)  
Keywords: Toxic substances  
Keywords: Spatial distribution  
Keywords: Neural networks  
Keywords: Surface water  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Spain  
Keywords: Bacillariophyceae  
Keywords: Algorithms  
Keywords: River basins  
Keywords: Toxicity  
Keywords: Risk Abstracts; Environment Abstracts; Meteorological & Geoastrophysical Abstracts; Pollution Abstracts  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Bioavailability  
Keywords: Biota  
Keywords: Water management  
Keywords: neural networks  
Keywords: R2 23050:Environment  
Date revised - 2012-01-01  
Language of summary - English  
Location - Spain  
Pages - 4269-4279  
ProQuest ID - 889690566  
SubjectsTermNotLitGenreText - Principal component analysis; Spatial distribution; Water management; Neural networks; Algorithms; River basins; Bioavailability; Artificial intelligence; Risk analysis; Biota; Toxic substances; Surface water; neural networks; Toxicity; Bacillariophyceae; Spain  
Last updated - 2012-08-02  
Corporate institution author - Carafa, Roberta; Faggiano, Leslie; Real, Montserrat; Munne, Antoni; Ginebreda, Antoni; Guasch, Helena; Flo, Monica; Tirapu, Luis  
DOI - OB-b3b16789-8ef3-46af-81f6csamfg201; 15619636; 0048-9697 English

178. Carlson, J. C.; Challis, J. K.; Hanson, M. L., and Wong, C. S. Stability of pharmaceuticals and other polar organic compounds stored on polar organic chemical integrative samplers and solid-phase extraction cartridges. 2013; 32, (2): 337-344.   
Rec #: 57359  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The stability of 24 chemicals, including pharmaceuticals and personal care products, and some agrochemicals on extraction media was evaluated by preloading them onto Oasis hydrophilic lipophilic balanced solid-phase extraction (SPE) cartridges and polar organic chemical integrative samplers (POCIS) followed by storage at 20 degrees C over time. After 20 months, the average loss was 11% on POCIS, with only 2,4-dichlorophenoxyacetic acid, atrazine, chlorpyrifos, and gemfibrozil showing a statistically significant decline compared with initial concentrations. Losses on SPE cartridges were below 19%, with an average loss of 9%. In addition to laboratory spiked samples, multiple POCIS deployed in wastewater-impacted surface waters and SPE extracts of these waters were stored in their original coextracted matrix for nearly two years with minimal observed losses. Errors from typical sampling, handling, and concentration estimates from POCIS sampling rates were typically +/- 15 to 30% relative standard deviation, so observed storage losses are minimal for most POCIS applications. While losses during storage on SPE cartridges for 20 months were small but statistically significant for many compounds, addition of labeled internal standards prior to freezing should correct for such losses. Thus, storage of processed water samples for analysis of polar organic pollutants is viable for archival purposes or studies for which samples cannot be analyzed in the short term. Environ. Toxicol. Chem. 2013;32:337344. (C) 2012 SETAC  
Keywords: Archival storage, Polar organic chemical integrative sampler,  
ISI Document Delivery No.: 075ET

179. Carpenter, Kurt D; Sobieszczyk, Steven; Arnsberg, Andrew J; Rinella, Frank a, and Carpenter, Kurt D. Pesticide Occurrence and Distribution in the Lower Clackamas River Basin, Oregon, 2000-2005. 2008.  
Rec #: 49859  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticide occurrence and distribution in the lower Clackamas River basin was evaluated in 2000-2005, when 119 water samples were analyzed for a suite of 86-198 dissolved pesticides. Sampling included the lower-basin tributaries and the Clackamas River mainstem, along with paired samples of pre- and post-treatment drinking water (source and finished water) from one of four drinking water-treatment plants that draw water from the lower river. Most of the sampling in the tributaries occurred during storms, whereas most of the source and finished water samples from the study drinking-water treatment plant were obtained at regular intervals, and targeted one storm event in 2005. In all, 63 pesticide compounds were detected, including 33 herbicides, 15 insecticides, 6 fungicides, and 9 pesticide degradation products. Atrazine and simazine were detected in about half of samples, and atrazine and one of its degradates (deethylatrazine) were detected together in 30 percent of samples. Other high-use herbicides such as glyphosate, triclopyr, 2,4-D, and metolachlor also were frequently detected, particularly in the lower-basin tributaries. Pesticides were detected in all eight of the lower-basin tributaries sampled, and were also frequently detected in the lower Clackamas River. Although pesticides were detected in all of the lower basin tributaries, the highest pesticide loads (amounts) were found in Deep and Rock Creeks. These medium-sized streams drain a mix of agricultural land (row crops and nurseries), pastureland, and rural residential areas. The highest pesticide loads were found in Rock Creek at 172nd Avenue and in two Deep Creek tributaries, North Fork Deep and Noyer Creeks, where 15-18 pesticides were detected. Pesticide yields (loads per unit area) were highest in Cow and Carli Creeks, two small streams that drain the highly urban and industrial northwestern part of the lower basin. Other sites having relatively high pesticide yields included middle Rock Creek and upper Noyer Creek, which drain basins having nurseries, pasture, and rural residential land. Some concentrations of insecticides (diazinon, chlorpyrifos, azinphos-methyl, and p,p-DDE) exceeded U.S. Environmental Protection Agency (USEPA) aquatic-life benchmarks in Carli, Sieben, Rock, Noyer, Doane, and North Fork Deep Creeks. One azinphos-methyl concentration in Doane Creek (0.21 micrograms per liter [ mu g/L]) exceeded Federal and State of Oregon benchmarks for the protection of fish and benthic invertebrates. Concentrations of several other pesticide compounds exceeded non-USEPA benchmarks. Twenty-six pesticides or degradates were detected in the Clackamas River mainstem, typically at much lower concentrations than those detected in the lower-basin tributaries. At least 1 pesticide was detected in 65 percent of 34 samples collected from the Clackamas River, with an average of 2-3 pesticides per sample. Pesticides were detected in 9 (or 60 percent) of the 15 finished water samples collected from the study water-treatment plant during 2003-2005. These included 10 herbicides, 1 insecticide, 1 fungicide, 1 insect repellent, and 2 pesticide degradates. The herbicides diuron and simazine were the most frequently detected (four times each during the study), at concentrations far below human-health benchmarks-USEPA Maximum Contaminant Levels or U.S. Geological Survey human Health-Based Screening Levels (HBSLs). The highest pesticide concentration in finished drinking water was 0.18 mu g/L of diuron, which was 11 times lower than its low HBSL benchmark. Although 0?2 pesticides were detected in most finished water samples, 9 and 6 pesticides were detected in 2 storm-associated samples from May and September 2005, respectively. Three of the unregulated compounds detected in finished drinking water (diazinon-oxon, deethylatrazine [CIAT], and N, N-diethyl-m-toluamide [DEET]) do not have human-health benchmarks available for comparison. Although most of the 51 current.  
Start Page: 99  
End Page: 99  
Keywords: Water Analysis  
Keywords: Nursery grounds  
Keywords: Water Sampling  
Keywords: Canada, British Columbia, Rock Creek  
Keywords: Freshwater  
Keywords: Streams  
Keywords: Insecticides  
Keywords: Drinking Water  
Keywords: Agricultural Chemicals  
Keywords: Q1 01422:Environmental effects  
Keywords: USA, Oregon, Clackamas R. basin  
Keywords: SW 3060:Water treatment and distribution  
Keywords: USA, Idaho, Deep Creek  
Keywords: USA, Oregon  
Keywords: Tributaries  
Keywords: Rivers  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: Herbicides  
Keywords: River basins  
Keywords: Q5 01504:Effects on organisms  
Keywords: Creek  
Keywords: ASW, USA, Florida, New Estuary, North Fork  
Keywords: Aqualine Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; ASFA 1: Biological Sciences & Living Resources  
Keywords: Pesticides  
Keywords: Fungicides  
Date revised - 2011-11-01  
Language of summary - English  
Location - ASW, USA, Florida, New Estuary, North Fork; Canada, British Columbia, Rock Creek; USA, Oregon, Clackamas R. basin; USA, Idaho, Deep Creek; USA, Oregon  
Pages - 99  
ProQuest ID - 904485064  
SubjectsTermNotLitGenreText - Insecticides; Drinking Water; Fungicides; Nursery grounds; Pesticides; River basins; Herbicides; Creek; Tributaries; Rivers; Agricultural Chemicals; Water Analysis; Water Sampling; Streams; ASW, USA, Florida, New Estuary, North Fork; Canada, British Columbia, Rock Creek; USA, Oregon, Clackamas R. basin; USA, Idaho, Deep Creek; USA, Oregon; Freshwater  
Last updated - 2012-12-14  
British nursing index edition - Scientific Investigations Report. U.S. Geological Survey. no. 2008-5027, 99 p. 2008.  
Corporate institution author - Carpenter, Kurt D; Sobieszczyk, Steven; Arnsberg, Andrew J; Rinella, Frank A  
DOI - d970246a-a551-426f-9fc2csamfg201; 15961876; NO1102441 English

180. Carriger, J. F. and Rand, G. M. Aquatic Risk Assessment of Pesticides in Surface Waters in and Adjacent to the Everglades and Biscayne National Parks: II. Probabilistic Analyses. 2008; 17, (7): 680-696.   
Rec #: 520  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ATZ,CPY,ES,ES1,ES2,MLN,MTL), NO REVIEW (ATZ,CPY,ES,ES1,ES2,MLN,MTL)  
Notes: Chemical of Concern: ATZ,CPY,ES,ES1,ES2,MLN,MTL

181. ---. Aquatic Risk Assessment of Pesticides in Surface Waters in and Adjacent to the Everglades and Biscayne National Parks: I. Hazard Assessment and Problem Formulation. 2008; 17, (7): 660-679.   
Rec #: 2130  
Keywords: REVIEW  
Call Number: NO REVIEW (ATZ,CPY,ES,MLN,MTL)  
Notes: Chemical of Concern: ATZ,CPY,ES,MLN,MTL

182. Carriger, J. F.; Rand, G. M.; Gardinali, P. R.; Perry, W. B.; Tompkins, M. S., and Fernandez, A. M. Pesticides of Potential Ecological Concern in Sediment from South Florida Canals: An Ecological Risk Prioritization for Aquatic Arthropods. randg@fiu.edu//: 2006; 15, (1): 21-45.   
Rec #: 510  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (24D,24DXY,ACR,ADC,ATZ,AZ,BMC,CBF,CBL,CPY,CPYM,CTN,CYP,DCF,DQT,DS,DU,DZ,EP,ES,FMP,HXZ,LNR,MLN,MOM,MP,MTL,MVP,NFZ,Naled,OML,PMR,PMT,PQT,PRT,SZ,TFN), NO REVIEW (24D,24DXY,ACR,ADC,ATZ,AZ,BMC,CBF,CBL,CPY,CPYM,CTN,CYP,DCF,DQT,DS,DU,DZ,EP,ES,FMP,HXZ,LNR,MLN,MOM,MP,MTL,MVP,NFZ,Naled,OML,PMR,PMT,PQT,PRT,SZ,TFN)  
Notes: Chemical of Concern: 24D,24DXY,ACF,ACR,ADC,AMTR,AND,ATZ,AZ,BHC,BMC,BMN,CBF,CBL,CHD,CPY,CPYM,CTN,CYP,DCF,DDT,DEM,DLD,DQT,DS,DU,DZ,EN,EP,ES,ETN,FMP,FNF,HPT,HXZ,LNR,MBZ,MLN,MOM,MP,MRX,MTL,MVP,MXC,NFZ,Naled,OML,PMR,PMT,PQT,PRT,SZ,TFN,TXP

183. Carter, H. L.; Evans, M. A., and Waldron, A. C. Pesticide Use on Major Crops in Ohio - 1978. SOIL; 1980: 47 p.   
Rec #: 530  
Keywords: NO EFFECT  
Call Number: NO EFFECT (24D,24DXY,ACP,ACR,ATZ,AZ,BMY,BT,BTY,CBF,CBL,CPP,CPY,Captan,DDP,DMB,DMT,DS,DZ,EPTC,GYP,LNR,MDT,MLN,MP,MTL,MVP,OXD,OYZ,PAQT,PDM,PHMD,PRT,PSM,PYZ,SZ,TCF,TFN,THM)  
Notes: Chemical of Concern: 24D,24DXY,ACP,ACR,AMTL,AMTR,AND,ATZ,AZ,BMY,BT,BTY,CBF,CBL,CPP,CPY,CYC,CZE,Captan,DDP,DMB,DMT,DS,DZ,EDT,EPRN,EPTC,FNF,GYP,HCCH,HPT,LNR,MBZ,MCPA,MDT,MLN,MP,MTL,MVP,MXC,NPM,OXD,OYZ,PAQT,PCH,PCL,PDM,PEB,PHMD,PPCP,PRN,PRT,PSM,PYZ,SZ,TCF,TFN,THM,TRB,TXP,VNT

184. Carvalho, F. P.; Fowler, S. W., and Readman, J. W. The Fate and Effects of Agrochemical Residues in Tropical Coastal Lagoons Investigated with 14C-Labelled Compounds and Radiotracer Techniques. F.P.Carvalho, Marine Environment Laboratory, International Atomic Energy Agency, Monaco, 98012, Monaco//: 1998; 26, (3): 1430-1432.   
Rec #: 540  
Keywords: FATE  
Call Number: NO FATE (CPY)  
Notes: Chemical of Concern: CPY

185. Carvalho, Fernando P; Villeneuve, Jean-Pierre; Cattini, C; RendăłN, Jaime, and Mota De Oliveira, J. Pesticide and Pcb Residues in the Aquatic Ecosystems of Laguna De Terminos, a Protected Area of the Coast of Campeche, Mexico. 2009 Feb; 74, (7): 988-995.   
Rec #: 48819  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The coastal lagoon system of Laguna de Terminos, Campeche, Mexico, a natural reserve since 1994, was investigated for contamination by agricultural and industrial chemical residues. Water, sediment and biota samples were analyzed for a wide variety of organochlorine and organophosphorus compounds. Chlorpyrifos was detected in water in concentrations up to 72 pgL(-1) and, amongst organochlorine compounds, summation operator PCB were measured averaging 1177 pgL(-1) and summation operator DDT 279 pgL(-1). Residues of chlorinated compounds were present in sediments and in biota with summation operator DDT averaging 190 pg g(-1) and 5876 pg g(-1) in sediment and oysters, respectively. Results show that the more widespread contaminants in the Laguna were residues of chlorinated hydrocarbons, such as DDTs, PCBs, endosulfan, and lindane. Concentrations of residues were not at an alarming level and were even lower than reported for other costal lagoons of the region. Still there is a need to implement control measures on persistent and bioaccumulative compounds that may reach the aquatic system of Laguna de Terminos.  
Keywords: 50-29-3  
Keywords: Water Pollutants, Chemical -- analysis  
Keywords: Polychlorinated Biphenyls  
Keywords: Pesticide Residues  
Keywords: Polychlorinated Biphenyls -- analysis  
Keywords: Ecosystem  
Keywords: 0  
Keywords: Mexico  
Keywords: Hydrocarbons, Chlorinated -- analysis  
Keywords: Hydrocarbons, Chlorinated  
Keywords: DDT  
Keywords: Water Pollutants, Chemical  
Keywords: Pesticide Residues -- analysis  
Keywords: Geologic Sediments  
Keywords: DDT -- analogs & derivatives  
Keywords: DDT -- analysis  
Date completed - 2009-03-18  
Date created - 2009-02-03  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 988-995  
ProQuest ID - 66879148  
Last updated - 2013-01-19  
British nursing index edition - Chemosphere, February 2009, 74(7):988-995  
Corporate institution author - Carvalho, Fernando P; Villeneuve, Jean-Pierre; Cattini, C; RendĂłn, Jaime; Mota de Oliveira, J  
DOI - MEDL-19022473; 19022473; 1879-1298 eng

186. Carvalho, Fernando P; Villeneuve, Jean-Pierre; Cattini, Chantal; Rendon, Jaime; Oliveira, Jmota, and Carvalho, Fernando P. Ecological Risk Assessment of Pcbs and Other Organic Contaminant Residues in Laguna De Terminos, Mexico. 2009 May; 18, (4): 403-416.   
Rec #: 48599  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Laguna de Terminos, a wide coastal lagoon system in Campeche, Mexico, was investigated for the contamination by polychlorobiphenyls (PCBs). Distribution of these industrial chemical contaminants along with pesticide residues in the lagoon, as well as their sediment-water partitioning and bioaccumulation by oysters and fish were assessed. Contaminant concentrations in the lagoon were compared with toxicity data for aquatic organisms and the ecotoxicological risks discussed. Current contaminant concentrations generally were several orders of magnitude below acute toxic levels for the most sensitive aquatic species and this seems compatible with the status of nature reserve and functions aimed at Laguna de Terminos. In particular, Penaeidae shrimp species that are the most valuable fisheries resources of Campeche with important populations in the Laguna are not impaired with the current low levels of these contaminants. Nevertheless, due to known environmental persistence, the surveillance of chlorinated contaminant levels in the lagoon ecosystems is recommended.  
Keywords: Risk assessment  
Keywords: Aquatic organisms  
Keywords: D 04070:Pollution  
Keywords: Ecosystems  
Keywords: Contamination  
Keywords: Pesticide residues  
Keywords: Pollution effects  
Keywords: Ecology Abstracts; Toxicology Abstracts; Pollution Abstracts; Environmental Engineering Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Toxicity tests  
Keywords: Lagoons  
Keywords: Environmental Studies  
Keywords: Industrial wastes  
Keywords: oysters  
Keywords: Penaeidae  
Keywords: Penaeid shrimps  
Keywords: Fisheries  
Keywords: Pollutant persistence  
Keywords: Nature reserves  
Keywords: Chemical pollution  
Keywords: X 24330:Agrochemicals  
Keywords: PCB compounds  
Keywords: Marine crustaceans  
Keywords: PCB  
Keywords: EE 40:Water Pollution: Monitoring, Control & Remediation  
Keywords: Sediment pollution  
Keywords: Marine  
Keywords: Data processing  
Keywords: nature reserves  
Keywords: Q5 01504:Effects on organisms  
Keywords: Toxicity  
Keywords: Bioaccumulation  
Keywords: polychlorinated biphenyls  
Keywords: P 1000:MARINE POLLUTION  
Keywords: Shrimp fisheries  
Keywords: ISE, Mexico  
Keywords: Fish  
Keywords: Coastal lagoons  
Keywords: Contaminants  
Keywords: fishery resources  
Date revised - 2010-02-01  
Language of summary - English  
Location - ISE, Mexico  
Pages - 403-416  
ProQuest ID - 289764902  
SubjectsTermNotLitGenreText - Penaeidae; ISE, Mexico; Toxicity; Lagoons; PCB compounds; Fish; nature reserves; Chemical pollution; Contaminants; Aquatic organisms; oysters; Risk assessment; Sediment pollution; Ecosystems; Bioaccumulation; Pesticide residues; fishery resources; Coastal lagoons; Toxicity tests; PCB; Pollutant persistence; Shrimp fisheries; Marine crustaceans; Industrial wastes; Pollution effects; polychlorinated biphenyls; Data processing; Contamination; Nature reserves; Fisheries; Marine  
Last updated - 2011-10-26  
Corporate institution author - Carvalho, Fernando P; Villeneuve, Jean-Pierre; Cattini, Chantal; Rendon, Jaime; Oliveira, JMota  
DOI - OB-MD-0009516332; 9297686; CS0934997; 0963-9292; 1573-3017 English

187. Casida, John E; Nomura, Daniel K; Vose, Sarah C, and Fujioka, Kazutoshi. Organophosphate-Sensitive Lipases Modulate Brain Lysophospholipids, Ether Lipids and Endocannabinoids. 2008 Sep 25; 175, (1-3): 355-364.   
Rec #: 49179  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Lipases play key roles in nearly all cells and organisms. Potent and selective inhibitors help to elucidate their physiological functions and associated metabolic pathways. Organophosphorus (OP) compounds are best known for their anticholinesterase properties but selectivity for lipases and other targets can also be achieved through structural optimization. **This review considers several lipid systems in brain modulated by highly OP-sensitive lipases.** Neuropathy target esterase (NTE) hydrolyzes lysophosphatidylcholine (lysoPC) as a preferred substrate. Gene deletion of NTE in mice is embryo lethal and the heterozygotes are hyperactive. NTE is very sensitive in vitro and in vivo to direct-acting OP delayed neurotoxicants and the related NTE-related esterase (NTE-R) is also inhibited in vivo. KIAA1363 hydrolyzes acetyl monoalkylglycerol ether (AcMAGE) of the platelet-activating factor (PAF) de novo biosynthetic pathway and is a marker of cancer cell invasiveness. It is also a detoxifying enzyme that hydrolyzes chlorpyrifos oxon (CPO) and some other potent insecticide metabolites. Monoacylglycerol lipase and fatty acid amide hydrolase regulate endocannabinoid levels with roles in motility, pain and memory. Inhibition of these enzymes in mice by OPs, such as isopropyl dodecylfluorophosphonate (IDFP), leads to dramatic elevation of brain endocannabinoids and distinct cannabinoid-dependent behavior. Hormone-sensitive lipase that hydrolyzes cholesteryl esters and diacylglycerols is a newly recognized in vivo CPO- and IDFP-target in brain. The OP chemotype can therefore be used in proteomic and metabolomic studies to further elucidate the biological function and toxicological significance of lipases in lipid metabolism. Only the first steps have been taken to achieve appropriate selective action for OP therapeutic agents.  
Keywords: Animals  
Keywords: Organophosphates  
Keywords: Humans  
Keywords: Brain -- drug effects  
Keywords: EC 3.1.1.3  
Keywords: Brain -- metabolism  
Keywords: Lysophospholipids  
Keywords: Lipase  
Keywords: Organophosphates -- pharmacology  
Keywords: 0  
Keywords: Cannabinoid Receptor Modulators -- metabolism  
Keywords: Cannabinoid Receptor Modulators  
Keywords: Endocannabinoids  
Keywords: Phospholipid Ethers  
Keywords: Lysophospholipids -- metabolism  
Keywords: Phospholipid Ethers -- metabolism  
Keywords: Lipase -- metabolism  
Date completed - 2008-12-10  
Date created - 2008-09-08  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 355-364  
ProQuest ID - 69520235  
SuppNotes - Cites: Toxicol Appl Pharmacol. 2007 Oct 1;224(1):98-104[17663017]; Cites: Chem Biol. 2007 Jul;14(7):741-56[17656311]; Cites: Toxicol Appl Pharmacol. 2008 Apr 1;228(1):42-8[18164358]; Cites: Biochem Pharmacol. 1995 Jun 29;50(1):83-90[7605349]; Cites: Annu Rev Physiol. 1995;57:135-50[7778861]; Cites: Nature. 1996 Nov 7;384(6604):83-7[8900284]; Cites: J Biol Chem. 1996 Dec 6;271(49):31426-30[8940153]; Cites: Biochem Pharmacol. 1997 Feb 7;53(3):255-60[9065728]; Cites: J Biol Chem. 1997 Mar 28;272(13):8567-75[9079687]; Cites: J Biol Chem. 1997 Oct 24;272(43):27218-23[9341166]; Cites: Proc Natl Acad Sci U S A. 2000 Jan 18;97(2):787-92[10639158]; Cites: DNA Res. 2000 Feb 28;7(1):65-73[10718198]; Cites: Biochemistry. 2001 Apr 3;40(13):4005-15[11300781]; Cites: Proc Natl Acad Sci U S A. 2001 Jul 31;98(16):9371-6[11470906]; Cites: J Biol Chem. 2002 Feb 15;277(7):4806-15[11717312]; Cites: Proc Natl Acad Sci U S A. 2002 Aug 6;99(16):10819-24[12136125]; Cites: Proc Natl Acad Sci U S A. 2002 Aug 6;99(16):10335-40[12149457]; Cites: Science. 2002 Nov 29;298(5599):1793-6[12459591]; Cites: Nat Genet. 2003 Apr;33(4):477-85[12640454]; Cites: Biochemistry. 2003 Jun 10;42(22):6696-708[12779324]; Cites: Proc Natl Acad Sci U S A. 2003 Jun 24;100(13):7983-7[12805562]; Cites: Arch Biochem Biophys. 2003 Aug 15;416(2):137-46[12893290]; Cites: Science. 1992 Dec 18;258(5090):1946-9[1470919]; Cites: Blood. 2004 May 1;103(9):3562-4[14726390]; Cites: Mol Cell Biol. 2004 Feb;24(4):1667-79[14749382]; Cites: Proc Natl Acad Sci U S A. 2004 Apr 6;101(14):5075-80[15051870]; Cites: Toxicol Appl Pharmacol. 2004 May 1;196(3):319-26[15094302]; Cites: Nat Rev Drug Discov. 2004 Aug;3(8):695-710[15286736]; Cites: J Biol Chem. 2004 Nov 19;279(47):48968-75[15364929]; Cites: Proc Natl Acad Sci U S A. 2005 Apr 26;102(17):6195-200[15840715]; Cites: J Biol Chem. 2005 Jul 22;280(29):26669-79[15908428]; Cites: Annu Rev Biochem. 2005;74:411-32[15952893]; Cites: Chem Biol. 2005 Jun;12(6):649-56[15975510]; Cites: J Clin Pathol. 2005 Aug;58(8):826-32[16049284]; Cites: Biochim Biophys Acta. 2005 Sep 15;1736(2):87-93[16137924]; Cites: Toxicol Lett. 2006 Mar 15;162(1):94-7[16309859]; Cites: Toxicol Appl Pharmacol. 2006 Feb 15;211(1):78-83[16310817]; Cites: Curr Opin Pharmacol. 2006 Apr;6(2):154-61[16495153]; Cites: Nat Genet. 2006 Jul;38(7):752-4[16783378]; Cites: J Lipid Res. 2006 Sep;47(9):1940-9[16799181]; Cites: Chem Rev. 2006 Aug;106(8):3279-301[16895328]; Cites: Int J Biochem Cell Biol. 2007;39(1):124-32[16978909]; Cites: Proc Natl Acad Sci U S A. 2006 Oct 10;103(41):15260-5[17015841]; Cites: Chem Biol. 2006 Oct;13(10):1041-50[17052608]; Cites: Mol Cell Biochem. 2007 Aug;302(1-2):179-85[17385009]; Cites: J Am Chem Soc. 2007 Aug 8;129(31):9594-5[17629278]; Cites: Basic Clin Pharmacol Toxicol. 2007 Nov;101(5):287-93[17910610]  
Last updated - 2013-01-19  
British nursing index edition - Chemico-biological interactions, September 25, 2008, 175(1-3):355-364  
Corporate institution author - Casida, John E; Nomura, Daniel K; Vose, Sarah C; Fujioka, Kazutoshi  
DOI - MEDL-18495101; 18495101; NIHMS72510; PMC2582404; 0009-2797 eng

188. Castillo, L. E.; De la Cruz, E., and Ruepert, C. Ecotoxicology and Pesticides in Tropical Aquatic Ecosystems of Central America. 10309//: 1997; 16, (1): 41-51.   
Rec #: 550  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (CPY), NO REVIEW (CPY)  
Notes: Chemical of Concern: CPY

189. Castillo, M. D. P.; Torstensson, L., and Stenstrom, J. Biobeds for environmental protection from pesticide use - A review. 2008; 56, (15 ): 6206-6219.   
Rec #: 57489  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Biobeds originated in Sweden in response to the need for simple and effective methods to minimize environmental contamination from pesticide use, especially when filling spraying equipment, a typical point source of contamination. The biobed system has attracted attention in several countries, where work is being conducted to adapt it to local conditions and applications. As a consequence, the biobed system has been more or less modified and sometimes renamed, for example, as biomassbed in Italy, biofilter in Belgium, and Phytobac and biobac in France. The effectiveness and simplicity of the biobed also make it suitable for use in developing countries, and different adaptations of the biobed concept now exist in, for instance, Peru, Guatemala, and Ecuador. When the modification of the biobed includes an intention to use it for retention and degradation of pesticides in sprayer washings, the construction has to be adapted to, for example, lined biobeds to ensure that no pesticide leaching will occur. Replacement of some of the original materials in the Swedish biomixture (straw, peat, and soil) can also change the performance of the system, for instance, the amount, activity, and composition of the microbial community that develops. This review presents the state of the art of biobeds and similar systems in Sweden and worldwide and identifies future research needs. Factors affecting the efficiency of biobeds in terms of degradation and retention of pesticides are discussed, with particular emphasis on the microbial processes involved.  
Keywords: WHITE-ROT FUNGUS, SUBSTRATE FERMENTATION SYSTEMS,  
ISI Document Delivery No.: 335DF

190. Catalgol, B. K.; Ozden, S., and Alpertunga, B. Effects of trichlorfon on malondialdehyde and antioxidant system in human erythrocytes. 2007; 21, (8): 1538-1544.   
Rec #: 57499  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorus insecticides may induce oxidative stress leading to generation of free radicals and alteration in antioxidant system. The aim of this study was to examine the potency of trichlorfon, an organophosphate insecticide, to induce oxidative stress response in human erythrocytes in vitro. For this purpose trichlorfon solutions in different concentrations and erythrocyte solutions were incubated at 37 degrees C for 60 min. At the end of the incubation time, malondialdehyde (NIDA), an end product of lipid peroxidation, total glutathione, reduced glutathione (GSH) levels, activities of superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GSH-Px) enzymes were determined by spectrophotometric methods. Trichlorfon increased MDA formation depended on the concentration. On the other hand, decreases in the GSH-Px activity, GSH levels and increases in the total glutathione levels, SOD and CAT activities were seen in the studied concentrations. The present findings indicate that the in vitro toxicity of trichlorfon may be associated with oxidative stress. (C) 2007 Elsevier Ltd. All rights reserved.  
Keywords: erythrocytes, trichlorfon, oxidative stress, malondialdehyde,  
ISI Document Delivery No.: 239ZZ

191. Catano, H. C.; Carranza, E.; Huamani, C., and Hernandez, A. F. Plasma cholinesterase levels and health symptoms in peruvian farm workers exposed to organophosphate pesticides. 2008; 55, (1): 153-159.   
Rec #: 57509  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The purpose of this study was to examine plasma cholinesterase (PChE) changes and the adverse health effects associated with chronic low-dose exposure to organophosphates (OPs) in a Peruvian agricultural population. A cross-sectional study with a clinical interview and blood tests was performed among 213 farm workers from two subtropical valleys in Peru. The control group consisted of 78 nonexposed workers from the same areas. PChE levels from the two exposed subgroups (pesticide applicators and other agricultural jobs) were significantly lower than those of controls (1554 +/- 315 U/l, 1532 +/- 340 U/l, and 1787 +/- 275 U/l, respectively). Fifteen percent of the exposed population reported a past poisoning by pesticides, all of them needing medical evaluation and treatment. They had significantly lower PChE levels as compared to those without this antecedent. Approximately 61% of the exposed workers reported pesticide-related symptoms, but no significant difference was found in their PChE as compared to workers without symptoms. On the other hand, the use of personal protective equipment (PPE) was significantly associated with higher PChE levels and with a lower risk of reporting pesticide-related symptoms, which supports the benefit from using appropriate protective measures. In conclusion, data indicate that farm workers exposed to OPs in developing countries need to be monitored by means of PChE and an examination of their clinical status, which would allow identification of farm workers most at risk from pesticide toxicity. The use of correct PPE is highly recommended.  
Keywords: LONG-TERM EXPOSURE, ACETYLCHOLINESTERASE ACTIVITY, AGRICULTURAL-WORKERS,  
ISI Document Delivery No.: 301CT

192. Cavalcante, Rivelino M; Lima, Danielle M; Fernandes, Gabrielle M; Duavi, Wersangela C, and Cavalcante, Rivelino M. Relation Factor: a New Strategy for Quality Control in the Determination of Pesticides in Environmental Aqueous Matrices. 2012 May 15; 93, 212-218.   
Rec #: 46729  
Keywords: FATE  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: The effects promoted by environmental aqueous matrices on pesticide determinations have been assessed, and for the first time, a simple, low-cost and efficient strategy for the correction of analytical results has been determined. This method can be useful as a parameter of quality control in a quality assurance programs. Evaluation of the matrix effect showed that environmental aqueous matrices, e.g., estuarine water, promote a distinctive and significant effect on the determination of pesticides. The picloram, atrazine and methyl parathion pesticides suffered the smallest effects promoted by the estuarine matrix, whereas chlorpyrifos and cypermethrin suffer a significant effect. For picloram, the matrix effect was a function of its physiochemical properties. However, for atrazine, methyl parathion, chlorpyrifos and cypermethrin, the matrix effect was promoted by environmental matrix components. As strategy for analytical quality control, it has been determined that there are relation factors (RFs) between pesticides and the selected surrogates standards. These RFs are not altered by the complexities and compositions of simple and complex aqueous matrices. Predetermined RFs was applied to the picloram, atrazine and methyl parathion assessment in a real sample from the estuary of the Jaguaribe River, and the results showed that when no quality control was applied, the concentration levels would be underestimated, leading to incorrect results and inaccurate conclusions.  
Keywords: Ceramic Abstracts/World Ceramics Abstracts (WC); Environmental Engineering Abstracts (EN); Engineered Materials Abstracts, Ceramics (EC)  
Date revised - 2012-07-01  
Language of summary - English  
Pages - 212-218  
ProQuest ID - 1022900960  
Last updated - 2012-12-05  
British nursing index edition - Talanta [Talanta]. Vol. 93, pp. 212-218. 15 May 2012.  
Corporate institution author - Cavalcante, Rivelino M; Lima, Danielle M; Fernandes, Gabrielle M; Duavi, Wersangela C  
DOI - 4052947f-c5d7-47c2-8d29csamfg201; 16604770; 0039-9140 English

193. Cedergreen, N.; Sorensen, H., and Svendsen, C. Can the joint effect of ternary mixtures be predicted from binary mixture toxicity results? 2012; 427, 229-237.   
Rec #: 57519  
Keywords: MIXTURE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The joint effect of the majority of chemical mixtures can be predicted using the reference model of Concentration Addition (CA). It becomes a challenge, however, when the mixtures include chemicals that synergise or antagonise the effect of each other. In this study we examine if the deviation from CA of seven ternary mixtures of interacting chemicals can be predicted from knowledge of the binary mixture responses involved. We hypothesise that the strongest interactions will take place in the binary mixtures and that the size of the ternary mixture response can be predicted from knowledge of the binary interactions. The hypotheses were tested using a stepwise modelling approach of incorporating the information held in binary mixtures into a ternary mixture model, and comparing the model predictions with **observed ternary mixture toxicity data derived from studies of interacting chemical mixtures on the floating plant Lemna minor and the bacteria Vibrio fischeri.** The results showed that for both the antagonistic and the synergistic ternary mixtures the ternary model predictions were superior to the conventional CA reference model and provided robust estimations of the size of the experimentally derived ternary mixture toxicity effects. (C) 2012 Elsevier B.V. All rights reserved.  
Keywords: Mixtures toxicity, Modelling, Synergy, Antagony, Risk assessment  
ISI Document Delivery No.: 956TF

194. Ch+ífer-Peric+ís, Consuelo; Balaguer, +üngel ; Maquieira, +üngel, and Puchades, Rosa. Dispersive solid-phase extraction and immunoassay with internal reference calibration using fatty acid-coated inorganic fluorescent nanoparticles. 2013 Jan 1-; 432, (1): 31-37.   
Rec #: 4070  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Dispersive solid-phase extraction (dSPE) using fatty acid-coated Eu2O3 nanoparticles (NPs) was developed, and a direct immunoassay was carried out employing these NPs as support. Secondary antibodies labeled with fluorophore groups were used as reporters, and the intrinsic optical properties of the Eu2O3 NPs were employed as an internal calibration of the detection system. The methodology was optimized for both dSPEÇöNP amount, sample volume, extraction time, ionic strength, and pHÇöand immunoassayÇôimmunoreagent concentrations, ionic strength, and incubation time. As proof of concept, the methodology was applied to the bovine serum albumin (BSA)/anti-BSA system, and precision of the method was between 5% and 17% with an IC50 of 100 nM. Then, water samples with high saline content (sea water) were assayed to observe the matrix effect, and average recoveries (n = 3) between 78% and 108% were obtained, demonstrating the reliability of the developed analytical method. Finally, the simultaneous dSPEÇôimmunoassay methodology was applied to other compounds with very different chemical characteristics such as an oligonucleotide, the antibiotic sulfamerazine, and the pesticide chlorpyriphos. Although the IC50 values for sulfamerazine were approximately 2400 nM, satisfactory standard curves were obtained. However, poor reproducibility and sensitivity results were obtained for the oligonucleotide and chlorpyriphos preliminary assays. Nanoparticle/ Immunoassay/ Dispersive SPE/ Fluorescence/ Internal reference/ BSA

195. Chai, L K; Mohd-Tahir, N; Hansen, S; Hansen, Hcb, and Chai, L K. Dissipation and Leaching of Acephate, Chlorpyrifos, and Their Main Metabolites in Field Soils of Malaysia. 2009; 38, (3): 1160-1169.   
Rec #: 41639  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Preventive treatment with insecticides at high dosing rates before planting of a new crop- soil drenching- is a common practice in some tropical intensive cropping systems, which may increase the risk of leaching, soil functioning, and pesticide uptake in the next crop. The degradation rates and migration of acephate and chlorpyrifos and their primary metabolites, methamidophos and 3,5,6-trichloropyridinol (TCP), have been studied in clayey red yellow podzolic (Typic Paleudults), alluvial (Typic Udorthents), and red yellow podzolic soils (Typic Kandiudults) of Malaysia under field conditions. The initial concentrations of acephate and chlorpyrifos in topsoils were found to strongly depend on solar radiation. Both pesticides and their metabolites were detected in subsoils at the deepest sampling depth monitored (50 cm) and with maximum concentrations up to 2.3 mg kg super(-1) at soil depths of 10 to 20 cm. Extraordinary high dissipation rates for weakly sorbed acephate was in part attributed to preferential flow which was activated due to the high moisture content of the soils, high precipitation and the presence of conducting macropores running from below the A horizons to at least 1 m, as seen from a dye tracer experiment. Transport of chlorpyrifos and TCP which both sorb strongly to soil organic matter was attributed to macropore transport with soil particles. The half-lives for acephate in topsoils were 0.4 to 2.6 d while substantially longer half-lives of between 12.6 and 19.8 d were observed for chlorpyrifos. The transport through preferential flow of strongly sorbed pesticides is of concern in the tropics.  
Keywords: Degradation  
Keywords: P 5000:LAND POLLUTION  
Keywords: SW 3030:Effects of pollution  
Keywords: Metabolites  
Keywords: intensive farming  
Keywords: Particulates  
Keywords: Solar radiation  
Keywords: Crops  
Keywords: Soil  
Keywords: Tracers  
Keywords: Insecticides  
Keywords: Agricultural Chemicals  
Keywords: Malaysia  
Keywords: R2 23050:Environment  
Keywords: migration  
Keywords: Leaching  
Keywords: Soil Contamination  
Keywords: Organic matter  
Keywords: planting  
Keywords: Soil Organic Matter  
Keywords: ENA 06:Food & Drugs  
Keywords: Chlorpyrifos  
Keywords: AQ 00007:Industrial Effluents  
Keywords: Tropical environments  
Keywords: Pesticides  
Keywords: subsoils  
Keywords: Macropores  
Keywords: Preferential Flow  
Keywords: Topsoil  
Keywords: Risk Abstracts; Pollution Abstracts; Environment Abstracts; Water Resources Abstracts; Aqualine Abstracts  
Date revised - 2009-07-01  
Language of summary - English  
Location - Malaysia  
Pages - 1160-1169  
ProQuest ID - 20757790  
SubjectsTermNotLitGenreText - migration; Leaching; Degradation; Organic matter; planting; Metabolites; intensive farming; Particulates; Solar radiation; Crops; Soil; Chlorpyrifos; Tracers; Insecticides; Pesticides; Tropical environments; subsoils; Agricultural Chemicals; Soil Contamination; Macropores; Preferential Flow; Soil Organic Matter; Topsoil; Malaysia  
Last updated - 2012-03-29  
British nursing index edition - Journal of Environmental Quality [J. Environ. Qual.]. Vol. 38, no. 3, pp. 1160-1169. 2009.  
Corporate institution author - Chai, L K; Mohd-Tahir, N; Hansen, S; Hansen, HCB  
DOI - MD-0010064958; 10188677; 0047-2425; 1537-2537 English

196. Chai, L. K. ; Wong, M. H.; Mohd-Tahir, N., and Hansen, H. C. B. Degradation and mineralization kinetics of acephate in humid tropic soils of Malaysia. 2010; 79, (4): 434-440.   
Rec #: 57599  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: **Acephate** is poorly sorbed to soil, thus the risk of leaching to the aquatic environment is high if it is not quickly degraded. The effect of soil moisture, temperature, microbial activity and application rate on acephate degradation has been studied in three Malaysian soils to examine and identify critical variables determining its degradation and mineralization kinetics. First-order kinetics could be used to describe degradation in all cases (r(2) > 0.91). Acephate degraded faster in air-dry (t(1/2), 9-11 d) and field capacity (t(1/2) 10-16 d) soils than in the wet soils (t(1/2) 32-77 d). The activation energy of degradation was in the range 17-28 kJ mol(-1) and significantly higher for the soil with higher pH and lower clay and iron oxide contents. Soil sterilization caused a 3- to 10-fold decrease in degradation rates compared to non-sterile soils (t(1/2) 53-116 d) demonstrating that acephate degradation is mainly governed by microbial processes. At 5-fold increase in application rates (25 mu g g(-1)), half-life increased slightly (t(1/2) 13-19 d) or was unaffected. Half-life from acephate mineralization was similar to those from degradation but much longer at the 5-fold increase in acephate application rates (t(1/2) 41-96 d) demonstrating that degradation of metabolites is rate limiting. Thus, application of acephate should be restricted or avoided during wet seasons with heavy rainfall and flooded soil as in paddy cultivation. Sandy soils with low microbial activity are more prone to acephate leaching than clayey soils rich in humic matter. (C) 2010 Elsevier Ltd. All rights reserved.  
Keywords: Half-lives, Pesticide, Carbon 14, Soil microbes, First order kinetic  
ISI Document Delivery No.: 588YM

197. Chai, Lian-Kuet; Mohd-Tahir, Norhayati; Hansen, Hans Christian Bruun, and Chai, Lian-Kuet. Determination of Chlorpyrifos and Acephate in Tropical Soils and Application in Dissipation Studies. 2008 Jul; 88, (8): 549-560.   
Rec #: 42089  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A rapid and accurate method for the extraction and determination of the two organophosphorus insecticides, chlorpyrifos and acephate in top- and subsoil materials of three tropical clayey soils from Sarawak has been developed. Soil samples were extracted with ethyl acetate and the pesticides were determined by GC-FPD. High recoveries of 76-102% and 76-100% were obtained for acephate and chlorpyrifos respectively, at fortification levels of 0.0,0.1 and 1 mg kg-1 with standard deviations below 9.0%. The addition of water prior to the extraction was important for obtaining high and reproducible recoveries. The method did not require clean-up of the extracts prior to GC analysis and could be detected down to 0.01 mg kg-1. A field study was conducted using the modified method to measure the degradation kinetics and migration of acephate and chlorpyrifos in one of the soils over a period of 84 days. The degradation of acephate and chlorpyrifos were rapid with half-lives of 3.3 and 8.7 days, respectively. Both pesticides were detected in subsoils 2 h after application at the deepest (50 cm) soil layers examined and at concentrations up to 5.42 mg kg-1. Subsoil concentrations of acephate were higher than for chlorpyrifos, and subsoil concentrations of acephate peaked after it had started to degrade in the top soil. The subsoil concentrations of the pesticides were attributed to transport with soil particles (chlorpyrifos) and via solution (acephate) through pores and cracks present in the soil profiles. The study demonstrates the high mobility of even strongly retained and fast degrading pesticides under tropical humid conditions.  
Keywords: migration  
Keywords: Organophosphorus compounds  
Keywords: Degradation  
Keywords: Mobility  
Keywords: ENA 09:Land Use & Planning  
Keywords: P 5000:LAND POLLUTION  
Keywords: Particulates  
Keywords: Chlorpyrifos  
Keywords: Soil  
Keywords: Kinetics  
Keywords: Pesticides  
Keywords: Tropical environments  
Keywords: Pollution Abstracts; Environment Abstracts  
Keywords: Borneo, Sarawak  
Keywords: subsoils  
Date revised - 2009-08-01  
Language of summary - English  
Location - Borneo, Sarawak  
Pages - 549-560  
ProQuest ID - 20769935  
SubjectsTermNotLitGenreText - Soil; Chlorpyrifos; migration; Organophosphorus compounds; Mobility; Degradation; Kinetics; Tropical environments; Pesticides; subsoils; Particulates; Borneo, Sarawak  
Last updated - 2011-12-14  
British nursing index edition - International Journal of Environmental and Analytical Chemistry [Int. J. Environ. Anal. Chem.]. Vol. 88, no. 8, pp. 549-560. Jul 2008.  
Corporate institution author - Chai, Lian-Kuet; Mohd-Tahir, Norhayati  
DOI - MD-0010233434; 10310854; 0306-7319 English

198. Chandler, K. J. and Tucker, G. R. suSCon (R) Maxi and control of Childers, negatoria and southern one-year canegrubs in sugarcane. 2012; 114, (1363): 504-511.   
Rec #: 57649  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This paper summarises efficacy data collected to satisfy requirements to register the granular controlled-release (CR) insecticide suSCon(1)(R) Maxi (50 g imidacloprid/kg) to control damage by Childers canegrub (Antritrogus parvulus), negatoria canegrub (Lepidiota negatoria) and southern one-year canegrub (Antitrogus consanguineus) to the root-mass of sugarcane crops in southern Queensland. The paper further illustrates collaborative research and development (R&D) to provide products suited to the sugarcane industry's needs, following a similar process to register suSCon Maxi for control of greyback canegrub. Populations of all three species were markedly reduced in first and second ratoon crops by treatment with 10 kg/ha of product applied into the planting furrow either at-planting or at drill fill-in. Cane yield increased in first and second ratoon crops, following these population reductions. These data support submissions to register suSCon Maxi for control of all three species up to second ratoon. Additional data is probably sufficient to support registration to control Childers canegrub for up to four crop-years (3rd ratoon). suSCon Maxi was equally as effective as other registered CR products against negatoria and southern one-year canegrubs, and more effective against Childers canegrub.  
Keywords: canegrub, control, controlled-release, imidacloprid, insecticide,  
ISI Document Delivery No.: 978VT

199. Chang, C. S.; Yen, J. H.; Chen, W. C., and Wang, Y. S. Soil dissipation of juvenile hormone analog insecticide pyriproxyfen and its effect on the bacterial community. 2012; 47, (1): 13-21.   
Rec #: 57679  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This investigation was undertaken to examine the dissipation rate of pyriproxyfen as well as the change in the soil bacterial community. Residues of pyriproxyfen were measured using high performance liquid chromatography (HPLC) and the changes in bacterial community were determined by comparing the 16S rDNA bands on patterns by denaturing gradient gel electrophoresis (DGGE). The dissipation of pyriproxyfen was affected by both the concentration applied and incubation temperature. Lower concentrations (1 mg Kg(-1)) and higher incubation temperatures (30 and 40 degrees C) showed more rapid dissipation rates. The population of microbial community decreased rapidly after incubation with 10 mg Kg(-1) of pyriproxyfen for 91 days, indicating the toxicity of pyriproxyfen toward bacterial communities in a closed soil ecosystem. **Lower concentrations of pyriproxyfen showed less toxicity toward the microbial community.** From cluster analysis, the structure of the bacterial community showed roughly a 60 % similarity throughout the experiment period in the control experiment, indicating the stability within soil microbiota without chemical agitation. However, the similarity was lower than 50 % both in the one and 10 mg Kg(-1) of insecticide pyriproxyfen spiked experiment, indicating the soil bacterial community changed after the insecticide pyriproxyfen was applied.  
Keywords: Juvenile hormone analog, pyriproxyfen, biodegradation, polymerase chain  
ISI Document Delivery No.: 916AD

200. Chatzicharisis, Ioannis; Thomidis, Thomas; Tsipouridis, Constantinos; Mourkidou-Papadopoulou, Efthimia, and Vryzas, Zisis. Residues of Six Pesticides in Fresh Peach--Nectarine Fruits After Preharvest Treatment. 2012 Sep; 40, (4): 311-317.   
Rec #: 42589  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: One of the key features of the new cultural systems is the control of harmful agents with environment-friendly methods. In this study, the residue levels of chlorothalonil, iprodione, bupirimate, pirimicarb, chlorpyrifos and fenoxycarb in different peach--nectarine cultivars were investigated. It was found that, with the exception of chlorpyrifos, the residue levels of all pesticides were lower than the Maximum Residues Limits (MRLs) in all peach--nectarine cultivars used. The detected levels of chlorpyrifos were higher than the MRLs in the cultivar 'Maria Bianca' 7 days after application, but in cv. 'Legory Hkcb' dropped to very low levels 27 days after application. The degradation over time of the above pesticides in fruits was investigated in the peach cv. 'Andross'. The detected residue levels of bupirimate, iprodione, fenoxycarb, chlorpyrifos and pirimicarb in this peach cultivar were much lower than those recommended by the European Union (MRLs) 33, 22, 22, 28, and 63 days, respectively, after application, whereas the residue levels of chlorothalonil were below the limit of detection by the analytical method used. All pesticides showed a reduction over time. When examining the levels of residues of pirimicarb and chlorpyrifos in peaches (cv. 'Andross') sampled from different parts of the tree canopy, no significant difference was found between samples collected from the top and the middle parts of the canopy; however, residues of pirimicarb were significantly higher in samples collected at the bottom of the canopy. Overall, the pesticide regime gave residue levels much lower than those of MRLs, in all peach--nectarine cultivars. This use of chemicals is in accordance with features of the new cultural systems to produce fruits with no or minimal pesticide residues, in contrast to the conventional system in which pesticide residues are not considered. Attention should however be paid to chlorpyrifos which should be applied at least 27 days before harvest. Factors related to the cultivars and the position of fruits in the tree canopy should be considered when sampling fruits for pesticide residues analysis.[PUBLICATION ABSTRACT]  
Keywords: Agriculture--Crop Production And Soil  
Copyright - Springer Science + Business Media B.V. 2012  
Language of summary - English  
Pages - 311-317  
ProQuest ID - 1037313224  
Last updated - 2012-11-20  
Place of publication - Dordrecht  
Corporate institution author - Chatzicharisis, Ioannis; Thomidis, Thomas; Tsipouridis, Constantinos; Mourkidou-papadopoulou, Efthimia; Vryzas, Zisis  
DOI - 2748892001; 71461062; 108342; PYOA; SPVLPYOA12600404231  
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Zettler, J. L., Arthur, F. H. 2000 "Chemical control of stored product insects with fumigants and residual treatments." Crop Protection 19 8/10 577-582 English

201. Chauhan, N. ; Narang, J., and Pundir, C. S. Immobilization of rat brain acetylcholinesterase on porous gold-nanoparticle-CaCO(3) hybrid material modified Au electrode for detection of organophosphorous insecticides. 2011; 49, (5): 923-929.   
Rec #: 57709  
Keywords: METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: **An acetylcholinesterase (AChE) purified from rat brain was immobilized onto gold nanoparticles (AuNPs) assembled on the surface of porous calcium carbonate (CaCO(3)) microsphere.** The resulting AChE-AuNPs-CaCO(3) bioconjugate was mounted on the surface of Au electrode with the help of silica sol-gel matrix to prepare the working electrode. This electrode was connected to Ag/AgCl (3 M/saturated KCl) as standard and Pt wire as an auxiliary electrode through a potentiostat to construct an organophosphorus (OP) biosensor. The biosensor was based on inhibition of AChE by OP compounds/insecticides. The biosensor showed optimum response at pH 7.0, 30 degrees C, when polarized at +0.2 V. Two OP compounds, malathion and chlorpyrifos could be detected in the range of 0.1-100 nM and 0.1-70 nM, respectively at 2.0-3.0% inhibition level of AChE. The sensor was reactivated by immersing it in 0.1 mM 2-pyridine aldoxime for 10 min. The detection limit of the sensor was 0.1 nM for both malathion and chlorpyrifos. The biosensor exhibited good reusability (50 times without considerable loss) and storage stability (50% within 60 days, when stored at 4 degrees C). (C) 2011 Elsevier B.V. All rights reserved.  
Keywords: Acetylcholinesterase, Rat brain, CaCO(3) nanoparticles, AuNPs,  
ISI Document Delivery No.: 846XT

202. ---. Immobilization of Rat Brain Acetylcholinesterase on Porous Gold-Nanoparticle-Caco&#8323; Hybrid Material Modified Au Electrode for Detection of Organophosphorous Insecticides.   
Rec #: 74979  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: An acetylcholinesterase (AChE) purified from rat brain was immobilized onto gold nanoparticles (AuNPs) assembled on the surface of porous calcium carbonate (CaCO(3)) microsphere. The resulting AChE-AuNPs-CaCO(3) bioconjugate was mounted on the surface of Au electrode with the help of silica sol-gel matrix to prepare the working electrode. This electrode was connected to Ag/AgCl (3M/saturated KCl) as standard and Pt wire as an auxiliary electrode through a potentiostat to construct an organophosphorus (OP) biosensor. The biosensor was based on inhibition of AChE by OP compounds/insecticides. The biosensor showed optimum response at pH 7.0, 30&deg;C, when polarized at +0.2V. Two OP compounds, malathion and chlorpyrifos could be detected in the range of 0.1-100 nM and 0.1-70 nM, respectively at 2.0-3.0% inhibition level of AChE. The sensor was reactivated by immersing it in 0.1 mM 2-pyridine aldoxime for 10 min. The detection limit of the sensor was 0.1 nM for both malathion and chlorpyrifos. The biosensor exhibited good reusability (50 times without considerable loss) and storage stability (50% within 60 days, when stored at 4&deg;C).  
MESH HEADINGS: Acetylcholinesterase/chemistry/isolation &amp  
MESH HEADINGS: purification/\*metabolism  
MESH HEADINGS: Animals  
MESH HEADINGS: Biosensing Techniques/\*methods  
MESH HEADINGS: Brain/\*enzymology  
MESH HEADINGS: Calcium Carbonate/chemistry  
MESH HEADINGS: Chlorpyrifos/analysis  
MESH HEADINGS: Electrochemistry/methods  
MESH HEADINGS: Electrodes  
MESH HEADINGS: Enzymes, Immobilized/chemistry/isolation &amp  
MESH HEADINGS: purification/\*metabolism  
MESH HEADINGS: Equipment Reuse  
MESH HEADINGS: GPI-Linked Proteins/chemistry/isolation &amp  
MESH HEADINGS: purification/metabolism  
MESH HEADINGS: Gold/chemistry  
MESH HEADINGS: Hydrogen-Ion Concentration  
MESH HEADINGS: Insecticides/\*analysis  
MESH HEADINGS: Limit of Detection  
MESH HEADINGS: Malathion/analysis  
MESH HEADINGS: Nanoparticles/chemistry  
MESH HEADINGS: Organophosphorus Compounds/\*analysis  
MESH HEADINGS: Porosity  
MESH HEADINGS: Potentiometry/\*methods  
MESH HEADINGS: Pralidoxime Compounds/chemistry  
MESH HEADINGS: Rats eng

203. Chauhan, Nidhi; Narang, Jagriti; Pundir, C S, and Chauhan, Nidhi. Immobilization of Rat Brain Acetylcholinesterase on Zns and Poly(Indole-5-Carboxylic Acid) Modified Au Electrode for Detection of Organophosphorus Insecticides. 2011 Nov 15; 29, (1): 82-88.   
Rec #: 43029  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: A novel, highly sensitive amperometric biosensor for detection of organophosphorus (OP) compounds has been constructed, **based on rat brain acetylcholinesterase (AChE) immobilized** onto nanocomposite of ZnS-nanoparticles (ZnSNPs) and poly(indole-5-carboxylic acid) electrodeposited on Au electrode. In the presence of acetylthiocholine chloride (ATCl) as a substrate, ZnSNPs promoted electron transfer reactions at a lower potential and catalyzed electrochemical oxidation of enzymatically formed thiocholine, thus increasing detection sensitivity. Under optimum conditions (phosphate buffer, pH 7.5 and 30 degree C), the inhibition of AChE by malathion and chlorpyrifos was proportional to their concentrations in the range, 0.1-50nM and 1.5-40nM, respectively. The biosensor determined malathion and chlorpyrifos in spiked tap water samples with a acceptable accuracy (95-100%). The enzyme electrode had long-storage stability (50% retention of initial activity within 2months, when stored at 4 degree C).  
Keywords: Acetylcholinesterase  
Keywords: Brain  
Keywords: Enzymes  
Keywords: Chloride  
Keywords: Electron transfer  
Keywords: CSA Neurosciences Abstracts; Biotechnology and Bioengineering Abstracts  
Keywords: Malathion  
Keywords: N3 11145:Methodology  
Keywords: Chlorpyrifos  
Keywords: Biosensors  
Keywords: Insecticides  
Keywords: Phosphate  
Keywords: Electrodes  
Keywords: Oxidation  
Keywords: W 30955:Biosensors  
Keywords: pH effects  
Keywords: Immobilization  
Date revised - 2011-11-01  
Language of summary - English  
Pages - 82-88  
ProQuest ID - 902372043  
SubjectsTermNotLitGenreText - Acetylcholinesterase; Brain; Enzymes; Chloride; Electron transfer; Malathion; Biosensors; Chlorpyrifos; Insecticides; Phosphate; Oxidation; Electrodes; pH effects; Immobilization  
Last updated - 2012-08-10  
British nursing index edition - Biosensors and Bioelectronics [Biosensors Bioelectron.]. Vol. 29, no. 1, pp. 82-88. 15 Nov 2011.  
Corporate institution author - Chauhan, Nidhi; Narang, Jagriti; Pundir, C S  
DOI - 53941068-f065-4a3c-a199csamfg201; 15763427; 0956-5663 English

204. Chauhan, Nidhi; Pundir, Chandra Shekhar, and Chauhan, Nidhi. An Amperometric Biosensor Based on Acetylcholinesterase Immobilized Onto Iron Oxide Nanoparticles/Multi-Walled Carbon Nanotubes Modified Gold Electrode for Measurement of Organophosphorus Insecticides. 2011 Sep 2; 701, (1): 66-74.   
Rec #: 43159  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An acetylcholinesterase (AChE) purified from maize seedlings was immobilized covalently onto iron oxide nanoparticles (Fe sub(3O) sub(4)NP) and carboxylated multi walled carbon nanotubes (c-MWCNT) modified Au electrode. An organophosphorus (OP) biosensor was fabricated using this AChE/Fe sub(3O) sub(4)/c-MWCNT/Au electrode as a working electrode, Ag/AgCl as standard and Pt wire as an auxiliary electrode connected through a potentiostat. The biosensor was based on inhibition of AChE by OP compounds/insecticides. The properties of nanoparticles modified electrodes were studied by scanning electron microscopy (SEM), Fourier transform infrared (FTIR), cyclic voltammograms (CVs) and electrochemical impedance spectroscopy (EIS). The synergistic action of Fe sub(3O) sub(4)NP and c-MWCNT showed excellent electrocatalytic activity at low potential (+0.4 V). The optimum working conditions for the sensor were pH 7.5, 35 degree C, 600 mu M substrate concentration and 10 min for inhibition by pesticide. Under optimum conditions, the inhibition rates of OP pesticides were proportional to their concentrations in the range of 0.1-40 nM, 0.1-50 nM, 1-50 nM and 10-100 nM for malathion, chlorpyrifos, monocrotophos and endosulfan respectively. The detection limits were 0.1 nM for malathion and chlorpyrifos, 1 nM for monocrotophos and 10 nM for endosulfan. The biosensor exhibited good sensitivity (0.475 mA mu M super(-1), reusability (more than 50 times) and stability (2 months). The sensor was suitable for trace detection of OP pesticide residues in milk and water.)  
Keywords: iron oxides  
Keywords: Sensors  
Keywords: Pesticide residues  
Keywords: Acetylcholinesterase  
Keywords: ENA 09:Land Use & Planning  
Keywords: monocrotophos  
Keywords: Spectroscopy  
Keywords: Malathion  
Keywords: Biosensors  
Keywords: Carbon  
Keywords: Insecticides  
Keywords: Zea mays  
Keywords: Biotechnology and Bioengineering Abstracts; Environment Abstracts  
Keywords: W 30955:Biosensors  
Keywords: Gold  
Keywords: pH effects  
Keywords: Milk  
Keywords: Endosulfan  
Keywords: Chlorpyrifos  
Keywords: Pesticides  
Keywords: Electrodes  
Keywords: nanotubes  
Keywords: Seedlings  
Keywords: Iron  
Keywords: nanoparticles  
Keywords: nanotechnology  
Date revised - 2012-01-01  
Language of summary - English  
Pages - 66-74  
ProQuest ID - 907952240  
SubjectsTermNotLitGenreText - Milk; iron oxides; Pesticide residues; Acetylcholinesterase; monocrotophos; Spectroscopy; Malathion; Endosulfan; Biosensors; Chlorpyrifos; Carbon; Insecticides; Electrodes; Pesticides; Gold; nanotubes; Seedlings; pH effects; nanoparticles; Sensors; Iron; nanotechnology; Zea mays  
Last updated - 2012-09-10  
British nursing index edition - Analytica Chimica Acta [Anal. Chim. Acta]. Vol. 701, no. 1, pp. 66-74. 2 Sep 2011.  
Corporate institution author - Chauhan, Nidhi; Pundir, Chandra Shekhar  
DOI - 46479967-2ac4-461a-852bcsaobj201; 15372226; 0003-2670 English

205. Chen, Chen; Li, Yun; Chen, Mingxue; Chen, Zhijun, and Qian, Yongzhong. Organophosphorus pesticide residues in milled rice (Oryza sativa) on the Chinese market and dietary risk assessment. 2009; 26, (3): 340-347.   
Rec #: 52499  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The present study investigates the occurrence of acetylcholinesterase (AChE)-inhibiting organophosphorus (OP) pesticide residues in milled rice samples obtained form local markets in China during the period 2004-2006 and estimates their cumulative exposure. Concentrations of OP pesticides were determined by gas chromatography with flame photometric detection (GC-FPD). The results showed that 9.3% of the samples contained detectable residues of at least one of the seven target OP pesticides (chlorpyrifos, dichlorvos, omethoate, methamidophos, parathion-methyl, parathion and triazophos) mainly used for agriculture in China, with concentrations ranging 0.011-1.756 mg kg-1. Rice consumption data was obtained from an individual food consumption survey. Relative potency factors (RPFs) for each pesticide were calculated with methamidophos as the index compound (IC), using 1- or 2-year chronic non-observed adverse effect levels (NOAEL) for AChE inhibition, mostly in rat brain, obtained from international evaluations of pesticides. Exposure to AChE-inhibiting pesticides for the population above 7 years old at P99.9 represented 52-94.5% of the acceptable daily intake (ADI) expressed as methamidophos. Estimated exposure for children aged 2-4 and 4-7 years at P99.9 were 119 and 104.3% of the ADI level, respectively. This study suggests that a yearly monitoring program for OP pesticide residues and strict implementation of the national safety standard for milled rice is necessary.  
Keywords: Internet resource  
Includes references 1022826152

206. Chen, Chen; Qian, Yongzhong; Liu, Xianjin; Tao, Chuanjiang; Liang, Ying, and Li, Yun. Risk Assessment of Chlorpyrifos on Rice and Cabbage in China. 2012 Feb; 62, (1): 125-130.   
Rec #: 39069  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos is a widely used organophosphorus insecticide in agricultural pest control. To understand the residue behavior of chlorpyrifos and to evaluate the dietary risk of chlorpyrifos residue in food in China, a number of residue studies were conducted on rice and cabbage. The supervised trial median residues (STMRs) for rice and cabbage were less than 0.010 and 0.227 mg kgâ’1, respectively. Only 7.4% and 13.3% of acceptable daily intake (ADI) (0-0.01 mg kgâ’1 bw) of chlorpyrifos is occupied by dietary daily intake to the Chinese adult and children, respectively, due to the consumption of rice and cabbage. These results on risk assessment were consistent with that of JMPR. Incorporation of market survey residue data gave a 5-fold reduction in the estimated exposures to chlorpyrifos. Concerning the acute exposure, the national estimated short-term intake (NESTI) represents 0.077% and 10.6% for rice and cabbage, respectively, of the acute reference dose (ARfD) (0-0.1 mg kgâ’1 bw). The application of chlorpyrifos at the recommended dose on rice and cabbage is unlikely to pose any public health issues if it is applied according to the good agricultural practices (GAPs) established by each country. Copyright Â© 2011 Elsevier Inc. All rights reserved.  
Keywords: 2921-88-2  
Keywords: Animals  
Keywords: Humans  
Keywords: Environmental Exposure -- analysis  
Keywords: Child  
Keywords: Pesticide Residues -- toxicity  
Keywords: Risk Assessment  
Keywords: Chlorpyrifos -- analysis  
Keywords: Insecticides  
Keywords: Cholinesterase Inhibitors -- toxicity  
Keywords: Cholinesterase Inhibitors -- analysis  
Keywords: Adult  
Keywords: Environmental Exposure -- adverse effects  
Keywords: China  
Keywords: Insecticides -- toxicity  
Keywords: Food Contamination -- analysis  
Keywords: Pesticide Residues  
Keywords: Oryza sativa  
Keywords: Insecticides -- analysis  
Keywords: Brassica  
Keywords: Chlorpyrifos  
Keywords: Cholinesterase Inhibitors  
Keywords: 0  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Pesticide Residues -- analysis  
Date completed - 2012-05-08  
Date created - 2012-01-27  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 125-130  
ProQuest ID - 918575960  
Last updated - 2013-01-19  
British nursing index edition - Regulatory toxicology and pharmacology : RTP, February 2012, 62(1):125-130  
Corporate institution author - Chen, Chen; Qian, Yongzhong; Liu, Xianjin; Tao, Chuanjiang; Liang, Ying; Li, Yun  
DOI - MEDL-22210174; 22210174; 1096-0295 eng

207. Chen, Fang; Zeng, Lingqin; Zhang, Yuanyuan; Liao, Xiaojun ; Ge, Yiqiang; Hu, Xiaosong, and Jiang, Lianzhou. Degradation behaviour of methamidophos and chlorpyrifos in apple juice treated with pulsed electric fields. 2009 Feb 15-; 112, (4): 956-961.   
Rec #: 210  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Apple juice (13 -\_Brix) spiked with methamidophos and chlorpyrifos (2Çô3 mg/l of each compound) was treated by pulsed electric fields (PEF), and pesticide residues were quantified by gas chromatography with flame photometric detection (GC-FPD). Results showed that electric field strength (8Çô20 kV/cm) and pulse number (6Çô26 pulses) have significant effects on the degradation of methamidophos and chlorpyrifos. PEF treatment is effective for the degradation of methamidophos and chlorpyrifos residues in apple juice, and chlorpyrifos is much more labile to PEF than methamidophos. An increase in either pulse number or electric field strength could speed the degradation of methamidophos and chlorpyrifos, and the kinetics equations and related parameters quantitatively characterized the degradation behavior of the pesticides. The exponential model better fits the experimental data for all treatments than the linear model. Pulsed electric field (PEF)/ Methamidophos/ Chlorpyrifos/ Degradation/ Apple juice

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Rec #: 51139  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Biol Chem. 2005 Aug 5;280(31):28230-40 (medline /15946948)  
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COMMENTS: Cites: J Biol Chem. 2002 Nov 29;277(48):46632-8 (medline /12351628)  
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ABSTRACT: Previous studies have demonstrated that treating cultured cells with cisplatin (CDDP) up-regulated the expression of glutathione (GSH) and its de novo rate-limiting enzyme glutamate-cysteine ligase (GCL), which consists of a catalytic (GCLC) and a modifier (GCLM) subunit. It has also been shown that many CDDP-resistant cell lines exhibit high levels of GCLC/GCLM and GSH. Because the GSH system is the major intracellular regulator of redox conditions that serve as an important detoxification cytoprotector, these results have been taken into consideration that elevated levels of GCL/GSH are responsible for the CDDP resistance. In contrast to this context, we demonstrated here that overexpression of GSH by transfection with an expression plasmid containing the GCLC cDNA conferred sensitization to CDDP through up-regulation of human copper transporter (hCtr) 1, which is also a transporter for CDDP. Depleting GSH levels in these transfected cells reversed CDDP sensitivity with concomitant reduction of hCtr1 expression. Although rates of copper transport were also up-regulated in the transfected cells, these cells exhibited biochemical signature of copper deficiency, suggesting that GSH functions as an intracellular copper-chelator and that overexpression of GSH can alter copper metabolism. More importantly, our results reveal a new role of GSH in the regulation of CDDP sensitivity. Overproduction of GSH depletes the bioavailable copper pool, leading to up-regulation of hCtr1 and sensitization of CDDP transport and cell killing. These findings also have important implications in that modulation of the intracellular copper pool may be a novel strategy for improving chemotherapeutic efficacy of platinum-based antitumor agents.  
MESH HEADINGS: Biological Transport/drug effects  
MESH HEADINGS: Buthionine Sulfoximine/pharmacology  
MESH HEADINGS: Catalytic Domain  
MESH HEADINGS: Cation Transport Proteins/\*genetics/metabolism  
MESH HEADINGS: Cell Line, Tumor  
MESH HEADINGS: Cisplatin/metabolism/\*toxicity  
MESH HEADINGS: Copper/metabolism/pharmacology  
MESH HEADINGS: Down-Regulation/drug effects  
MESH HEADINGS: Drug Resistance, Neoplasm/drug effects  
MESH HEADINGS: Drug Screening Assays, Antitumor  
MESH HEADINGS: Fluorescent Antibody Technique  
MESH HEADINGS: Gene Expression Regulation, Neoplastic/drug effects  
MESH HEADINGS: Glutamate-Cysteine Ligase/metabolism  
MESH HEADINGS: Glutathione/\*metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Models, Biological  
MESH HEADINGS: RNA, Messenger/genetics/metabolism  
MESH HEADINGS: RNA, Small Interfering/metabolism  
MESH HEADINGS: Transfection  
MESH HEADINGS: Up-Regulation/\*drug effects eng

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Rec #: 40619  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos (CPF) is moderately persistent in soils. In our study, microcalorimetry was introduced for the first time to explore the acute toxic effect of CPF on a Pseudomonas strain in sterilized soil. Firstly, it was determined by microcalorimetry that P. putida failed to degrade CPF. Then the acute toxicity of increasing concentrations of CPF to P. putida was determined by its temporal effects on metabolism and counts of colony forming units. Results revealed that the increase of CPF concentration could induce a decrease of the growth rate constant (k) and the total thermal effect (Q sub(T)), representing an inhibiting action on P. putida. In addition, the colony forming units (CFU) for P. putida were counted. Results showed that the number of P. putida decreased with increasing CPF dose after 18h of incubation in sterilized soil. Interestingly, the trend of the number of CFU was similar to the growth rate constant k, whereas the trend became irregular after 36h of incubation. This indicated that P. putida resisted and also expresses high metabolic activity during the exponential growth phase of 18h; thereafter the microorganisms showed a certain adaptation, even declining in number and activity.  
Keywords: acute toxicity  
Keywords: Incubation  
Keywords: J 02320:Cell Biology  
Keywords: Pseudomonas  
Keywords: Acute toxicity  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Strain  
Keywords: adaptability  
Keywords: Environmental Studies  
Keywords: Soil  
Keywords: Colonies  
Keywords: Soil Environment  
Keywords: Pseudomonas putida  
Keywords: A 01400:Soil Microbes  
Keywords: X 24330:Agrochemicals  
Keywords: Growth rate  
Keywords: Adaptations  
Keywords: Microbiology Abstracts B: Bacteriology; Microbiology Abstracts A: Industrial & Applied Microbiology; Environment Abstracts; Pollution Abstracts; Aqualine Abstracts; Toxicology Abstracts  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Growth Rates  
Keywords: Toxicity  
Keywords: Chlorpyrifos  
Keywords: Acute Toxicity  
Keywords: Colony-forming cells  
Keywords: Pesticides  
Keywords: Microorganisms  
Keywords: Metabolism  
Date revised - 2010-02-01  
Language of summary - English  
Pages - 587-593  
ProQuest ID - 810388493  
SubjectsTermNotLitGenreText - Growth rate; Chlorpyrifos; Soil; Colonies; Adaptations; Colony-forming cells; Microorganisms; Acute toxicity; Metabolism; acute toxicity; Pesticides; adaptability; Acute Toxicity; Soil Environment; Incubation; Pseudomonas; Toxicity; Growth Rates; Strain; Pseudomonas putida  
Last updated - 2011-10-25  
Corporate institution author - Chen, Huilun; Yao, Jun; Wang, Fei; Zhou, Yong; Chen, Ke; Zhuang, Rensheng; Zaray, Gyula  
DOI - OB-f9cadeff-8338-4773-8edemfgefd107; 12667444; 0090-4341; 1432-0703 English

210. Chen, J.; Peng, Y.; Li, Y.; Wang, W., and Wu, J. A METHOD FOR DETERMINING ORGANOPHOSPHORUS PESTICIDE CONCENTRATION BASED ON NEAR-INFRARED SPECTROSCOPY. 2011; 54, (3): 1025-1030.   
Rec #: 57779  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The traditional methods for determining pesticide concentrations are time-consuming, complicated, and require extensive pretreatment processes. In this study, near-infrared (NIR) spectroscopy was used to determine trace chemicals. The dry-extract system for infrared (DESIR) technique was used to prepare samples. Filter paper was used as the substrate. Pesticide solutions were prepared by dissolving a commercial pesticide in distilled water at different concentrations (1.25 to 400 mg kg(-1)). Samples were prepared by pipetting the solution onto the filter paper and then evaporating it in a vacuum drying oven. Spectral curves of the samples were acquired in the range of 10000 to 4000 cm(-1) using an NIR spectrometer. Partial least squares regression (PLSR) was used to establish prediction models. The best prediction result was obtained using PLSR with multiplicative scatter correction (MSC) and first derivation as the pretreatment procedure. The process was able to predict the concentrations of chlorpyrifos with R = 0.899. A support vector machine (SVM) was used to establish a classification model. The result showed that 89.286% of samples were correctly predicted when the sample set was divided into three classes of chlorpyrifos content (<100, 100 to 300, >300 mg kg(-1)).  
Keywords: NIR spectroscopy, Organphosphorus pesticide, Rapid detection  
ISI Document Delivery No.: 793DO

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Rec #: 2520  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY,DCF)  
Notes: Chemical of Concern: ACO,CPY,DCF

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Rec #: 51009  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Nature. 1982 Dec 23;300(5894):765-7 (medline /6960256)  
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COMMENTS: Cites: J Am Soc Mass Spectrom. 2006 Dec;17(12):1700-3 (medline /16931036)  
COMMENTS: Cites: Genes Dev. 1995 Nov 1;9(21):2569-82 (medline /7590236)  
ABSTRACT: Recent studies have shown that trans-phosphorylation of the Abl SH3 domain at Tyr89 by Src-family kinases is required for the full transforming activity of Bcr-Abl. Tyr89 localizes to a binding surface of the SH3 domain that engages the SH2-kinase linker in the crystal structure of the c-Abl core. Displacement of SH3 from the linker is likely to influence efficient downregulation of c-Abl. Hydrogen-deuterium exchange (HX) and mass spectrometry (MS) were used to investigate whether Tyr89 phosphorylation affects the ability of the SH3 domain to interact intramolecularly with the SH2-kinase linker in cis as well as other peptide ligands in trans. HX MS analysis of SH3 binding showed that when various Abl constructs were phosphorylated at Tyr89 by the Src-family kinase Hck, SH3 was unable to engage a high-affinity ligand in trans and that interaction with the linker in cis was reduced dramatically in a construct containing the SH3 and SH2 domains plus the linker. Phosphorylation of the Abl SH3 domain on Tyr89 also interfered with binding to the negative regulatory protein Abi-1 in trans. Site-directed mutagenesis of Tyr89 and Tyr245, another tyrosine phosphorylation site located in the linker that may also influence SH3 binding, implicated Tyr89 as the key residue necessary for disrupting regulation after phosphorylation. These results imply that phosphorylation at Tyr89 by Src-family kinases prevents engagement of the Abl SH3 domain with its intramolecular binding partner leading to enhanced Abl kinase activity and cellular signaling.  
MESH HEADINGS: Amino Acid Sequence  
MESH HEADINGS: Binding Sites  
MESH HEADINGS: Fusion Proteins, bcr-abl/chemistry/metabolism  
MESH HEADINGS: Genes, abl  
MESH HEADINGS: Humans  
MESH HEADINGS: Mass Spectrometry  
MESH HEADINGS: Models, Molecular  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Phosphorylation  
MESH HEADINGS: Protein Conformation  
MESH HEADINGS: Proto-Oncogene Proteins c-abl/\*chemistry/\*metabolism  
MESH HEADINGS: Signal Transduction  
MESH HEADINGS: Tyrosine/genetics/\*metabolism  
MESH HEADINGS: \*src Homology Domains/genetics eng

213. Chen, S. H. ; Geng, P.; Xiao, Y., and Hu, M. Y. Bioremediation of beta-cypermethrin and 3-phenoxybenzaldehyde contaminated soils using Streptomyces aureus HP-S-01. 2012; 94, (2): 505-515.   
Rec #: 57799  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Using laboratory and field experiments, the ability of Streptomyces aureus HP-S-01 to eliminate beta-cypermethrin (beta-CP) and its metabolite 3-phenoxybenzaldehyde (3-PBA) in soils was investigated. In the laboratory, 80.5% and 73.1% of the initial dose of beta-CP and 3-PBA (50 mg kg(-1)) was removed in sterilized soils within 10 days, respectively, while in the same period, disappearance rate of beta-CP and 3-PBA in non-sterilized soils was higher and reached 87.8% and 79.3%, respectively. Furthermore, the disappearance process followed the first-order kinetics and the half-life (T (1/2)) for beta-CP and 3-PBA reduced by 20.3-52.9 and 133.7-186.8 days, respectively, as compared to the controls. The addition of sucrose to the soils enhanced the ability of strain HP-S-01 to eliminate beta-CP and 3-PBA. Similar results were observed in the field experiments. The introduced strain HP-S-01 quickly adapted to the environment and rapidly removed beta-CP and 3-PBA without any lag phases in the field experiments. Compared with the controls, 47.9% and 67.0% of applied dose of beta-CP and 3-PBA was removed from the soils without extra carbon sources and 52.5% and 73.3% of beta-CP and 3-PBA was eliminated in soils supplemented with sucrose within 10 days, respectively. Analysis of beta-CP degradation products in soil indicated that the tested strain transform beta-CP to 3-PBA and alpha-hydroxy-3-phenoxy-benzeneacetonitrile. However, both intermediates were transient and they disappeared after 10 days. Therefore, the selected actinomyces strain HP-S-01 is suitable for the efficient and rapid bioremediation of beta-CP contaminated soils.  
Keywords: beta-Cypermethrin, 3-Phenoxybenzaldehyde, Bioremediation, Streptomyces  
ISI Document Delivery No.: 915NV

214. Chen, S. H. ; Lai, K. P.; Li, Y. A.; Hu, M. Y.; Zhang, Y. B., and Zeng, Y. Biodegradation of deltamethrin and its hydrolysis product 3-phenoxybenzaldehyde by a newly isolated Streptomyces aureus strain HP-S-01. 2011; 90, (4): 1471-1483.   
Rec #: 57809  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A newly isolated actinomycete strain HP-S-01 from activated sludge could effectively degrade deltamethrin and its major hydrolysis product 3-phenoxybenzaldehyde. Based on the morphological, cultural, physio-biochemical characteristics, and 16S rDNA sequence analysis, strain HP-S-01 was identified as Streptomyces aureus. Strain HP-S-01 was also found highly efficient in degrading cyfluthrin, bifenthrin, fenvalerate, fenpropathrin, permethrin, and cypermethrin. Strain HP-S-01 rapidly degraded deltamethrin without a lag phase over a wide range of temperature (18 similar to 38 degrees C) and pH (5 similar to 10), and metabolized to produce alpha-hydroxy-3-phenoxy-benzeneacetonitrile and 3-phenoxybenzaldehyde by hydrolysis of the carboxylester linkage. The 3-phenoxybenzaldehyde was further oxidized to form 2-hydroxy-4-methoxy benzophenone resulting in its detoxification. No persistent accumulative product was detected by gas chromatography-mass spectrometry (GC/MS) analysis. Response surface methodology was used to optimize degradation conditions. Strain HP-S-01 completely removed 50 similar to 300 mg L(-1) deltamethrin within 7 days under the optimal degradation conditions. Furthermore, the biodegradation kinetics corresponded with the first-order model. Therefore, strain HP-S-01 is suitable for the efficient and rapid bioremediation of pyrethroid-contaminated environment.  
Keywords: Pyrethroids, Deltamethrin, 3-Phenoxybenzaldehyde, Biodegradation,  
ISI Document Delivery No.: 763QL

215. Chen, S. H. ; Luo, J. J.; Hu, M. Y.; Lai, K. P.; Geng, P., and Huang, H. S. Enhancement of cypermethrin degradation by a coculture of Bacillus cereus ZH-3 and Streptomyces aureus HP-S-01. 2012; 110, 97-104.   
Rec #: 57819  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Degradation of **cypermethrin** was significantly enhanced in a coculture of Bacillus cereus ZH-3 and Streptomyces aureus HP-S-01. In the pure culture, longer half-lives (t(1/2) = 32.6-43.0 h) of cypermethrin were observed, as compared to the mixed cocultures (t(1/2)= 13.0 h). The optimal degradation conditions were determined to be 28.2 degrees C and pH 7.5 based on response surface methodology (RSM). Under these conditions, the mixed cultures completely metabolized cypermethrin (50 mg L(-1)) within 72 h. Analysis of degradation products of cypermethrin indicated that the microbial consortium converted cypermethrin to alpha-hydroxy-3-phenoxy-benzeneacetonitrile, 3-phenoxybenzaldehyde and 4-phenoxyphenyl-2,2-dimethyl-propiophenone, and subsequently transformed these compounds with a maximum specific degradation rate (q(max)), half-saturation constant (K(s)) and inhibition constant (K(i)) of 0.1051 h(-1), 31.2289 mg L(-1) and 220.5752 mg L(-1), respectively. This is the first report of a proposed pathway of degradation of cypermethrin by hydrolysis of ester linkage and oxidization of 3-phenoxybenzyl in a coculture. Finally, this coculture is the first described mixed microbial consortium capable of metabolizing cypermethrin. (C) 2012 Elsevier Ltd. All rights reserved.  
Keywords: Degradation, Cypermethrin, Microbial consortium, Metabolites, Coculture  
ISI Document Delivery No.: 966QO

216. Chen, S. H. ; Yang, L.; Hu, M. Y., and Liu, J. J. Biodegradation of fenvalerate and 3-phenoxybenzoic acid by a novel Stenotrophomonas sp. strain ZS-S-01 and its use in bioremediation of contaminated soils. 2011; 90, (2): 755-767.   
Rec #: 57829  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A bacterial strain ZS-S-01, newly isolated from activated sludge, could effectively degrade fenvalerate and its hydrolysis product 3-phenoxybenzoic acid (3-PBA). Based on the morphology, physiological biochemical characteristics, and 16 S rDNA sequence, strain ZS-S-01 was identified as Stenotrophomonas sp. Strain ZS-S-01 could also degrade and utilize deltamethrin, beta-cypermethrin, beta-cyfluthrin, and cyhalothrin as substrates for growth. Strain ZS-S-01 was capable of degrading fenvalerate rapidly without a lag phase over a wide range of pH and temperature, even in the presence of other carbon sources, and metabolized it to yield 3-PBA, then completely degraded it. No persistent accumulative product was detected by HPLC and GC/MS analysis. Studies on biodegradation in various soils showed that strain ZS-S-01 demonstrated efficient degradation of fenvalerate and 3-PBA (both 50 mg center dot kg(-1)) with a rate constant of 0.1418-0.3073 d(-1), and half-lives ranged from 2.3 to 4.9 days. Compared with the controls, the half-lives for fenvalerate and 3-PBA reduced by 16.9-156.3 days. These results highlight strain ZS-S-01 may have potential for use in bioremediation of pyrethroid-contaminated environment.  
Keywords: Biodegradation, Fenvalerate, 3-Phenoxybenzoic acid, Stenotrophomonas  
ISI Document Delivery No.: 737DC

217. Chen, W. Q.; Ma, H.; Bian, J. M.; Zhang, Y. Z., and Li, J. Hyper-Phosphorylation of GSK-3beta: Possible Roles in Chlorpyrifos-Induced Behavioral Alterations in Animal Model of Depression. Department of New Drug Evaluation, Beijing Institute of Pharmacology and Toxicology, 27 Taiping Road, Beijing 100850, PR China.//: 2012; 528, (2): 148-152.   
Rec #: 2610  
Keywords: REVIEW  
Call Number: NO REVIEW (CPY)  
Notes: Chemical of Concern: CPY

218. Chen, X. P.; Jin, J. L.; Li, C. W., and Wang, F. S. [Effects of Low Concentration of Chlorpyrifos Prenatal Exposure on Generation Mouse Brain Hippocampus and Somatosensory Cortex].   
Rec #: 77749  
Keywords: NON-ENGLISH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: OBJECTIVE: To observe the effects of low concentration of organophosphate pesticide chlorpyrifos (CPF) prenatal exposure on generation mouse brain development.  
ABSTRACT: METHODS: 5 mg/kg CPF was administered daily on gestation days (GD) 7.5 - 11.5. On postnatal day (PD) 35, quantitative morphologic examines were measured in CA1, CA3, dentate gyrus regions of the hippocampus and somatosensory cortex.  
ABSTRACT: RESULTS: After CPF prenatal exposure, selective morphology impairments were observed, showing 22.37%, 25.66% thinning of the CA1 and CA3 layers, 24.14% enlargement of the dentate guys and 81.77% to 74.61% decreasing of the ratio of neuron/glial of the somatosensory cortex.  
ABSTRACT: CONCLUSION: There maybe slight morphological changes after prenatal low concentration pesticide exposure even without obviously systemic toxicity.  
MESH HEADINGS: Animals  
MESH HEADINGS: Chlorpyrifos/\*toxicity  
MESH HEADINGS: Female  
MESH HEADINGS: Hippocampus/\*drug effects/pathology  
MESH HEADINGS: Insecticides/\*toxicity  
MESH HEADINGS: Male  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred ICR  
MESH HEADINGS: Pregnancy  
MESH HEADINGS: \*Prenatal Exposure Delayed Effects  
MESH HEADINGS: Somatosensory Cortex/\*drug effects/pathology chi

219. Chen, Y.; Wen, G.; Rao, F.; Zhang, K.; Wang, L.; Rodriguez-Flores, J. L.; Sanchez, A. P.; Mahata, M.; Taupenot, L.; Sun, P.; Mahata, S. K.; Tayo, B.; Schork, N. J.; Ziegler, M. G.; Hamilton, B. A., and O'connor, D. T. Human Dopamine Beta-Hydroxylase (Dbh) Regulatory Polymorphism That Influences Enzymatic Activity, Autonomic Function, and Blood Pressure.   
Rec #: 50689  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Circulation. 2007 May 1;115(17):2271-81 (medline /17438154)  
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COMMENTS: Cites: J Hypertens. 2002 Jul;20(7):1335-45 (medline /12131530)  
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COMMENTS: Cites: J Neurochem. 1990 Jul;55(1):97-105 (medline /1693949)  
COMMENTS: Cites: Mol Pharmacol. 1979 Sep;16(2):529-38 (medline /514256)  
COMMENTS: Cites: J Hypertens. 2007 Feb;25(2):329-43 (medline /17211240)  
ABSTRACT: RATIONALE: Dopamine beta-hydroxylase (DBH) plays an essential role in catecholamine synthesis by converting dopamine into norepinephrine. Here we systematically investigated DBH polymorphisms associated with enzymatic activity as well as autonomic and blood pressure (BP)/disease phenotypes in vivo.  
ABSTRACT: METHODS AND RESULTS: Seventy genetic variants were discovered at the locus; across ethnicities, much of the promoter was spanned by a 5' haplotype block, with a larger block spanning the promoter in whites than blacks. DBH secretion was predicted by genetic variants in the DBH promoter, rather than the amino acid coding region. The C allele of common promoter variant C-970T increased plasma DBH activity, epinephrine excretion, the heritable change in BP during environmental stress in twin pairs, and also predicted higher basal BP in three independent populations. Mutagenesis and expression studies with isolated/transfected DBH promoter/luciferase reporters in chromaffin cells indicated that variant C-970T was functional. C-970T partially disrupted consensus transcriptional motifs for n-MYC and MEF-2, and this variant affected not only basal expression, but also the response to exogenous/co-transfected n-MYC or MEF-2; during chromatin immunoprecipitation, these two endogenous factors interacted with the motif.  
ABSTRACT: CONCLUSIONS: These results suggest that common DBH promoter variant C-970T plays a role in the pathogenesis of human essential hypertension: common genetic variation in the DBH promoter region seems to initiate a cascade of biochemical and physiological changes eventuating in alterations of basal BP. These observations suggest new molecular strategies for probing the pathophysiology, risk, and rational treatment of systemic hypertension.  
MESH HEADINGS: Adolescent  
MESH HEADINGS: Adult  
MESH HEADINGS: African Continental Ancestry Group/genetics  
MESH HEADINGS: Aged  
MESH HEADINGS: Aged, 80 and over  
MESH HEADINGS: Autonomic Nervous System/\*physiology  
MESH HEADINGS: Blood Pressure/\*genetics/physiology  
MESH HEADINGS: Dopamine beta-Hydroxylase/\*genetics  
MESH HEADINGS: European Continental Ancestry Group/genetics  
MESH HEADINGS: Female  
MESH HEADINGS: \*Genetic Predisposition to Disease  
MESH HEADINGS: Genetic Variation  
MESH HEADINGS: Heart Rate/genetics  
MESH HEADINGS: Humans  
MESH HEADINGS: Hypertension/epidemiology/\*genetics/physiopathology  
MESH HEADINGS: Male  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: /epidemiology  
MESH HEADINGS: \*Polymorphism, Single Nucleotide  
MESH HEADINGS: /epidemiology  
MESH HEADINGS: Young Adult eng

220. Chen, Y. P. ; Ning, B. A.; Liu, N.; Feng, Y.; Liu, Z.; Liu, X. Y., and Gao, Z. X. A rapid and sensitive fluoroimmunoassay based on quantum dot for the detection of chlorpyrifos residue in drinking water. 2010; 45, (6): 508-515.   
Rec #: 57919  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A rapid and sensitive indirect competitive fluorescence-linked immunosorbent assay (cFLISA) method based on quantum dots as the fluorescence label coupled with secondary antibody (Ab2) for the detection of chlorpyrifos in drinking water has been developed. The cFLISA method allowed for chlorpyrifos determination in a liner working range of 15.2-205.5 ng mL-1. The 50 % inhibition value (IC50) and the limit of detection (LOD) of the cFLISA were 50.2 ng mL-1 and 8.4 ng mL-1, while the IC50 and the LOD of the conventhional enzyme linked immunosorbent assay (ELISA) were 95.3 ng- mL-1 and 16.2 ng mL-1, respectively. When the concentrations of chlorpyrifos were 200, 100 and 50 ng mL-1, the recoveries ranged from 90.8 % to 108.2 % with a coefficient of variation (CV) of 7.5 %-15.2 %. In water sample analysis, the results of cFLISA were similar to those obtained from a cELISA and a high performance liquid chromatography (HPLC) method, while the detection time by cFLISA was reduced 0.5 h compared with ELISA. It showed that cFLISA could be used as a new screening method for the detection of pesticide residue.  
Keywords: Quantum dots, fluorescence immunoassay, chlorpyrifos, drinking water  
ISI Document Delivery No.: 615GA

221. Chen, Y. P. ; Ren, H. L.; Liu, N.; Sai, N.; Liu, X. Y.; Liu, Z.; Gao, Z. X., and Ning, B. A. A Fluoroimmunoassay Based on Quantum Dot-Streptavidin Conjugate for the Detection of Chlorpyrifos. 2010; 58, (16): 8895-8903.   
Rec #: 57929  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A rapid and sensitive competitive fluorescence-linked immunosorbent assay (cFLISA) based on quantum dot-streptavidin conjugate (QDs-SA) was developed for the detection of chlorpyrifos in drinking water. The QDs-SA conjugate, which consists of 3-mercaptopropyl acid-stabilized CdTe nanoparticle QDs and streptavidin (SA) made through the active ester method, was employed to improve the sensitivity of QDs-SA-cFLISA. The 50% inhibition concentration (IC(50)) and the limit of detection (LOD) were 28.5 and 3.8 ng mL(-1), respectively. QDs-SA-cFLISA increased sensitivity 5.5-fold and reduced detection time by 1 h compared with conventional enzyme-linked immunosorbent assay (ELISA). With chlorpyrifos concentrations of 100, 50, and 20 ng mL-1, recoveries ranged from 85.9% to 105.3% with coefficients of variation ranging from 6.3% to 13.5%. This study demonstrated that QDs-SA-cFLISA was more rapid and sensitive than conventional ELISA. Therefore, it can be used as a novel screening method for the detection of pesticide residues.  
Keywords: Quantum dot-streptavidin, fluoroimmunoassay, chlorpyrifos  
ISI Document Delivery No.: 638BV

222. Chen, Z-D; Chen, J-M; Han, M-S; Wang, W-J; Cao, W, and Chen, Z-D. Difference of Chlorpyrifos Residue in Fruits of Various Apple Cultivars and Bagging Effect on the Residue. 2011 Nov 20; 30, (11): 2197-2201.   
Rec #: 39259  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Apple is one of important fruits exported in China. The pesticide residue in apple fruit directly impacts the export trade of agricultural products and safety of consumer. Chlorpyrifos is one of organophosphorous pesticides permitted to be used in apple production. In order to evaluate the difference of chlorpyrifos residue in fruits of various apple cultivars and effects of fruit bagging on fruit chlorpyrifos residue, chlorpyrifos residue quantity in different tissues of fruit of various apple cultivars was determined with gas chromatography(GC- FPD). The results showed that there was a significant difference among apple cultivars in chlorpyrifos residue in the fruit, Red Fuji belonged to the cultivar with high pesticide residues, while Gala, Red General and 83-1-70-3 to the cultivars with low pesticide residues. Chlorpyrifos residues showed significant difference in different fruit tissues of apple, the final residue of pesticide in the pericarp was the highest, followed in the whole fruit, lowest in the pulp. Chlorpyrifos residue in apple fruit was significantly decreased with bagging. Regardless of the pesticide concentration applied, and sampling time, pesticide residue in bagged apple fruit reduced by 33% as compared with that in fruit without being bagged.  
Keywords: ENA 06:Food & Drugs  
Keywords: Chlorpyrifos  
Keywords: exports  
Keywords: P 9999:GENERAL POLLUTION  
Keywords: Pesticide residues  
Keywords: Pesticides  
Keywords: fruits  
Keywords: cultivars  
Keywords: Malus  
Keywords: Pollution Abstracts; Environment Abstracts  
Keywords: China, People's Rep.  
Date revised - 2012-03-01  
Language of summary - English  
Location - China, People's Rep.  
Pages - 2197-2201  
ProQuest ID - 915430019  
SubjectsTermNotLitGenreText - Chlorpyrifos; exports; Pesticide residues; Pesticides; fruits; cultivars; Malus; China, People's Rep.  
Last updated - 2012-08-02  
Corporate institution author - Chen, Z-D; Chen, J-M; Han, M-S; Wang, W-J; Cao, W  
DOI - OB-MD-0017960601; 16145134; 1672-2043 English

223. Chen, Z-D; Ji, Y-L; Zhang, Q-Z; Wang, W-J; Liu, H-Y; Chen, J-M, and Chen, Z-D. Effects of Rare Earths Nitrate on Degradation of Chlorpyrifos Residue in Spinach. 2009 Jun 20; 28, (6): 1307-1312.   
Rec #: 41169  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Spinach(Spinacia oleracea L.) is an important variety for the vegetable export in China. The chlorpyrifos residue in spinach is directly related to the export trade of agricultural products and safety of consumer. In this work, the residue of chlorpyrifos was determined by GC(Gas Chromatograph) with NPD detector. The dynamic analysis of chlorpyrifos residue in spinach sprayed with rare earths nitrate was also carried out. The results indicated that the different rare earths nitrate help to reduce the pesticide residue in spinach, whether 2 d before or after spraying pesticide. However, different degradation efficiencies of chlorpyrifos were found when the spinach was treated with different rare earths nitrate. After spraying, the concentration of chlorpyrifos residue in spinach decreased with keeping time delayed. For different time of spraying, degradation effects of rare earths nitrate on chlorpyrifos residue in spinach presented diverse, on the whole, the effect of spraying after pesticide application is superior to that before application. Cerium nitrate and neodymium nitrate showed the best degradation effects on chlorpyrifos residue in spinach, and lanthanum nitrate and changleyizhisu took second place. On the basis of safety analysis for rare earth application to fanning, and consulting maximum residue limits for rare earth in vegetable food, as a result, applying rare earths nitrate as degradation preparation for pesticide residues will be feasible and helpful for the security growth of vegetables.  
Keywords: exports  
Keywords: International trade  
Keywords: Degradation  
Keywords: Nitrates  
Keywords: Pesticide residues  
Keywords: P 5000:LAND POLLUTION  
Keywords: Cerium  
Keywords: Neodymium  
Keywords: Lanthanum  
Keywords: Crops  
Keywords: Chlorpyrifos  
Keywords: Efficiency  
Keywords: Pesticides  
Keywords: China, People's Rep.  
Keywords: Spinacia oleracea  
Keywords: Pollution Abstracts  
Date revised - 2009-08-01  
Language of summary - English  
Location - China, People's Rep.  
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SubjectsTermNotLitGenreText - Chlorpyrifos; Efficiency; exports; International trade; Degradation; Nitrates; Pesticide residues; Neodymium; Cerium; Pesticides; Lanthanum; Crops; Spinacia oleracea; China, People's Rep.  
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British nursing index edition - Journal of Agro-Environment Science [J. Agro-Environ. Sci.]. Vol. 28, no. 6, pp. 1307-1312. 20 Jun 2009.  
Corporate institution author - Chen, Z-D; Ji, Y-L; Zhang, Q-Z; Wang, W-J; Liu, H-Y; Chen, J-M  
DOI - MD-0010097487; 10250443; 1672-2043 English

224. Chen, Z. D.; Zhang, Q. Z.; Wang, W. J.; Zhou, Y., and Chen, J. M. Screening of Genotypes with Low Pesticide Residue in Leafy Vegetables. Qingdao Academy of Agricultural Sciences, Qingdao 266100, China,//: SOIL; 2010; 29, (2): 239-245(CHI) (ENG ABS).   
Rec #: 2680  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY,FNV)  
Notes: Chemical of Concern: CPY,FNV

225. Cheung, C. and Gonzalez, F. J. Humanized Mouse Lines and Their Application for Prediction of Human Drug Metabolism and Toxicological Risk Assessment.   
Rec #: 51079  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Cytochrome P450s (P450s) are important enzymes involved in the metabolism of xenobiotics, particularly clinically used drugs, and are also responsible for metabolic activation of chemical carcinogens and toxins. Many xenobiotics can activate nuclear receptors that in turn induce the expression of genes encoding xenobiotic metabolizing enzymes and drug transporters. Marked species differences in the expression and regulation of cytochromes P450 and xenobiotic nuclear receptors exist. Thus, obtaining reliable rodent models to accurately reflect human drug and carcinogen metabolism is severely limited. Humanized transgenic mice were developed in an effort to create more reliable in vivo systems to study and predict human responses to xenobiotics. Human P450s or human xenobiotic-activated nuclear receptors were introduced directly or replaced the corresponding mouse gene, thus creating &quot;humanized&quot; transgenic mice. Mice expressing human CYP1A1/CYP1A2, CYP2E1, CYP2D6, CYP3A4, CY3A7, pregnane X receptor, and peroxisome proliferator-activated receptor alpha were generated and characterized. These humanized mouse models offer a broad utility in the evaluation and prediction of toxicological risk that may aid in the development of safer drugs.  
MESH HEADINGS: Animals  
MESH HEADINGS: Cytochrome P-450 CYP1A1/physiology  
MESH HEADINGS: Cytochrome P-450 CYP1A2/physiology  
MESH HEADINGS: Cytochrome P-450 CYP2D6/physiology  
MESH HEADINGS: Cytochrome P-450 CYP2E1/physiology  
MESH HEADINGS: Cytochrome P-450 CYP3A/physiology  
MESH HEADINGS: Cytochrome P-450 Enzyme System/\*physiology  
MESH HEADINGS: Humans  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Transgenic  
MESH HEADINGS: PPAR alpha/physiology  
MESH HEADINGS: Pharmaceutical Preparations/\*metabolism  
MESH HEADINGS: Receptors, Steroid/physiology  
MESH HEADINGS: \*Risk Assessment  
MESH HEADINGS: Species Specificity eng

226. Chishti, Zia; Hussain, Sarfraz; Arshad, Khaliq R.; Khalid, Azeem, and Arshad, Muhammad. Microbial degradation of chlorpyrifos in liquid media and soil. 2013 Jan 15-; 114, (0): 372-380.   
Rec #: 750  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Chlorpyrifos is a broad-spectrum insecticide which is used extensively in agriculture worldwide. Its massive application has led to the contamination of water and soil, and disruption of biogeochemical cycles. In addition, its residues have been detected in various ecological systems. A number of methods are currently available that can be used for the detoxification of such pesticides, however, this review focuses on microbial biodegradation which is considered to be one of the most viable options for the removal of organophosphate pesticides from the environment. Identification of genes and enzymes responsible for the cleavage of specific functional groups of the pesticide and understanding the kinetics of biodegradation are critical to accomplish successful bioremediation. Recently, the use of indigenous or genetically modified microorganisms and/or plants has increased the chances for in-situ bioremediation of contaminated sites. The literature provides evidence that the bioremediation process can be enhanced by maintaining an effective chlorpyrifos-degrading microbial community in the contaminated site and optimizing environmental conditions. Biodegradation/ Chlorpyrifos/ Enzymes/ Genes/ Modeling/ Optimization/ Soil/ Water

227. Chiu, S. F.; Huang, B. Q., and Hu, M. Y. Synergistic Effect of Toosendanin in a Mixture with Bacillus thuringiensis and Other Insecticides Against the Cabbage Worm Pieris rapae L. 1989; 32, (2): 158-165(CHI) (ENG ABS).   
Rec #: 560  
Keywords: MIXTURE,NON-ENGLISH  
Call Number: NO MIXTURE (CPY), NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

228. Cho, K. M.; Math, R. K.; Islam, S. M. A.; Lim, W. J.; Hong, S. Y.; Kim, J. M.; Yun, M. G.; Cho, J. J., and Yun, H. D. Biodegradation of Chlorpyrifos by Lactic Acid Bacteria during Kimchi Fermentation. 2009; 57, (5): 1882-1889.   
Rec #: 57969  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: We examined the role of microorganisms in the degradation of the organophosphorus (OP) insecticide chlorpyrifos (CP) during kimchi fermentation. During the fermentation of kimchi, 30 mg L(-1) of CP was added and its stability assayed during fermentation. CP was degraded rapidly until day 3 (83.3%) and degraded completely by day 9. Four CP-degrading lactic acid bacteria (LAB) were isolated from kimchi fermentation in the presence of 200 mg L-1 CP and were identified as Leuconostoc mesenteroides WCP907, Lactobacillus brevis WCP902, Lactobacillus plantarum WCP931, and Lactobacillus sakei WCP904. CP could be utilized by these four strains as the sole source of carbon and phosphorus. Coumaphos (CM), diazinon (DZ), parathion (PT), and methylparathion (MPT) were also degraded by WCP907, WCP902, WCP931, and WCP904 when provided as sole sources of carbon and phosphorus.  
Keywords: Organophosphorus insecticides, chlorpyrifos, kimchi, lactic acid  
ISI Document Delivery No.: 415ZH

229. Cho, S.; Gorjup, E., and Thielecke, H. Chip-based time-continuous monitoring of toxic effects on stem cell differentiation. 2009; 191, (1): 145-152.   
Rec #: 57979  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticides used to control unwanted insects are potentially toxic to humans. In assessing the risk involved in exposure to pesticides or complex chemical mixtures, an in vitro cell-based test can provide useful information regarding danger to human health. Cell differentiation is a biological process of fundamental importance in developing and adult organisms. In this paper, we propose a cell-based test system for continuous, label-free monitoring of the effect of test substances on stem cell differentiation. Using a prefabricated electrode-based chip and impedance measurement system, we investigated the influence of chlorpyrifos (a pesticide) on the differentiation of human mesenchymal stem cells (hMSCs) to adipocytes. The state of hMSCs on electrodes during adipogenic differentiation or after application of the cytotoxic substance was clearly reflected in the impedance measurement. Chlorpyrifos caused a partially uncovered electrode area with a decreased number of lipid vacuoles, thus leading to a rapid decrease in resistance in the cell layer. After removal of the chlorpyrifos, the cell layer resistance was regained due to the renewed covering of the electrodes by hMSCs. However, an increase in lipid vacuoles was not observed. From this, it was concluded that the measured resistance of hMSCs is determined by the electrical properties in the extra cellular space (e.g., cell/etectrode or cell/cell gap), but not by the lipid vacuoles appearing in intracellular space during adipogenic differentiation. (C) 2008 Elsevier GmbH. All rights reserved.  
Keywords: Adipogenic differentiation, Electrode-based cell chip, Human mesenchymal  
ISI Document Delivery No.: 404ZM

230. Cho, T. H.; Kim, B. S.; Jo, S. J.; Kang, H. G.; Choi, B. Y., and Kim, M. Y. Pesticide residue monitoring in Korean agricultural products, 2003-05. 2009; 2, (1): 27-37.   
Rec #: 57999  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Between 2003 and 2005, a total of 11,716 samples were collected and analysed to determine the level of pesticides residues. Multi-residue methods (MRMs) capable of simultaneously determining 250 pesticides were used. Of the 11,716 samples, 89.1% had no detectable residues and 1.7% had violative residues. The detection rates by commodity group were 11.4, 8.6, 0.3, and 0.02% for vegetables, fruit, grain, mushrooms, and the others, respectively. Agricultural products with pesticide residues were pepper, Perilla frutescens, leafy lettuce and spinach in decreasing order. Of the 250 pesticides that were monitored, 70 pesticides were actually found. Procymidone, endosulfan, chlorfenapyr, metalaxyl, and diethofencarb were frequently detected. Of the samples, parsley, Petasites hybridus, Aster scaber and leek had high violative rates of 23.1, 12.6, 8.2, and 7.9%, respectively. From violative samples, procymidone, endosulfan, metalaxyl, diazinon and chlorpyrifos were frequently detected. The violation rates were 1.71, 1.68, and 1.76% in 2003, 2004 and 2005, respectively, and the detection rates were 8.5, 12.0, and 13.3% in 2003, 2004, and 2005, respectively.  
Keywords: pesticide monitoring, agricultural products, pesticide residue  
ISI Document Delivery No.: 487YX

231. Choi, K.; Joo, H.; Campbell, J. L.; Clewell, R. A.; Andersen, M. E., and Clewell, H. J. In vitro metabolism of di(2-ethylhexyl) phthalate (DEHP) by various tissues and cytochrome P450s of human and rat. 2012; 26, (2): 315-322.   
Rec #: 58019  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: **In vitro metabolism of DEHP** by subcellular fractions of human brain, intestine, kidney, liver, lung, skin, testis, rat liver and recombinant CYP isoforms of human and rat was investigated using LC-MS/MS. DEHP was rapidly hydrolyzed to mono(2-ethylhexyl) phthalate (MEHP) in 12 microsomal/cytosolic fractions of selected 7 human organs and rat liver but not in microsomal fractions of human brain and human female skin. MEHP was metabolized to CYP-mediated oxidative and dealkylated metabolites in human and rat liver and at a lower rate in human intestine. Measurable amounts of mono(2-ethyl-5-hydroxyhexyl) phthalate (5-OH MEHP), mono(2-ethyl-5-oxohexyl) phthalate (5-Oxo MEHP), mono(2-ethyl-5-carboxypentyl) phthalate (5-carboxy MEPP), mono(2-carboxymethyl-hexyl) phthalate (2-carboxy MMHP) and phthalic acid (PA) were formed by human liver fractions. Human CYP2C9\*1, CYP2C19 and rat CYP2C6 were the major CYP isoforms producing 5-OH MEHP and 5-Oxo MEHP metabolites; however, only human CYP2C9\*1 and 2C9\*2 produced 5-carboxy MEPP from MEHP. Additionally, human CYP3A4 and rat CYP3A2 were the primary enzymes for PA production via heteroatom dealkylation of MEHP. Percent total normalized rates (%TNR) by CYP2C9\*1 in human liver microsomes (HLM) were 94%, 98% and 100%, respectively, for 5-OH MEHP, 5-Oxo MEHP, 5-carboxy MEPP, and 76% for PA production by CYP3A4. (C) 2011 Elsevier Ltd. All rights reserved.  
Keywords: DEHP, In vitro metabolism, Human tissues, Rat tissues, Cytochrome P450,  
ISI Document Delivery No.: 902DU

232. Chowdhury, Alamgir Zaman; Jahan, Salina Akter; Islam, Mohammad Nazrul; Moniruzzaman, Mohammed; Alam, Mohammad Khorshed; Zaman, Mohammad a; Karim, Nurul, and Gan, Siew Hua. Occurrence of Organophosphorus and Carbamate Pesticide Residues in Surface Water Samples From the Rangpur District of Bangladesh. 2012 Jul; 89, (1): 202-7.   
Rec #: 42669  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We report the presence of organophosphorus and carbamate residues in 24 surface water samples and five ground water samples from Pirgacha Thana, Rangpur district, Bangladesh using high-performance liquid chromatography. A number of samples of surface water from paddy fields were found to contain chlorpyriphos, carbofuran and carbaryl at concentrations ranging from 0-1.189, 0-3.395 and 0-0.163 ÎĽg/L, respectively. Surface water from the lakes had chlorpyriphos, carbofuran and carbaryl at concentrations ranging from 0.544-0.895, 0.949-1.671 and 0-0.195 ÎĽg/L, respectively. This result indicates that the general public living in the area of Rangpur is at high risk of pesticide exposure from contaminated waters in the environment.[PUBLICATION ABSTRACT]  
Keywords: Agriculture  
Keywords: Lakes -- chemistry  
Keywords: Organophosphorus Compounds -- analysis  
Keywords: Carbofuran -- analysis  
Keywords: Carbofuran  
Keywords: Water Pollutants, Chemical -- analysis  
Keywords: Humans  
Keywords: Pesticide Residues  
Keywords: Carbaryl  
Keywords: Carbaryl -- analysis  
Keywords: Environmental Studies  
Keywords: Environmental Monitoring  
Keywords: Carbamates -- analysis  
Keywords: Organophosphorus Compounds  
Keywords: Carbamates  
Keywords: Water Pollutants, Chemical  
Keywords: Pesticide Residues -- analysis  
Keywords: Bangladesh  
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Language of summary - English  
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Pages - 202-7  
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SubjectsTermNotLitGenreText - Bangladesh  
Last updated - 2012-10-05  
Place of publication - New York  
Corporate institution author - Chowdhury, Alamgir Zaman; Jahan, Salina Akter; Islam, Mohammad Nazrul; Moniruzzaman, Mohammed; Alam, Mohammad Khorshed; Zaman, Mohammad A; Karim, Nurul; Gan, Siew Hua  
DOI - 2685220351; 69774282; 108019; BVCX; 22526994; SPVLBVCX128891641  
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233. Chowdhury, M. A. Z.; Banik, S.; Uddin, B.; Moniruzzaman, M.; Karim, N., and Gan, S. H. Organophosphorus and Carbamate Pesticide Residues Detected in Water Samples Collected from Paddy and Vegetable Fields of the Savar and Dhamrai Upazilas in Bangladesh. 2012; 9, (9): 3318-3329.   
Rec #: 58089  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Several types of organophosphorous and carbamate pesticides have been used extensively by the farmers in Bangladesh during the last few decades. Twenty seven water samples collected from both paddy and vegetable fields in the Savar and Dhamrai Upazilas in Bangladesh were analyzed to determine the occurrence and distribution of organophosphorus (chlorpyrifos, malathion and diazinon) and carbamate (carbaryl and carbofuran) pesticide residues. A high performance liquid chromatograph instrument equipped with a photodiode array detector was used to determine the concentrations of these pesticide residues. Diazinon and carbofuran were detected in water samples collected from Savar Upazila at 0.9 mu g/L and 198.7 mu g/L, respectively. Malathion was also detected in a single water sample at 105.2 mu g/L from Dhamrai Upazila. Carbaryl was the most common pesticide detected in Dhamrai Upazila at 14.1 and 18.1 mu g/L, while another water sample from Dhamrai Upazila was contaminated with carbofuran at 105.2 mu g/L. Chlorpyrifos was not detected in any sample. Overall, the pesticide residues detected were well above the maximum acceptable levels of total and individual pesticide contamination, at 0.5 and 0.1 mu g/L, respectively, in water samples recommended by the European Economic Community (Directive 98/83/EC). The presence of these pesticide residues may be attributed by their intense use by the farmers living in these areas. Proper handling of these pesticides should be ensured to avoid direct or indirect exposure to these pesticides.  
Keywords: pesticides, organophosphorus, carbamate, HPLC  
ISI Document Delivery No.: 012XP

234. Chrisman, J. D.; Koifman, S.; Sarcinelli, P. D.; Moreira, J. C.; Koifman, R. J., and Meyer, A. Pesticide sales and adult male cancer mortality in Brazil. 2009; 212, (3): 310-321.   
Rec #: 58099  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: In Brazil, where the use of pesticide grows rapidly, studies that evaluate the impact of pesticide exposure on cancer incidence and mortality are very scarce. In this study, we evaluated the degree of correlation between pesticide sales in 1985 in eleven Brazilian states and cancer mortality rates during 1996-1998. Information of all cancer deaths occurred in men 30-69 years old from 1996 to 1998 were collected from National Mortality System. Single and multiple linear regression coefficients were obtained to assess the relationship between per capita sales of pesticides in 1985, specific-site cancer mortality rates (prostate, soft tissue, larynx, leukemia, lip, esophagus, lung, pancreas, bladder, liver, testis, stomach, brain, non-Hodgkin's lymphoma, and multiple myeloma) during 1996-1998, and several covariates. In addition, states were stratified into three groups according to tertiles of pesticides sales and cancer mortality rate ratios (MRR) were then calculated using first tertile as reference. Finally, a factor analysis was performed to reveal unapparent relationships between pesticide use and cancer mortality. Pesticide sales showed statistically significant correlation with the mortality rates for the cancers of prostate (r = 0.69; p = 0.019), soft tissue (r = 0.71; p = 0.015), leukemia (r = 0.68; p = 0.021), lip (r = 0.73; p = 0.010), esophagus (r = 0.61; p = 0.046), and pancreas (r = 0.63; p = 0.040). Moderate to weak correlations were observed for the cancers of larynx, lung, testis, bladder, liver, stomach, brain, and NHL and multiple myeloma. In addition, correlation between pesticide sales and specific-site cancer mortality rates was reinforced by multiple regression analysis. For all specific-sites, cancer mortality rates were significantly higher in the states of moderate (2nd tertile) and high (3rd tertile) pesticide sales, with MRR ranging from 1.11 to 5.61. Exploring hidden relationships between pesticide sales and cancer mortality in Brazil, through a factor analysis, revealed that affluence; public policies and lifestyle behaviors may explain almost 70% of the variance of the studied association. The results suggest that population exposure to pesticides in the 1980s in some Brazilian States may have been associated with selected cancer sites observed a decade later. (C) 2008 Elsevier GrnbH. All rights reserved.  
Keywords: Pesticides, Cancer mortality, Brazil, Ecological study  
ISI Document Delivery No.: 432JP

235. Chuang, J. C. and Wilson, N. K. Multiresidue analysis of organophosphate and pyrethroid pesticides in duplicate-diet solid food by pressurized liquid extraction. 2011; 46, (1): 41-50.   
Rec #: 58119  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An analytical method was developed for determining organophosphate pesticides (OPP) and pyrethroid pesticides (PYR) in duplicate-diet solid food. The method consisted of pressurized liquid extraction (PLE) with dichloromethane followed by cleanup with gel permeation and solid phase extraction columns and gas chromatography/mass spectrometry (GC/MS) analysis. Quantitative recoveries (73-117 %) of the target pesticides were obtained for spiked duplicate-diet food samples. The percent standard deviation (% RSD) of replicate food samples was within +/- 20 %. Another method was developed for determining a common OPP metabolite, 3, 5, 6-trichloro-2-pyridinol (TCP) in duplicate-diet food. The method consisted of a PLE with methanol followed by liquid-liquid partitioning, derivatization, and GC/MS analysis. Recoveries of TCP ranged from 83 to 101 % for spiked duplicate-diet food samples. The % RSD of replicate food samples was within +/- 15 %. The results confirmed that these methods are reliable and robust, and that they can be used in routine analysis. In addition, a storage stability study for a common OPP, chlorpyrifos (CPF), in solid food samples was performed. The fortified 15N-13C-labeled CPF was stable over 16 mo storage at -20 degrees C in the dark. The developed analytical methods were successfully applied to 278 duplicate-diet food samples from preschool children, demonstrating that these methods are robust and suitable for routine analysis in future exposure monitoring studies.  
Keywords: Duplicate-diet food, organophosphate pesticide, pyrethroid pesticide,  
ISI Document Delivery No.: 733MV

236. Chuang, Jane C; Wilson, Nancy K, and Chuang, Jane C. Multiresidue Analysis of Organophosphate and Pyrethroid Pesticides in Duplicate-Diet Solid Food by Pressurized Liquid Extraction. 2010 Nov; 45, (8): 868-877.   
Rec #: 43799  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: An analytical method was developed for determining organophosphate pesticides (OPP) and pyrethroid pesticides (PYR) in duplicate-diet solid food. The method consisted of pressurized liquid extraction (PLE) with dichloromethane followed by cleanup with gel permeation and solid phase extraction columns and gas chromatography/mass spectrometry (GC/MS) analysis. Quantitative recoveries (73-117 %) of the target pesticides were obtained for spiked duplicate-diet food samples. The percent standard deviation (% RSD) of replicate food samples was within plus or minus 20 %. Another method was developed for determining a common OPP metabolite, 3, 5, 6-trichloro-2-pyridinol (TCP) in duplicate-diet food. The method consisted of a PLE with methanol followed by liquid-liquid partitioning, derivatization, and GC/MS analysis. Recoveries of TCP ranged from 83 to 101 % for spiked duplicate-diet food samples. The % RSD of replicate food samples was within plus or minus 15 %. The results confirmed that these methods are reliable and robust, and that they can be used in routine analysis. In addition, a storage stability study for a common OPP, chlorpyrifos (CPF), in solid food samples was performed. The fortified 15N-13C-labeled CPF was stable over 16 mo storage at -20 degree C in the dark. The developed analytical methods were successfully applied to 278 duplicate-diet food samples from preschool children, demonstrating that these methods are robust and suitable for routine analysis in future exposure monitoring studies.  
Keywords: Mass Spectrometry  
Keywords: Pollution monitoring  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: Environment Abstracts; Water Resources Abstracts; Pollution Abstracts  
Keywords: Organophosphates  
Keywords: Agricultural wastes  
Keywords: Mass spectrometry  
Keywords: Metabolites  
Keywords: Solids  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Storage  
Keywords: Chlorpyrifos  
Keywords: Foods  
Keywords: Agricultural Chemicals  
Keywords: Organophosphorus Pesticides  
Keywords: Analytical Methods  
Keywords: Pesticides  
Keywords: Monitoring  
Keywords: Pyrethroids  
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Number of references - 28  
Pages - 868-877  
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SubjectsTermNotLitGenreText - Chlorpyrifos; Storage; Pollution monitoring; Organophosphates; Agricultural wastes; Pesticides; Mass spectrometry; Metabolites; Pyrethroids; Mass Spectrometry; Foods; Organophosphorus Pesticides; Agricultural Chemicals; Analytical Methods; Solids; Monitoring  
Last updated - 2012-12-14  
British nursing index edition - Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants and Agricultural Wastes [J. Environ. Sci. Health, Pt. B: Pestic., Food Contam., Agric. Wastes]. Vol. 45, no. 8, pp. 868-877. Nov 2010.  
Corporate institution author - Chuang, Jane C; Wilson, Nancy K  
DOI - b25f3514-d4e6-4254-a339mfgefd107; 14060674; 0360-1234; 1532-4109  
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Rec #: 50509  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Public Health Med. 2000 Mar;22(1):99-107 (medline /10774911)  
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ABSTRACT: Molecular diagnostic tools capable of identifying Shiga toxin-specific genetic determinants in stool specimens permit an unbiased approach to detect Shiga toxin-producing Escherichia coli (STEC) in clinical samples and can indicate when culture-based isolation methods are required. It is increasingly recognized that clinically relevant STEC are not limited to the singular O157 serotypes, and therefore diagnostic assays targeting toxin-encoding determinants must be able to account for any genetic variation that exists between serotypes. In this study conventional PCR and four real-time PCR assays (HybProbe, TaqMan, SYBR Green, and LUX) targeting the stx1 and stx2 Shiga toxin coding sequences were used to identify STEC in enriched stool samples (n = 36) and a panel of O157 and non-O157 strains (n = 64). PCR assays targeting stx1 and stx2 had variable specificity and sensitivity values with enriched stool samples. Molecular assays using DNA from pure cultures revealed that some primers were not sensitive to all stx2 variants. This evaluation concluded that the TaqMan-based probes were most appropriate in high throughput clinical diagnostic laboratories in consideration of cost, turn around time, and assay performance.  
MESH HEADINGS: Biological Assay  
MESH HEADINGS: Feces/\*microbiology  
MESH HEADINGS: Humans  
MESH HEADINGS: Polymerase Chain Reaction/economics/\*methods  
MESH HEADINGS: Sensitivity and Specificity  
MESH HEADINGS: Shiga Toxin 1/genetics  
MESH HEADINGS: Shiga Toxin 2/genetics  
MESH HEADINGS: Shiga-Toxigenic Escherichia coli/\*genetics/\*isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: Time Factors eng

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Rec #: 42989  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An algorithm developed to estimate pesticide exposure intensity for use in epidemiologic analyses was revised based on data from two exposure monitoring studies. In the first study, we estimated relative exposure intensity based on the results of measurements taken during the application of the herbicide 2,4-dichlorophenoxyacetic acid (2,4-D) (n = 88) and the insecticide chlorpyrifos (n = 17). Modifications to the algorithm weighting factors were based on geometric means (GM) of post-application urine concentrations for applicators grouped by application method and use of chemically-resistant (CR) gloves. Measurement data from a second study were also used to evaluate relative exposure levels associated with airblast as compared to hand spray application methods. Algorithm modifications included an increase in the exposure reduction factor for use of CR gloves from 40% to 60%, an increase in the application method weight for boom spray relative to in-furrow and for air blast relative to hand spray, and a decrease in the weight for mixing relative to the new weights assigned for application methods. The weighting factors for the revised algorithm now incorporate exposure measurements taken on Agricultural Health Study (AHS) participants for the application methods and personal protective equipment (PPE) commonly reported by study participants.  
Keywords: Chlorpyrifos  
Keywords: Insecticides  
Keywords: Urine  
Keywords: H 5000:Pesticides  
Keywords: Pesticides  
Keywords: Sprays  
Keywords: 2,4-Dichlorophenoxyacetic acid  
Keywords: Herbicides  
Keywords: gloves  
Keywords: Health & Safety Science Abstracts  
Keywords: Protective equipment  
Date revised - 2012-06-01  
Language of summary - English  
Pages - 4608-4622  
ProQuest ID - 1020840104  
SubjectsTermNotLitGenreText - Chlorpyrifos; Insecticides; Urine; Pesticides; Sprays; 2,4-Dichlorophenoxyacetic acid; Herbicides; gloves; Protective equipment  
Last updated - 2012-12-14  
British nursing index edition - International Journal of Environmental Research and Public Health [Int. J. Environ. Res. Public Health]. Vol. 8, no. 12, pp. 4608-4622. Dec 2011.  
Corporate institution author - Coble, J; Thomas, K W; Hines, C J; Hoppin, JA; Dosemeci, M; Curwin, B; Lubin, J H; Freeman, LEB; Blair, A; Sandler, D P; Alavanja, MCR  
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Keywords: REVIEW  
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Rec #: 570  
Keywords: NO CONC,NO DURATION  
Call Number: NO CONC (CPY), NO DURATION (CPY)  
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Rec #: 50409  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
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COMMENTS: Cites: J Neurosci. 2005 Apr 6;25(14):3539-50 (medline /15814784)  
ABSTRACT: A subset of neurodegenerative tauopathies is characterized by abundant filamentous inclusions of hyperphosphorylated tau in both neurons and glia. Although the contribution of neuronal tau to behavioral changes and neuronal loss in neurodegenerative diseases has been studied extensively, the functional consequences of tau deposition in glial cells have been less well characterized. To investigate the role of abnormal tau accumulation and aggregation in glial cells, we created a Drosophila model of glial tauopathy by expressing human wild-type tau in adult fly glial cells. Glial expression of tau resulted in robust aggregation of phosphorylated tau into fibrillary inclusions similar to human glial tangles. Tangle formation was accompanied by shortened lifespan and age-dependent apoptotic cell death of both glia and neurons. Genetic manipulation of Janus kinase/signal transducer and activator of transcription (JAK/STAT) signaling modified toxicity of glial tau. We also identified a synergistic interaction of combined tau expression in neurons and glial cells. In summary, we present a genetically tractable model of glial fibrillary tau tangle formation and identify JAK/STAT signaling as mediating the death of both glia and neurons in this model.  
MESH HEADINGS: Animals  
MESH HEADINGS: Animals, Genetically Modified  
MESH HEADINGS: Cell Death/genetics/physiology  
MESH HEADINGS: \*Disease Models, Animal  
MESH HEADINGS: Drosophila melanogaster/genetics  
MESH HEADINGS: Humans  
MESH HEADINGS: Janus Kinases/genetics/\*physiology  
MESH HEADINGS: Neurofibrillary Tangles/genetics/\*metabolism/pathology  
MESH HEADINGS: Neuroglia/\*enzymology/\*pathology  
MESH HEADINGS: Neurons/metabolism/pathology  
MESH HEADINGS: STAT Transcription Factors/genetics/\*physiology  
MESH HEADINGS: Signal Transduction/genetics/physiology  
MESH HEADINGS: Tauopathies/\*enzymology/etiology/\*pathology eng

242. Colovic, M.; Krstic, D.; Petrovic, S.; Leskovac, A.; Joksic, G.; Savic, J.; Franko, M.; Trebse, P., and Vasic, V. Toxic effects of diazinon and its photodegradation products. 2010; 193, (1): 9-18.   
Rec #: 58229  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The toxic effects of diazinon and its irradiated Solutions were investigated using cultivated human blood cells (lymphocytes and erythrocytes) and skin fibroblasts. Ultra Performance Liquid Chromatography (UPLC)-UV/VIS system was used to monitor the disappearance of starting diazinon during 115-min photodegradation and formation of its by-products (diazoxon and 2-isopropyl-6-methyl-4-pyrimidinol (IMP)) as a function of time Dose-dependent AChE and Na(+)/K(+)-ATPase inhibition by diazinon was obtained for all investigated cells Calculated IC(50) (72 h) values, in M, were 7 5 x 10(-6)/3 4 x 10(-5), 8.7 x 10(-5)/6.6 x 10(-5), and 3 0 x 10(-5)/4 6 x 10(-5) for fibroblast, erythrocyte and lymphocyte AChE/Na(+)/K(+)-ATPase, respectively. Results obtained for reference commercially purified target enzymes indicate similar sensitivity of AChE towards diazinon (IC(50) (20 min)-7.8 x 10(-5) M). while diazinon concentrations below 10 mM did not noticeably affect Na(+)/K(+)-ATPase activity Besides, diazinon and IMP induced increasing incidence of micronuclei (via clastogenic mode of action) in a dose-dependent manner up to 2 x 10(-6) M and significant inhibition of cell proliferation and increased level of malondialdehyde at all investigated concentrations Although after 15-min diazinon irradiation formed products do not affect purified commercial enzymes activities, inhibitory effect of irradiated solutions on cell enzymes increased as a function of time exposure to UV light and resulted in significant reduction of AChE (LIP to 28-45%) and Na(+)/K(+)-ATPase (up to 35-40%) at the end of irradiation period Moreover, photodegradation treatment strengthened prooxidative properties of diazinon as well as its potency to induce cytogenetic damage (C) 2009 Elsevier Ireland Ltd All rights reserved.  
Keywords: Diazinon, Photodegradation, Acetylcholinesterase, Na(+)/K(+)-ATPase,  
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Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY   
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ABSTRACT: The physiological role and mechanism of nutrient storage within vacuoles of specific cell types is poorly understood. Transcript profiles from Arabidopsis thaliana leaf cells differing in calcium concentration ([Ca], epidermis < 10 mM versus mesophyll >60 mM) were compared using a microarray screen and single-cell quantitative PCR. Three tonoplast-localized Ca(2+) transporters, CAX1 (Ca(2+)/H(+)-antiporter), ACA4, and ACA11 (Ca(2+)-ATPases), were identified as preferentially expressed in Ca-rich mesophyll. Analysis of respective loss-of-function mutants demonstrated that only a mutant that lacked expression of both CAX1 and CAX3, a gene ectopically expressed in leaves upon knockout of CAX1, had reduced mesophyll [Ca]. Reduced capacity for mesophyll Ca accumulation resulted in reduced cell wall extensibility, stomatal aperture, transpiration, CO(2) assimilation, and leaf growth rate; increased transcript abundance of other Ca(2+) transporter genes; altered expression of cell wall-modifying proteins, including members of the pectinmethylesterase, expansin, cellulose synthase, and polygalacturonase families; and higher pectin concentrations and thicker cell walls. We demonstrate that these phenotypes result from altered apoplastic free [Ca(2+)], which is threefold greater in cax1/cax3 than in wild-type plants. We establish CAX1 as a key regulator of apoplastic [Ca(2+)] through compartmentation into mesophyll vacuoles, a mechanism essential for optimal plant function and productivity.  
MESH HEADINGS: Antiporters/genetics/\*metabolism  
MESH HEADINGS: Arabidopsis/genetics/\*metabolism  
MESH HEADINGS: Arabidopsis Proteins/genetics/\*metabolism  
MESH HEADINGS: Calcium/\*metabolism  
MESH HEADINGS: Cation Transport Proteins/genetics/\*metabolism  
MESH HEADINGS: Cell Wall/metabolism  
MESH HEADINGS: Gene Expression Profiling  
MESH HEADINGS: Gene Expression Regulation, Plant  
MESH HEADINGS: Mutagenesis, Insertional  
MESH HEADINGS: Mutation  
MESH HEADINGS: Oligonucleotide Array Sequence Analysis  
MESH HEADINGS: Phenotype  
MESH HEADINGS: Plant Leaves/cytology/metabolism  
MESH HEADINGS: Plant Stomata/metabolism  
MESH HEADINGS: RNA, Plant/genetics  
MESH HEADINGS: Single-Cell Analysis  
MESH HEADINGS: Vacuoles/\*metabolism eng

244. Coombes, Ryan Hunter and Chambers, Janice E. Hydrolysis of Organophosphate and Model Substrates in African American and Caucasian Southerners by Serum Paraoxonase-1 (Pon1) and Its Relationship to Atherosclerosis. 2011: (UMI# 1502713 ).   
Rec #: 51649  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Paraoxonase-1 (PON1) is a high density lipoprotein (HDL)-associated enzyme displaying esterase and lactonase activity. **PON1 hydrolyzes the oxons of several organophosphorous insecticides (e.g. paraoxon, diazoxon and chlorpyrifos-oxon)** and metabolizes lipid peroxides of low density lipoproteins (LDL) and HDL. As such, PON1 plays a relevant role in determining susceptibility of organophosphate toxicity and cardiovascular disease. The objective of this study was to determine associations of PON1 status (i.e. genotype and activity levels) with atherosclerosis (ATH) in individuals from the Southeastern United States. An additional objective was to determine whether PON1 genotype and/or PON1 activity levels influence the capacity of PON1 to metabolize **chlorpyrifos-oxon (CPO)** at a relatively low concentration. Data indicated increasing PON1 activity assessed by hydrolysis of phenyl acetate is associated with decreased odds of ATH. Furthermore, neither PON1 genotype nor PON1 activity levels influence capacity of PON1 to metabolize CPO at a relatively low concentration.  
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ISSN/ISBN: 9781267059482  
Keywords: Paraoxonase  
Keywords: Chlorpyrifos-oxon  
Keywords: Atherosclerosis  
Keywords: 0383:Surgery  
Keywords: Organophosphates  
Keywords: 0383:Toxicology  
Keywords: Pon1  
Keywords: Health and environmental sciences  
Keywords: 0307:Molecular biology  
Keywords: Health disparities  
Keywords: Biological sciences  
Paraoxonase  
Atherosclerosis  
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912870368  
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0383: Toxicology  
66569  
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0307: Molecular biology  
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Rec #: 58309  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Biological systems are being developed all over EU countries to protect water-bodies from pesticide contamination at farm level. A laboratory experiment was carried out to test the efficiency of a mixture of compost and straw in bio-degrading different mixtures of fungicides usually applied in vineyards. At the same time the effects of fungicide applications on microbial community of biomixture were also evaluated. Results showed that the biomixture had a good capability of degrading pesticides. Indeed, at the end of the experiment (112 days), the concentration of most of the pesticides was close to complete degradation. Denaturing gradient gel electrophoresis (DGGE) analysis showed an evident modification. of microbial diversity after the addition of fungicides. However, at the end of degradation process, no significant changes in the composition of microbial community were seen. In this specific substrate used in the biomixture, yeast flora and ascomycete filamentous fungi seemed to be involved in the degradation activity.  
Keywords: RIBOSOMAL-RNA GENE, PHANEROCHAETE-CHRYSOSPORIUM, FERMENTATION, BIOBEDS,  
ISI Document Delivery No.: 859LF

246. Corlett, P. R.; Frith, C. D., and Fletcher, P. C. From Drugs to Deprivation: a Bayesian Framework for Understanding Models of Psychosis.   
Rec #: 50749  
Keywords: HUMAN HEALTH  
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COMMENTS: Cites: Neuropsychopharmacology. 2004 Aug;29(8):1558-72 (medline /15173844)  
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COMMENTS: Cites: Prog Neurobiol. 2003 Dec;71(6):439-73 (medline /15013228)  
COMMENTS: Cites: Am J Psychiatry. 2004 Feb;161(2):377; author reply 377-8 (medline /14754801)  
COMMENTS: Cites: Brain. 2004 Feb;127(Pt 2):243-58 (medline /14662516)  
COMMENTS: Cites: Ann N Y Acad Sci. 2003 Nov;1003:138-58 (medline /14684442)  
COMMENTS: Cites: J Pers Soc Psychol. 2003 Dec;85(6):989-1005 (medline /14674809)  
COMMENTS: Cites: Brain Res. 2002 Sep 6;948(1-2):155-8 (medline /12383968)  
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COMMENTS: Cites: Trends Neurosci. 2003 Sep;26(9):507-13 (medline /12948663)  
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COMMENTS: Cites: Science. 2003 Mar 21;299(5614):1898-902 (medline /12649484)  
COMMENTS: Cites: Am J Psychiatry. 2003 Jan;160(1):13-23 (medline /12505794)  
COMMENTS: Cites: Neural Netw. 2002 Jun-Jul;15(4-6):719-30 (medline /12371522)  
COMMENTS: Cites: J Neurosci. 2002 Oct 1;22(19):8633-46 (medline /12351737)  
COMMENTS: Cites: Prog Brain Res. 2002;136:373-88 (medline /12143395)  
COMMENTS: Cites: Psychopharmacology (Berl). 2002 May;161(2):168-79 (medline /11981597)  
COMMENTS: Cites: Curr Opin Neurobiol. 2001 Dec;11(6):689-95 (medline /11741019)  
COMMENTS: Cites: Nat Neurosci. 2001 Oct;4(10):1043-8 (medline /11559855)  
COMMENTS: Cites: Nature. 2001 Jul 5;412(6842):79-83 (medline /11452310)  
COMMENTS: Cites: Nature. 2001 Jul 5;412(6842):43-8 (medline /11452299)  
COMMENTS: Cites: Biol Psychiatry. 2001 Jun 1;49(11):954-7 (medline /11398792)  
COMMENTS: Cites: Annu Rev Neurosci. 2001;24:167-202 (medline /11283309)  
COMMENTS: Cites: J Basic Clin Physiol Pharmacol. 2000;11(4):305-20 (medline /11248944)  
ABSTRACT: INTRODUCTION: Various experimental manipulations, usually involving drug administration, have been used to produce symptoms of psychosis in healthy volunteers. Different drugs produce both common and distinct symptoms. A challenge is to understand how apparently different manipulations can produce overlapping symptoms. We suggest that current Bayesian formulations of information processing in the brain provide a framework that maps onto neural circuitry and gives us a context within which we can relate the symptoms of psychosis to their underlying causes. This helps us to understand the similarities and differences across the common models of psychosis.  
ABSTRACT: MATERIALS AND METHODS: The Bayesian approach emphasises processing of information in terms of both prior expectancies and current inputs. A mismatch between these leads us to update inferences about the world and to generate new predictions for the future. According to this model, what we experience shapes what we learn, and what we learn modifies how we experience things.  
ABSTRACT: DISCUSSION: This simple idea gives us a powerful and flexible way of understanding the symptoms of psychosis where perception, learning and inference are deranged. We examine the predictions of the cognitive model in light of what we understand about the neuropharmacology of psychotomimetic drugs and thereby attempt to account for the common and the distinctive effects of NMDA receptor antagonists, serotonergic hallucinogens, cannabinoids and dopamine agonists.  
ABSTRACT: CONCLUSION: By acknowledging the importance of perception and perceptual aberration in mediating the positive symptoms of psychosis, the model also provides a useful setting in which to consider an under-researched model of psychosis-sensory deprivation.  
MESH HEADINGS: Animals  
MESH HEADINGS: Antipsychotic Agents/pharmacology/therapeutic use  
MESH HEADINGS: Bayes Theorem  
MESH HEADINGS: Humans  
MESH HEADINGS: \*Models, Biological  
MESH HEADINGS: Psychoses, Substance-Induced/etiology/\*physiopathology  
MESH HEADINGS: Psychotic Disorders/\*physiopathology eng

247. Cormier, C. M.; Au, K. S., and Northrup, H. A 10 Bp Deletion Polymorphism and 2 New Variations in the Glut1 Gene Associated With Meningomyelocele.   
Rec #: 51529  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Arch Pediatr Adolesc Med. 2007 Aug;161(8):745-50 (medline /17679655)  
COMMENTS: Cites: Hum Mol Genet. 2006 Aug 15;15(16):2490-508 (medline /16825284)  
COMMENTS: Cites: Am J Obstet Gynecol. 2008 Sep;199(3):237.e1-9 (medline /18674752)  
COMMENTS: Cites: JAMA. 2009 Feb 11;301(6):636-50 (medline /19211471)  
COMMENTS: Cites: Paediatr Perinat Epidemiol. 2009 Jan;23(1):41-50 (medline /19228313)  
COMMENTS: Cites: Nucleic Acids Res. 2009 May;37(9):e67 (medline /19339519)  
COMMENTS: Cites: Birth Defects Res A Clin Mol Teratol. 2010 Jan;88(1):35-40 (medline /19711433)  
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COMMENTS: Cites: J Cereb Blood Flow Metab. 1997 Feb;17(2):204-9 (medline /9040500)  
COMMENTS: Cites: Nat Med. 1998 Dec;4(12):1421-4 (medline /9846581)  
COMMENTS: Cites: Biochem Soc Trans. 1997 Aug;25(3):951-4 (medline /9388579)  
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COMMENTS: Cites: Am J Clin Nutr. 2003 Nov;78(5):972-8 (medline /14594784)  
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COMMENTS: Cites: Semin Reprod Endocrinol. 1999;17(2):153-65 (medline /10528366)  
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COMMENTS: Cites: Epidemiology. 2001 Nov;12(6):630-5 (medline /11679789)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 2003 Dec 23;100(26):15613-8 (medline /14673082)  
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ABSTRACT: We sought to examine the diversity and extent of sequence variations in GLUT1 in patients with myelomeningocele (MM) and to identify variations conferring risk of MM. Sequences of the 10 exons and exon-intron boundaries of GLUT1 for 96 patients with MM (48 Caucasians and 48 Mexican Americans) were determined by direct sequencing of DNA. Two new variants were identified. One is located within intron 7 (c.972+17t>a), 17 bases from exon 7. The other is within exon 8 (c.1016T>C) and results in an amino acid change at isoleucine 339 (p.Ile339Thr). A 10 base pair (bp) deletion within intron 9 was genotyped for 457 patients with MM and showed it to be more common in Caucasian MM patients than in Caucasian controls (P = .02). The physiologic role of the 2 newly identified variants in the GLUT1 gene and the 10 bp deletion associated with risk of MM in Caucasian patients is under investigation.  
MESH HEADINGS: Cohort Studies  
MESH HEADINGS: European Continental Ancestry Group/genetics  
MESH HEADINGS: Genetic Association Studies/methods  
MESH HEADINGS: Glucose Transporter Type 1/\*genetics  
MESH HEADINGS: Humans  
MESH HEADINGS: Meningomyelocele/diagnosis/\*genetics  
MESH HEADINGS: Mexican Americans/genetics  
MESH HEADINGS: \*Polymorphism, Single Nucleotide  
MESH HEADINGS: \*Sequence Deletion eng

248. Coscolla, Clara; Castillo, Mercedes; Pastor, Agustin; Yusa, Vicent, and Coscolla, Clara. Determination of 40 Currently Used Pesticides in Airborne Particulate Matter (Pm 10) by Microwave-Assisted Extraction and Gas Chromatography Coupled to Triple Quadrupole Mass Spectrometry. 2011 May 5; 693, (1-2): 72-81.   
Rec #: 47319  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A confirmatory and sensitive procedure has been developed for the determination of 40 currently used pesticides (CUPs) in airborne particulate matter (PM 10) at trace level. The proposed method includes extraction of PM 10-bound pesticides by microwave-assisted extraction (MAE) followed by a gel permeation chromatography (GPC) clean-up and determination by GC-MS/MS. The injection mode and the main parameters in MS/MS were optimized. The matrix effect was also evaluated. Recoveries ranged from 70 to 120% except for pyrimethanil and pirimicarb. The limit of quantification (LOQ) ranged from 1.32 to 39.47 pg m[super]-3, when air volumes of 760 m[super]3 were collected. The method was applied to 38 samples collected from a rural station belonging to the atmospheric monitoring network of the Regional Valencia Government (Spain) during April-June 2010. Eighteen out of 40 pesticides investigated were found in at least one sample (bifenthrin, chlorothalonil, chlorpyriphos-e, chlorpyriphos-m, clorpropham, diazinon, dicofol, diphenylamine, fipronil, fludioxonil, folpet, malathion, metalaxyl, penconazole, quinoxyfen, triadimefon, trifluralin, and vinclozoline), with concentrations ranging from 1.32 to 625.80 pg m[super]-3.  
Keywords: Chromatography  
Keywords: Spain  
Keywords: Mass spectrometry  
Keywords: Particulates  
Keywords: Atmospheric circulation-oceanic circulation coupled models  
Keywords: Malathion  
Keywords: M2 551.510.42:Air Pollution (551.510.42)  
Keywords: Environment Abstracts; Meteorological & Geoastrophysical Abstracts  
Keywords: Gas chromatography  
Keywords: fipronil  
Keywords: Spain, Valencia  
Keywords: Pesticides  
Keywords: Trifluralin  
Keywords: ENA 01:Air Pollution  
Keywords: Rural areas  
Date revised - 2011-06-01  
Language of summary - English  
Location - Spain; Spain, Valencia  
Pages - 72-81  
ProQuest ID - 874193418  
SubjectsTermNotLitGenreText - Gas chromatography; Chromatography; Mass spectrometry; Atmospheric circulation-oceanic circulation coupled models; fipronil; Pesticides; Trifluralin; Particulates; Malathion; Rural areas; Spain; Spain, Valencia  
Last updated - 2012-03-29  
British nursing index edition - Analytica Chimica Acta [Anal. Chim. Acta]. Vol. 693, no. 1-2, pp. 72-81. 5 May 2011.  
Corporate institution author - Coscolla, Clara; Castillo, Mercedes; Pastor, Agustin; Yusa, Vicent  
DOI - e178a357-ab57-46a8-8b21csaobj201; 14977508; 0003-2670 English

249. Coscolla, Clara; Colin, Patrice; Yahyaoui, Abderrazak; Petrique, Olivier; Yusa, Vicent; Mellouki, Abdelwahid; Pastor, Agustin, and CoscollA, Clara. Occurrence of Currently Used Pesticides in Ambient Air of Centre Region (France). 2010 Oct; 44, (32): 3915-3925.   
Rec #: 47669  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Ambient air samples were collected, from 2006 to 2008 at three rural and two urban sites in Centre Region (France) and analyzed for 56 currently used pesticides (CUPs), of which 41 were detected. The four CUPs most frequently detected were the herbicides trifluralin, acetochlor and pendimethalin and the fungicide chlorothalonil, which were found with frequencies ranging between 52 and 78%, and with average concentrations of 1.93, 1.32, 1.84 and 12.15ngma3, respectively. Among the detected pesticides, concentrations of eight fungicides (spiroxamine, fenpropimorph, cyprodinil, tolyfluanid, epoxiconazole, vinchlozolin, fluazinam, fludioxinil), two insecticides (propargite, ethoprophos), and one herbicide (oxyfluorfen) are, to our knowledge, reported for the first time in the literature. The majority of the CUPs showed a seasonal trend, with most of the detections and the highest concentrations occurring during the spring and early summer. The most important pesticides detected were related to arable crops and fruit orchards, the main cultures in this region, highlighting the fact that the main sources come from local applications. Minor differences were found in the profiles of pesticides within rural areas and between rural and urban areas.  
Keywords: P 0000:AIR POLLUTION  
Keywords: Herbicides  
Keywords: Environmental Studies  
Keywords: France  
Keywords: Sulfur dioxide  
Keywords: Pesticides  
Keywords: Fungicides  
Keywords: Air sampling  
Keywords: M2 551.5:General (551.5)  
Keywords: summer  
Keywords: Trifluralin  
Keywords: Meteorological & Geoastrophysical Abstracts; Pollution Abstracts; Environment Abstracts  
Keywords: Seasonal variations  
Keywords: pendimethalin  
Keywords: ENA 01:Air Pollution  
Keywords: Rural areas  
Date revised - 2011-10-01  
Language of summary - English  
Location - France  
Pages - 3915-3925  
ProQuest ID - 811148145  
SubjectsTermNotLitGenreText - Fungicides; Rural areas; Sulfur dioxide; Pesticides; Air sampling; Trifluralin; summer; Herbicides; pendimethalin; Seasonal variations; France  
Last updated - 2011-12-08  
Corporate institution author - CoscollA, Clara; Colin, Patrice; Yahyaoui, Abderrazak; Petrique, Olivier; YusA, Vicent; Mellouki, Abdelwahid; Pastor, Agustin  
DOI - OB-5898967e-37e0-4e37-99c0csaobj202; 13637768; 1352-2310 English

250. Coscolla, Clara; Yusa, Vicent; Beser, M Isabel; Pastor, Agustin, and Coscolla, Clara. Multi-Residue Analysis of 30 Currently Used Pesticides in Fine Airborne Particulate Matter (Pm 2.5) By Microwave-Assisted Extraction and Liquid Chromatography-Tandem Mass Spectrometry. 2009 Dec 18; 1216, (51): 8817-8827.   
Rec #: 44419  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A confirmatory and rapid procedure has been developed for the determination of 30 currently used pesticides (CUP) in fine airborne particulate matter (PM 2.5) at trace level. The proposed method includes extraction of PM 2.5-bound pesticides by microwave-assisted extraction (MAE) followed by a direct injection into LC-MS/MS. The main parameters affecting the MAE extraction (time, temperature and volume of solvent) were optimised using statistical design of experiments (DoE). The matrix effect was also evaluated. Recoveries ranged from 72 to 109% and the limit of quantification (LoQ) was 32.5 pg m super(-3) for chlorpyrifos, 13.5 pg m super(-3) for fenhexamid, imazalil and prochloraz, and 6.5 pg m super(-3) for the rest of pesticides, when air volumes of 760 m super(3) were collected. The method was applied to 54 samples collected from three stations of the atmospheric monitoring network of the Regional Valencia Government (Spain) during April-July 2009. Nineteen out of 30 pesticides investigated were found in at least one sample: omethoate, carbendazim, acetamiprid, thiabendazole, malathion, flusilazole, metalaxyl, azoxystrobin, iprovalicarb, myclobutanil, tebuconazole, triflumizole, cyprodinil, tebufenpyrad, buprofezin, pyriproxyfen, hexythiazox, flufenoxuron and fenazaquin. The measured concentrations ranged from 6.5 to 1208 pg m super(-3). To our knowledge, 11 of the pesticides detected have been reported for the first time in ambient air.  
Keywords: P 0000:AIR POLLUTION  
Keywords: Chromatography  
Keywords: Spain  
Keywords: Solvents  
Keywords: Temperature  
Keywords: Statistical analysis  
Keywords: Mass spectrometry  
Keywords: Particulates  
Keywords: Malathion  
Keywords: Chlorpyrifos  
Keywords: M2 551.510.42:Air Pollution (551.510.42)  
Keywords: Pollution Abstracts; Meteorological & Geoastrophysical Abstracts  
Keywords: Spain, Valencia  
Keywords: Pesticides  
Keywords: Atmospheric monitoring  
Date revised - 2010-03-01  
Language of summary - English  
Location - Spain; Spain, Valencia  
Pages - 8817-8827  
ProQuest ID - 21337999  
SubjectsTermNotLitGenreText - Chromatography; Statistical analysis; Mass spectrometry; Chlorpyrifos; Pesticides; Temperature; Solvents; Particulates; Atmospheric monitoring; Malathion; Spain; Spain, Valencia  
Last updated - 2012-03-29  
British nursing index edition - Journal of Chromatography A [J. Chromatogr.]. Vol. 1216, no. 51, pp. 8817-8827. 18 Dec 2009.  
Corporate institution author - Coscolla, Clara; Yusa, Vicent; Pastor, Agustin  
DOI - MD-0011340607; 11309966; 0021-9673 English

251. Costa, L. G.; Giordano, G.; Cole, T. B.; Marsillach, J., and Furlong, C. E. Paraoxonase 1 (PON1) as a Genetic Determinant of Susceptibility to Organophosphate Toxicity. 2013; PRESS, 8 p.   
Rec #: 2730  
Keywords: REVIEW  
Call Number: NO REVIEW (CPY,CPYO,DZ)  
Notes: Chemical of Concern: CPY,CPYO,DZ,EPRN,PRN

252. Costa, Michael D; Freitas, Mayara L; Soares, Felix Alexandre Antunes; Carratu, Vanessa Santana; Brandao, Ricardo, and Costa, Michael D. Potential of Two New Oximes in Reactivate Human Acetylcholinesterase and Butyrylcholinesterase Inhibited by Organophosphate Compounds: an in Vitro Study. 2011 Dec; 25, (8): 2120-2123.   
Rec #: 43009  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphate (OP) compounds exert inhibition on cholinesterase (ChE) activity by irreversibly binding to the catalytic site of the enzyme. Oximes are compounds generally used to reverse the ChE inhibition caused by OP agents. In this study, we compared the in vitro reactivation potency of two new oximes (oxime 1: butane-2,3-dionethiosemicarbazone; oxime 2: 3-(phenylhydrazono) butan-2-one) against the inhibition on acetylcholinesterase (AChE) and butyrylcholinesterase (BChE) activities induced by chlorpyrifos, diazinon and malathion. Oximes used clinically (obidoxime and pralidoxime) were used as positive control. For this study, human blood (erythrocytes for AChE determination and plasma for BChE determination) was used and different concentrations of oximes (1-100 mu M) were tested. The concentrations of OP used were based on the IC50 for AChE and BChE. Results demonstrated that obidoxime was more effective in reactivate the AChE inhibition induced by OP compounds. However, both newly developed oximes achieved similar reactivations rates that pralidoxime for chlorpyrifos and diazinon-inhibited AChE. For BChE reactivation, none of evaluated oximes achieved positives rates of reactivation, been obidoxime able to reactivate malathion-inhibited BChE only in 24% at the highest concentration. We conclude that both newly developed oximes seem to be promising reactivators of OP-inhibited AChE.  
Keywords: obidoxime  
Keywords: Acetylcholinesterase  
Keywords: Erythrocytes  
Keywords: Enzymes  
Keywords: organophosphates  
Keywords: Cholinesterase  
Keywords: Malathion  
Keywords: Chlorpyrifos  
Keywords: Blood  
Keywords: oximes  
Keywords: Active sites  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Diazinon  
Date revised - 2011-12-01  
Language of summary - English  
Pages - 2120-2123  
ProQuest ID - 911163686  
SubjectsTermNotLitGenreText - Chlorpyrifos; Blood; obidoxime; Acetylcholinesterase; oximes; Erythrocytes; Enzymes; organophosphates; Active sites; Cholinesterase; Diazinon; Malathion  
Last updated - 2012-03-29  
British nursing index edition - Toxicology In Vitro [Toxicol. In Vitro]. Vol. 25, no. 8, pp. 2120-2123. Dec 2011.  
Corporate institution author - Costa, Michael D; Freitas, Mayara L; Carratu, Vanessa Santana; Brandao, Ricardo  
DOI - 24e28ee8-bec7-47cf-9ab4csamfg201; 16058565; 0887-2333 English

253. Cotelle, S. ; Testolin, R. C.; Foltete, A. S.; Bossardi-Rissardi, G.; Silveira, R. A., and Radetski, C. M. Genotoxicity potential of a new natural formicide. 2012; 19, (3): 628-635.   
Rec #: 58349  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background, aim, and scope Assessment of environmental impacts from pesticide utilization should include genotoxicity studies, where the possible effects of mutagenic/genotoxic substances on individuals are assessed. In this study, the genotoxicity profile of the new formicide Macex (R) was evaluated with two genotoxicity tests, namely, the micronucleus test with mouse bone marrow and Vicia faba, and a mutagenicity test using the Ames Salmonella assay. Materials and methods The bacterial reverse mutation test (Salmonella typhimurium strains TA97, TA98, TA100, TA102, and TA1535), the Vicia root tip and mouse micronucleus tests were conducted according to published protocols. Results In the range of the formicide **Macex** (R) concentrations tested from 0.06 to 1.0 gL(-1) (or mgkg(-1) in the mouse test), no genotoxicity was observed in the prokaryotic or eukaryotic test organisms. However, at Macex (R) concentrations of 0.5 gL(-1) and above a significant decrease in the mitotic index (P <= 0.05) in the V. faba was observed. Micronucleus formation was likewise increased in the test organism at concentrations starting at 2.0 gL(-1). Conclusions These data allow us to classify this natural formicide preparation as a product with no geno-environmental-impact when applied at recommended concentrations.  
Keywords: Pesticide genotoxicity, Formicide, Vicia faba, Micronucleus assay, Ames  
ISI Document Delivery No.: 935UL

254. Cowman, D. F. and Mazanti, L. E. Ecotoxicology of "New Generation" Pesticides to Amphibians. 2000: 233-267.   
Rec #: 2280  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ACP,ATZ,AZ,CBF,CBL,CPY,DDVP,DM,DMDP,DMT,DQTBr,DU,DZ,EFV,ES,FNT,FNV,GYP,HXZ,MLN,MLT,MP,MYC,MZB,Maneb,Naled,OML,PMR,PPX,PQT,PRT,PSM,RTN,TFN,TMP,TPR), NO REVIEW (ACP,ATZ,AZ,CBF,CBL,CPY,DDVP,DM,DMDP,DMT,DQTBr,DU,DZ,EFV,ES,FNT,FNV,GYP,HXZ,MLN,MLT,MP,MYC,MZB,Maneb,Naled,OML,PMR,PPX,PQT,PRT,PSM,RTN,TFN,TMP,TPR)  
Notes: Chemical of Concern: ACP,ATZ,AZ,CBF,CBL,CPY,DBN,DDVP,DM,DMDP,DMT,DQTBr,DU,DZ,EFV,EPRN,ES,FNT,FNTH,FNV,GYP,HXZ,MCPA,MLN,MLT,MP,MSMA,MYC,MZB,Maneb,Naled,OML,PIM,PMR,PPX,PQT,PRN,PRT,PSM,RTN,TBT,TFN,TMP,TPR,TRL

255. Crane, A. L.; Klein, K., and Olson, J. R. Bioactivation of chlorpyrifos by CYP2B6 variants. 2012; 42, (12): 1255-1262.   
Rec #: 58369  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: 1. Chlorpyrifos (CPF), an organophosphorus (OP) pesticide, is bioactivated by cytochrome P450s (CYPs) to the active metabolite chlorpyrifos oxon (CPF-O). Given that human CYP2B6 has the highest intrinsic clearance (CL(int)) for CPF bioactivation, CYP2B6 polymorphisms may impact human susceptibility to CPF at real world environmental and occupational CPF exposure levels. 2. CYP2B6.4,.5,.7, and. 18 were over-expressed in mammalian COS-1 cells to assess the impact of CYP2B6 variants on the K(m) and V(max) for bioactivation of CPF. Cell lysates were incubated with CPF (0-100 mu M) and the production of CPF-O was measured via HPLC analysis. CYP2B6 content was determined by western blot. 3. CYP2B6.18 had neither detectable protein nor activity levels. The V(max) value for each remaining variant was significantly higher than wild-type (CYP2B6.1, V(max) 4.13 x 10(4) pmol/min/nmol CYP2B6), with CYP2B6.4,.5, and.7 having V(max) values of 4.52 x 10(5), 1.82 x 10(5), and 9.60 x 10(4) pmol/min/nmol CYP2B6, respectively. The K(m) values for these variants ranged from 0.39 to 1.09 mu M and were not significantly different from wild-type. All active variants examined had significantly higher CL(int) than CYP2B6.1. 4. Variants of CYP2B6 have altered capacity to bioactivate CPF and may affect individual susceptibility by altering the V(max) for CPF-O formation.  
Keywords: Biotransformation, toxicokinetics, pesticide metabolism, cytochrome  
ISI Document Delivery No.: 033PS

256. Crane, Alice L; Klein, Kathrin; Zanger, Ulrich M, and Olson, James R. Effect of Cyp2b6\*6 and Cyp2c19\*2 Genotype on Chlorpyrifos Metabolism. 2012 Mar 11; 293, (1-3): 115-122.   
Rec #: 38949  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos (CPF) is a widely used organophosphorus (OP) pesticide. CPF is bioactivated by cytochrome P450s (CYPs) to the potent cholinesterase inhibitor chlorpyrifos oxon (CPF-O) or detoxified to 3,5,6-trichloro-2-pyridinol (TCPy). Human CYP2B6 has the highest reported Vmax)/Km (intrinsic clearance--CL(int)) for bioactivation while CYP2C19 has the highest reported CL(int) for detoxification of CPF. In this study, 22 human liver microsomes (HLMs) genotyped for common variants of these enzymes (CYP2B6\*6 and CYP2C19\*2) were incubated with 10 Î¼M and 0.5 Î¼M CPF and assayed for metabolite production. While no differences in metabolite production were observed in homozygous CYP2C19\*2 HLMs, homozygous CYP2B6\*6 specimens produced significantly less CPF-O than wild-type specimens at 10 Î¼M (mean 144 and 446 pmol/min/mg, respectively). This correlated with reduced expression of CYP2B6 protein (mean 4.86 and 30.1 pmol/mg, for CYP2B6\*6 and \*1, respectively). Additionally, CYP2B6\*1 and CYP2B6\*6 were over-expressed in mammalian COS-1 cells to assess for the first time the impact of the CYP2B6\*6 variant on the kinetic parameters of CPF bioactivation. The Vmax for CYP2B6\*6 (1.05Ã—105 pmol/min/nmol CYP2B6) was significantly higher than that of CYP2B6\*1 (4.13Ã—104 pmol/min/nmol CYP2B6) but the K(m) values did not differ (1.97 Î¼M for CYP2B6\*6 and 1.84 Î¼M for CYP2B6\*1) resulting in CL(int) rates of 53.5 and 22.5 nL/min/nmol CYP2B6 for \*6 and \*1, respectively. These data suggest that CYP2B6\*6 has increased specific activity but reduced capacity to bioactivate CPF in HLMs compared to wild-type due to reduced hepatic protein expression, indicating that individuals with this genotype may be less susceptible to CPF toxicity. Copyright Â© 2012 Elsevier Ireland Ltd. All rights reserved.  
Keywords: EC 1.14.14.1  
Keywords: 2921-88-2  
Keywords: Animals  
Keywords: Polymorphism, Single Nucleotide  
Keywords: COS Cells  
Keywords: Microsomes, Liver -- metabolism  
Keywords: Humans  
Keywords: Bupropion -- metabolism  
Keywords: Cholinesterase Inhibitors -- metabolism  
Keywords: 34841-39-9  
Keywords: Insecticides  
Keywords: Recombinant Proteins -- metabolism  
Keywords: Biotransformation  
Keywords: CYP2C19 protein, human  
Keywords: Aryl Hydrocarbon Hydroxylases -- genetics  
Keywords: Oxidoreductases, N-Demethylating -- metabolism  
Keywords: Male  
Keywords: Amino Acid Substitution  
Keywords: Insecticides -- metabolism  
Keywords: Oxidoreductases, N-Demethylating -- genetics  
Keywords: EC 1.5.-  
Keywords: Homozygote  
Keywords: Recombinant Proteins  
Keywords: S-mephenytoin N-demethylase  
Keywords: Aryl Hydrocarbon Hydroxylases  
Keywords: Hydroxylation  
Keywords: Chlorpyrifos  
Keywords: Cholinesterase Inhibitors  
Keywords: Aryl Hydrocarbon Hydroxylases -- metabolism  
Keywords: 0  
Keywords: Kinetics  
Keywords: Microsomes, Liver -- enzymology  
Keywords: Bupropion  
Keywords: Cercopithecus aethiops  
Keywords: Oxidoreductases, N-Demethylating  
Keywords: Female  
Keywords: Chlorpyrifos -- metabolism  
Date completed - 2012-04-09  
Date created - 2012-02-20  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 115-122  
ProQuest ID - 922498212  
Last updated - 2013-01-19  
British nursing index edition - Toxicology, March 11, 2012, 293(1-3):115-122  
Corporate institution author - Crane, Alice L; Klein, Kathrin; Zanger, Ulrich M; Olson, James R  
DOI - MEDL-22281205; 22281205; 1879-3185 eng

257. Crawford, Kevin D; Weinstein, John E; Hemingway, Ronald E; Garner, Thomas R; Globensky, Gavin, and Crawford, Kevin D. A Survey of Metal and Pesticide Levels in Stormwater Retention Pond Sediments in Coastal South Carolina. 2010 Jan; 58, (1): 9-23.   
Rec #: 44269  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: During the summer of 2007, sediment samples were collected from 16 stormwater detention ponds and 2 reference ponds located in coastal South Carolina. The sediments were analyzed for more than 30 pesticides with current and historical uses, six polybrominated diphenyl ethers (PBDEs), and seven metals. The results are compared with established screening assessment parameters, with copper found to be the contaminant of highest concern. Lead levels were found to correlate well with pond drainage area, while copper and zinc levels correlated with both pond drainage area and pond surface area. Chlorpyrifos levels were found to correlate with pond surface area. Our results also show that ponds draining commercial areas were likely to have higher levels of zinc and lead in the sediments compared to other pond classes.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Historical account  
Keywords: Heavy metals  
Keywords: ENA 12:Oceans & Estuaries  
Keywords: SW 3030:Effects of pollution  
Keywords: ANW, USA, South Carolina  
Keywords: Copper  
Keywords: Freshwater  
Keywords: Lead  
Keywords: Ponds  
Keywords: Environmental Studies  
Keywords: Polybrominated diphenyl ethers  
Keywords: Agricultural Chemicals  
Keywords: USA, South Carolina  
Keywords: Stormwater runoff  
Keywords: Zinc  
Keywords: Ethers  
Keywords: Drainage Area  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology  
Keywords: Aqualine Abstracts; Environment Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Pollution Abstracts; Oceanic Abstracts; Toxicology Abstracts  
Keywords: O 4060:Pollution - Environment  
Keywords: Sediment pollution  
Keywords: Marine  
Keywords: Metals  
Keywords: Drainage  
Keywords: Surface area  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Brackish  
Keywords: Sediments  
Keywords: Chlorpyrifos  
Keywords: polybrominated diphenyl ethers  
Keywords: Coastal zone  
Keywords: P 1000:MARINE POLLUTION  
Keywords: Pesticides  
Keywords: summer  
Keywords: Contaminants  
Keywords: surface area  
Date revised - 2011-12-01  
Language of summary - English  
Location - USA, South Carolina; ANW, USA, South Carolina  
Pages - 9-23  
ProQuest ID - 909766873  
SubjectsTermNotLitGenreText - Sediment pollution; Coastal zone; Stormwater runoff; Heavy metals; Pesticides; Sediments; Toxicology; Lead; Ponds; Chlorpyrifos; polybrominated diphenyl ethers; Drainage; Surface area; Zinc; Copper; Contaminants; Polybrominated diphenyl ethers; Historical account; Metals; summer; surface area; Agricultural Chemicals; Ethers; Drainage Area; USA, South Carolina; ANW, USA, South Carolina; Freshwater; Brackish; Marine  
Last updated - 2011-12-09  
Corporate institution author - Crawford, Kevin D; Weinstein, John E; Hemingway, Ronald E; Garner, Thomas R; Globensky, Gavin  
DOI - OB-d0df2094-4c9a-48df-ada9mfgefd107; 12598027; CS1021577; 0090-4341; 1432-0703 English

258. Croom, Edward L; Wallace, Andrew D; Hodgson, Ernest, and Croom, Edward L. Human Variation in Cyp-Specific Chlorpyrifos Metabolism. 2010 Oct 29; 276, (3): 184-191.   
Rec #: 40239  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos, an organophophorothioate insecticide, is bioactivated to the neurotoxic metabolite, chlorpyrifos-oxon (CPO) by cytochromes P450 (CYPs). To determine the variability in chlorpyrifos bioactivation, CPO production by human liver microsomes from 17 individual donors was compared relative to phenotype and genotype. CPO production varied over 14-fold between individuals in incubations utilizing 20 mu M chlorpyrifos as substrate, while CPO production varied 57-fold in incubations with 100 mu M chlorpyrifos. For all but two samples, the formation of the less toxic metabolite, 3,5,6-trichloro-2-pyridinol (TCP), was greater than CPO production. TCP production varied 9-fold in incubations utilizing 20 mu M chlorpyrifos as substrate and 19-fold using 100 mu M chlorpyrifos. Chlorpyrifos metabolism by individual human liver microsomes was significantly correlated with CYP2B6, CYP2C19 and CYP3A4 related activity. CPO formation was best correlated with CYP2B6 related activity at low (20 mu M) chlorpyrifos concentrations while CYP3A4 related activity was best correlated with CPO formation at high concentrations (100 mu M) of chlorpyrifos. TCP production was best correlated with CYP3A4 activity at all substrate concentrations of chlorpyrifos. The production of both CPO and TCP was significantly lower at a concentration of 20 mu M chlorpyrifos as compared to 100 mu M chlorpyrifos. Calculations of percent total normalized rates (% TNR) and the chemical inhibitors ketoconazole and ticlopidine were used to confirm the importance of CYP2B6, CYP2C19, and CYP3A4 for the metabolism of chlorpyrifos. The combination of ketoconazole and ticlopidine inhibited the majority of TCP and CPO formation. CPO formation did not differ by CYP2B6 genotype. Individual variations in CPO production may need to be considered in determining the risk of chlorpyrifos poisoning.  
Keywords: ticlopidine  
Keywords: Environment Abstracts; Toxicology Abstracts  
Keywords: Microsomes  
Keywords: Pharmacy And Pharmacology  
Keywords: Poisoning  
Keywords: Metabolites  
Keywords: Genotypes  
Keywords: Ketoconazole  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Insecticides  
Keywords: Cytochrome  
Keywords: Pesticides  
Keywords: Neurotoxicity  
Keywords: Liver  
Keywords: Cytochrome P450  
Keywords: X 24330:Agrochemicals  
Keywords: Metabolism  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 184-191  
ProQuest ID - 808661221  
SubjectsTermNotLitGenreText - ticlopidine; Chlorpyrifos; Microsomes; Insecticides; Neurotoxicity; Poisoning; Liver; Metabolites; Cytochrome P450; Genotypes; Ketoconazole; Metabolism; Cytochrome; Pesticides  
Last updated - 2011-12-13  
Corporate institution author - Croom, Edward L; Wallace, Andrew D; Hodgson, Ernest  
DOI - OB-15ac0000-dfa5-4a64-8924csaobj202; 13783341; 0300-483X English

259. Croom, Edward Lee and Hodgson, Ernest. Human Hepatic Expression of Cyp2b6: Developmental Pattern and in Vitro Bioactivation of Chiorpyrifos. 2009.  
Rec #: 51819  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos is a widely used organophosphorothioate insecticide. Known human exposures to chlorpyrifos range from low dietary levels to the intentional ingestion of concentrated chlorpyrifos solutions as a means of suicide. Chlorpyrifos derives its in vivo toxicity through bioactivation by the cytochromes P450 (CYPs) to the neurotoxic metabolite, chlorpyrifos-oxon (CPO). Chlorpyrifos-induced toxicity occurs when the level of CPO produced exceeds the capacity to detoxify CPO before acetylcholinesterase inhibition occurs. Several human esterases detoxify CPO, the most efficient being the serum esterase, paraoxonase 1 (PON1). The capacity of PON1 to detoxify CPO is understood to depend on genotype, age and diet. PON1 expression can be developmentally delayed not plateauing until at least six months of age. The ability to produce CPO has not been as well studied in humans and there are questions regarding the impact of age, genetic variation on chlorpyrifos bioactivation. To assess CPO production variability, a series of in vitro metabolism studies were conducted with individual human liver microsomes incubated with chlorpyrifos. CPO production varied over 14-fold and was predicted by CYP2B6 activity but no relationship with CP2B6 genotype was observed. CYP expression can change substantially during development. However, CYP2B6 ontogeny has been poorly characterized. Earlier reports suggested a general lack of CYP2B6 expression in neonatal and fetal liver samples. CYP2B6 levels in 220 individual human liver microsomal samples ranging from 10 weeks gestation to 17 years were semi-quantitatively measured by western blot. CYP2B6 protein expression was determined to be significantly higher after the neonatal period and the percent of samples with detectable CYP2B6 protein increased from a low of 60% detectable in the first-trimester to over 90% detectable in samples from donors over 11 years of age. CYP2B6 is highly efficient at producing CPO.  
Start Page: 110  
ISSN/ISBN: 9781124264752  
Keywords: 0383:Surgery  
Keywords: Hepatic expression  
Keywords: Bioactivation  
Keywords: CYP2B6  
Keywords: 0758:Developmental biology  
Keywords: Liver microsomes  
Keywords: Insecticide  
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Keywords: Health and environmental sciences  
Keywords: CYP isoforms  
Keywords: Cytochromes P450  
Keywords: Chiorpyrifos  
2009  
Hepatic expression  
9781124264752  
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0383: Toxicology  
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0383: Surgery  
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759199415  
Chiorpyrifos  
Copyright ProQuest, UMI Dissertations Publishing 2009  
2167983291  
2012-07-10  
0758: Developmental biology  
49384871  
Health and environmental sciences  
CYP isoforms  
3425966  
Croom, Edward Lee  
Cytochromes P450 English

260. Crossan, Angus N; Kennedy, Ivan R, and Crossan, Angus N. Calculation of Pesticide Degradation in Decaying Cotton Gin Trash. 2008 Oct; 81, (4): 355-359.   
Rec #: 45519  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticide residues were measured in stockpiled cotton gin trash (CGT) over a 2-year period. Samples were analysed by GC/MS/MS and interpretation of the results was aided by the presence of DDE residues, remnant from prior DDT use. Fourteen pesticide residues from current agricultural practice were detected in CGT. Several of these, including indoxacarb, profenofos, chlorpyrifos, propargite, bifenthrin, ethion and cyhalothrin, were more persistent than expected on the basis of published data for soil dissipation. The results showed a complex pattern of pesticide residue decay over time because of the simultaneous decomposition of the CGT matrix.  
Keywords: Cyhalothrin  
Keywords: Data processing  
Keywords: agricultural practices  
Keywords: Cotton  
Keywords: Degradation  
Keywords: Pesticide residues  
Keywords: P 5000:LAND POLLUTION  
Keywords: DDE  
Keywords: Decomposition  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Soil  
Keywords: Guanylate cyclase  
Keywords: Agricultural practices  
Keywords: Toxicology Abstracts; Pollution Abstracts; Environment Abstracts  
Keywords: Insecticides  
Keywords: Nitrous oxide  
Keywords: Pesticides  
Keywords: DDT  
Keywords: Decay  
Keywords: X 24330:Agrochemicals  
Date revised - 2010-01-01  
Language of summary - English  
Pages - 355-359  
ProQuest ID - 21253795  
SubjectsTermNotLitGenreText - Chlorpyrifos; Soil; Guanylate cyclase; Agricultural practices; Cyhalothrin; Data processing; Cotton; Pesticide residues; Pesticides; DDT; DDE; Decomposition; agricultural practices; Degradation; Insecticides; Nitrous oxide; Decay  
Last updated - 2011-12-14  
British nursing index edition - Bulletin of Environmental Contamination and Toxicology [Bull. Environ. Contam. Toxicol.]. Vol. 81, no. 4, pp. 355-359. Oct 2008.  
Corporate institution author - Crossan, Angus N; Kennedy, Ivan R  
DOI - MD-0010968715; 11766972; 0007-4861; 1432-0800 English

261. Crow, J. A.; Bittles, V.; Borazjani, A.; Potter, P. M., and Ross, M. K. Covalent inhibition of recombinant human carboxylesterase 1 and 2 and monoacylglycerol lipase by the carbamates JZL184 and URB597. 2012; 84, (9): 1215-1222.   
Rec #: 58419  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Carboxylesterase type 1 (CES1) and CES2 are serine hydrolases located in the liver and small intestine. CES1 and CES2 actively participate in the metabolism of several pharmaceuticals. Recently, carbamate compounds were developed to inhibit members of the serine hydrolase family via covalent modification of the active site serine. URB597 and JZL184 inhibit fatty acid amide hydrolase (FAAH) and monoacylglycerol lipase (MAGL), respectively; however, carboxylesterases in liver have been identified as a major off-target. We report the kinetic rate constants for inhibition of human recombinant CES1 and CES2 by URB597 and JZL184. Bimolecular rate constants (k(inact)/K(i)) for inhibition of CES1 by JZL184 and URB597 were similar [3.9 (+/- 0.2) x 10(3) M(-1) s(-1) and 4.5 (+/- 1.3) x 10(3) M(-1) s(-1), respectively]. However. k(inact)/K(i) for inhibition of CES2 by JZL184 and URB597 were significantly different [2.3 (+/- 1.3) x 10(2) M(-1) s(-1) and 3.9 (+/- 1.0) x 10(3) M(-1) s(-1), respectively]. Rates of inhibition of CES1 and CES2 by URB597 were similar; however. CES1 and MAGL were more potently inhibited by JZL184 than CES2. We also determined kinetic constants for spontaneous reactivation of CES1 carbamoylated by either JZL184 or URB597 and CES1 diethylphosphorylated by paraoxon. The reactivation rate was significantly slower (4.5x) for CES1 inhibited by JZL184 than CES1 inhibited by URB597. Half-life of reactivation for CES1 carbamoylated by JZL184 was 49 +/- 15 h, which is faster than carboxylesterase turnover in HepG2 cells. Together, the results define the kinetics of inhibition for a class of drugs that target hydrolytic enzymes involved in drug and lipid metabolism. (C) 2012 Elsevier Inc. All rights reserved.  
Keywords: Carboxylesterase, Monoacylglycerol lipase, Carbamate, Bimolecular rate  
ISI Document Delivery No.: 017DL

262. Crow, J. Allen; Middleton, Brandy L.; Borazjani, Abdolsamad; Hatfield, M. Jason; Potter, Philip M., and Ross, Matthew K. Inhibition of carboxylesterase 1 is associated with cholesteryl ester retention in human THP-1 monocyte/macrophages. 2008 Oct; 1781, (10): 643-654.   
Rec #: 3000  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Cholesteryl esters are hydrolyzed by cholesteryl ester hydrolase (CEH) yielding free cholesterol for export from macrophages. Hence, CEH has an important regulatory role in macrophage reverse cholesterol transport (RCT). CEH and human carboxylesterase 1 (CES1) appear to be the same enzyme. CES1 is inhibited by oxons, the bioactive metabolites of organophosphate (OP) pesticides. Here, we show that CES1 protein is robustly expressed in human THP-1 monocytes/macrophages and its biochemical activity inhibited following treatment of cell lysates and intact cells with chlorpyrifos oxon, paraoxon, or methyl paraoxon (with nanomolar IC50 values) or after immunodepletion of CES1 protein. CES1 protein expression in cells is unaffected by a 24-h paraoxon treatment, suggesting that the reduced hydrolytic activity is due to covalent inhibition of CES1 by oxons and not down-regulation of expression. Most significantly, treatment of cholesterol-loaded macrophages with either paraoxon (a non-specific CES inhibitor) or benzil (a specific CES inhibitor) caused enhanced retention of intracellular cholesteryl esters and a Ç£foamyÇ¥ phenotype, consistent with reduced cholesteryl ester mobilization. Thus, exposure to OP pesticides, which results in the inhibition of CES1, may also inhibit macrophage RCT, an important process in the regression of atherosclerosis. Atherosclerosis/ Cholesteryl ester hydrolase/ Carboxylesterase/ Cholesterol metabolism/ Organophosphate/ Benzil

263. Crow, Jallen; Bittles, Victoria; Herring, Katye L; Borazjani, Abdolsamad; Potter, Philip M; Ross, Matthew K, and Crow, JAllen. Inhibition of Recombinant Human Carboxylesterase 1 and 2 and Monoacylglycerol Lipase by Chlorpyrifos Oxon, Paraoxon and Methyl Paraoxon. 2012 Jan 1; 258, (1): 145-150.   
Rec #: 39169  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Oxons are the bioactivated metabolites of organophosphorus insecticides formed via cytochrome P450 monooxygenase-catalyzed desulfuration of the parent compound. Oxons react covalently with the active site serine residue of serine hydrolases, thereby inactivating the enzyme. A number of serine hydrolases other than acetylcholinesterase, the canonical target of oxons, have been reported to react with and be inhibited by oxons. These off-target serine hydrolases include carboxylesterase 1 (CES1), CES2, and monoacylglycerol lipase. Carboxylesterases (CES, EC 3.1.1.1) metabolize a number of xenobiotic and endobiotic compounds containing ester, amide, and thioester bonds and are important in the metabolism of many pharmaceuticals. Monoglyceride lipase (MGL, EC 3.1.1.23) hydrolyzes monoglycerides including the endocannabinoid, 2-arachidonoylglycerol (2-AG). The physiological consequences and toxicity related to the inhibition of off-target serine hydrolases by oxons due to chronic, low level environmental exposures are poorly understood. Here, we determined the potency of inhibition (IC50 values; 15min preincubation, enzyme and inhibitor) of recombinant CES1, CES2, and MGL by chlorpyrifos oxon, paraoxon and methyl paraoxon. The order of potency for these three oxons with CES1, CES2, and MGL was chlorpyrifos oxon>paraoxon>methyl paraoxon, although the difference in potency for chlorpyrifos oxon with CES1 and CES2 did not reach statistical significance. We also determined the bimolecular rate constants (k|>inact/KI) for the covalent reaction of chlorpyrifos oxon, paraoxon and methyl paraoxon with CES1 and CES2. Consistent with the results for the IC50 values, the order of reactivity for each of the three oxons with CES1 and CES2 was chlorpyrifos oxon>paraoxon>methyl paraoxon. The bimolecular rate constant for the reaction of chlorpyrifos oxon with MGL was also determined and was less than the values determined for chlorpyrifos oxon with CES1 and CES2 respectively. Together, the results define the kinetics of inhibition of three important hydrolytic enzymes by activated metabolites of widely used agrochemicals.  
Keywords: Pharmacy And Pharmacology  
Keywords: Statistics  
Keywords: Acetylcholinesterase  
Keywords: Monoglycerides  
Keywords: Carboxylesterase  
Keywords: Enzymes  
Keywords: Metabolites  
Keywords: Toxicity  
Keywords: Paraoxon  
Keywords: Esters  
Keywords: Agrochemicals  
Keywords: Chlorpyrifos  
Keywords: Triacylglycerol lipase  
Keywords: Insecticides  
Keywords: Cannabinoids  
Keywords: serine hydrolase  
Keywords: Kinetics  
Keywords: 2-Arachidonylglycerol  
Keywords: Pharmaceuticals  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Serine  
Date revised - 2012-03-01  
Language of summary - English  
Pages - 145-150  
ProQuest ID - 919309362  
SubjectsTermNotLitGenreText - Statistics; Acetylcholinesterase; Monoglycerides; Enzymes; Carboxylesterase; Metabolites; Paraoxon; Toxicity; Esters; Agrochemicals; Chlorpyrifos; Triacylglycerol lipase; Insecticides; Cannabinoids; serine hydrolase; Kinetics; 2-Arachidonylglycerol; Pharmaceuticals; Serine  
Last updated - 2012-03-22  
Corporate institution author - Crow, JAllen; Bittles, Victoria; Herring, Katye L; Borazjani, Abdolsamad; Potter, Philip M; Ross, Matthew K  
DOI - OB-f79f27ee-a168-47aa-a7e1csamfg201; 16208784; 0041-008X English

264. Crowe, K. M.; Bushway, A. A.; Bushway, R. J., and Davis-Dentici, K. Microbial degaradation of phosmet on blueberry fruit and in aqueous systems by indigenous bacterial flora on lowbush blueberries (Vaccinium angustifolium). 2007; 72, (8): M293-M299.   
Rec #: 58449  
Keywords: NO EFFECT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Phosmet-adapted bacteria Isolated from lowbush blueberries (Vaccinium angustifolium) were evaluated for their ability to degrade phosmet on blueberry fruit and in minimal salt solutions. Microbial metabolism of phosmet by isolates of Enterobacter agglomerans and Pseudomonas fluorescens resulted in significant reductions (P < 0.05; 33.8%) **in phosmet residues oil blueberry fruit.** Degradation was accompanied, by microbial proliferation of phosmet-adapted bacteria. Preferential utilization of phosmet as a carbon source was investigated in minimal salt solutions Inoculated with either E. agglomerans or P ftuorescens and supplemented with phosmet, or phosmet and glucose. Microbial degradation concurrent with the proliferation of P. fluorescens was similar in both liquid systems, indicative of preferential utilization of phosmet as an energy substrate. E. agglomerans exhibited the ability to degrade phosmet as a carbon source, yet in the presence of added glucose, phosmet degradation occurred within the 1st 24 h only followed by total population mortality resulting In no appreciable degradation. Characteristic utilization of glucose by this isolate suggests a possible switch in carbon substrate utilization away from phosmet, which resulted in toxicity from the remaining phosmet. Overall, microbial metabolism of phosmet as an energy source resulted in significant degradation of residues on blueberries and in minimal salt solutions, Thus, the role of adapted strains of E. agglomerans and P fluorescens in degrading phosmet on blueberries represents an extensive plant-microorganism relationship, which is essential to determination of phosmet persistence under pre- and postharvest conditions.  
Keywords: degradation, Enterobacter agglomerans, microbial mineralization,  
ISI Document Delivery No.: 223XJ

265. Csermely, T.; Kalasz, H.; Petroianu, G. A.; Kuca, K.; Darvas, F.; Ludanyi, K.; Mudhafar, A. A., and Tekes, K. Analysis of Pyridinium Aldoximes - A Chromatographic Approach. 2008; 15, (23 ): 2401-2418.   
Rec #: 58459  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pyridinium aldoximes are used as antidotes to organophosphorus cholinesterase inhibitors. All pyridinium aldoximes (oximes) are highly polar quaternary ammonium compounds showing low to minimal blood-brain-barrier (BBB) penetration. Oximes are separated using reversed-phase (RP) HPLC methods and/or thin-layer chromatography (TLC). The chemical structures, elementary compositions, molecular sizes and the calculated logP values of several mono-and bis-pyridinium aldoximes are given. Chromatographic and electrophoretic analyses of oximes are detailed, including the stationary and mobile phase composition and the mode of detection. Degradation pathways and products are also discussed. To characterize oximes lipophilicity/hydrophilicity an in silico method was used and expanded as to describe organophosphorus compound adducts with several pyridinium aldoximes.  
Keywords: Pyridinium aldoximes, lipophilicity, chromatography, blood-brain-barrier  
ISI Document Delivery No.: 360CC

266. Cui, F.; Tan, Y., and Qiao, C. L. Filariasis Vector in China: Insecticide Resistance and Population Structure of Mosquito Culex pipiens Complex. 2007; 63, (5): 453-458.   
Rec #: 580  
Keywords: NO DURATION  
Call Number: NO DURATION (CPY,DDVP,PPX)  
Notes: Chemical of Concern: CPY,DDVP,EPRN,PPX,PRN

267. Cui, Y; Guo, J; Xu, B; Chen, Z, and Cui, Y. Genotoxicity of Chlorpyrifos and Cypermethrin to Icr Mouse Hepatocytes. 2011 Jan; 21, (1): 70-74.   
Rec #: 40189  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Massive application of pesticides had generated a considerable concern in the public. Potentials of chlorpyrifos [0,0-diethyl-0-(3,5,6-trichloro-2-pyridinyl) phosphorothionate] and cypermethrin [(RS)- alpha -cyano-3-phenoxybenzyl (1RS)-cw-trans-3-(2,2-dichlorovinyl)-2, 2-dimethylcyclopropanecarboxylate] to induce the excision-repairable DNA damage, DNA strand breakage, and DNA hypomethylation **in ICR mouse hepatocytes were investigated**. It was showed that chlorpyrifos and cypermethrin didn't increase the incorporation of super(3)H-TdR into DNA of ICR mouse hepatocytes but increased the frequency of comet cells and decreased the 5MeC percentage of ICR mouse hepatocytes. In conclusion, chlorpyrifos and cypermethrin induced no excision-repairable DNA damage but led to DNA strand breakage and DNA hypomethylation in ICR mouse hepatocytes.  
Keywords: Chlorpyrifos  
Keywords: DNA damage  
Keywords: cypermethrin  
Keywords: Environment Abstracts; Toxicology Abstracts  
Keywords: Cypermethrin  
Keywords: Hepatocytes  
Keywords: Pesticides  
Keywords: Genotoxicity  
Keywords: DNA  
Keywords: X 24330:Agrochemicals  
Keywords: ENA 02:Toxicology & Environmental Safety  
Date revised - 2011-06-01  
Language of summary - English  
Pages - 70-74  
ProQuest ID - 874184252  
SubjectsTermNotLitGenreText - Chlorpyrifos; DNA damage; Cypermethrin; Hepatocytes; Genotoxicity; Pesticides; cypermethrin; DNA  
Last updated - 2012-03-29  
British nursing index edition - Toxicology Mechanisms and Methods [Toxicol. Mech. Methods]. Vol. 21, no. 1, pp. 70-74. Jan 2011.  
Corporate institution author - Cui, Y; Guo, J; Chen, Z  
DOI - MD-0016456328; 14972719; 1537-6516 English

268. Culbreth, M. E.; Harrill, J. A.; Freudenrich, T. M.; Mundy, W. R., and Shafer, T. J. Comparison of chemical-induced changes in proliferation and apoptosis in human and mouse neuroprogenitor cells. 2012; 33, (6): 1499-1510.   
Rec #: 58479  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: There is a need to develop rapid and efficient models to screen chemicals for their potential to cause developmental neurotoxicity. Use of in vitro neuronal models, including human cells, is one approach that allows for timely, cost-effective toxicity screening. **The present study compares the sensitivity of human (ReN CX) and mouse (mCNS) neuroprogenitor cell lines to chemicals using a multiplex assay for proliferation and apoptosis, endpoints that are critical for neural development.** Cells were exposed to 0.001-100 mu M concentrations of 11 chemicals (**cadmium, chlorpyrifos oxon, dexamethasone, dieldrin, ketamine, lead, maneb, methylmercury, nicotine, trans-retinoic acid, and trimethyltin**) reported in the literature to affect proliferation and/or apoptosis, and 5 chemicals (dimethyl pthalate, glyphosate, omeprazole, saccharin, and D-sorbitol) with no reports of effects on either endpoint. High-content screening of markers for proliferation (BrdU incorporation) and apoptosis (activated caspase 3 and p53) was used to assess the effect of chemicals in both cell lines. Of the chemicals tested, methylmercury, cadmium, dieldrin, chlorpyrifos oxon, trans-retinoic acid, and trimethyltin decreased proliferation by at least 50% of control in either the ReN CX or mCNS cells. None of the chemicals tested activated caspase 3 or p53 in the ReN CX cells, while methylmercury, cadmium, dieldrin, chlorpyrifos oxon, trimethyltin, and glyphosate all induced at least a doubling in these apoptotic markers in the mCNS cells. Compared to control, cadmium, trans-retinoic acid, and trimethyltin decreased cell viability (ATP levels) by at least 50% in the ReN CX cells, while cadmium, dieldrin, and methylmercury decreased viability by at least 50% in the mCNS cells. Based on these results, BrdU is an appropriate marker for assessing chemical effects on proliferation, and human cells are more sensitive than mouse cells for this endpoint. By contrast, caspase 3 and p53 were altered by environmental chemicals in mouse, but not in human cells. Therefore, these markers are not appropriate to assess the ability of environmental chemicals to induce apoptosis in the ReN CX cells. Published by Elsevier Inc.  
Keywords: Neuroprogenitor cells, Species extrapolation, Developmental  
ISI Document Delivery No.: 063UI

269. Cunha, Jo+úo Paulo; Chueca, Patricia; Garcer+í, Cruz, and Molt+¦, Enrique. Risk assessment of pesticide spray drift from citrus applications with air-blast sprayers in Spain. 2012 Dec; 42, (0): 116-123.   
Rec #: 5410  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: There have been no previous risk assessment studies on citrus pesticides in Spain. The aim of this work was to estimate the risks caused by worst-case drift scenarios of the principal pesticides used on the crop, assessing possible damage to the environment and human health. A field survey was carried out, characterizing the specific conditions of plant protection product applications to citrus crops in Spain. Six targets were identified as being the most affected by droplet spray drift in Spain, and more broadly in most Mediterranean conditions: aquatic organisms, earthworms, bees, adult bystanders, child bystanders and residents. Three drift estimation models were used to assess the amount of drift at specific distances downwind of a field in order to calculate Risk Indicators. These showed safe conditions for earthworms and residents, but also indicated that some pesticides may pose a risk to aquatic organisms, even with a 20-ám buffer zone, and also to bees, and adult and child bystanders. In general, results generated similar consequences of hazard risk independent of the drift prediction model used, indicating that toxicological data are more relevant for predicting risks. Buffer zone/ Environmental risk/ Bystander exposure/ Drift models

270. Curtin, B. F.; Seetharam, K. I.; Dhoieam, P.; Gordon, R. K.; Doctor, B. P., and Nambiar, M. P. Resveratrol induces catalytic bioscavenger paraoxonase 1 expression and protects against chemical warfare nerve agent toxicity in human cell lines. 2008; 103, (5): 1524-1535.   
Rec #: 58489  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Current advances in enzyme bioscavenger prophylactic therapy against chemical warfare nerve agent (CWNA) exposure are moving towards the identification of catalytic bioscavengers that can degrade large doses of organophosphate (OP) nerve agents without self destruction. This is a preferred method compared to therapy with the purified stoichiometric bioscavenger, butyrylcholinesterase, which binds OPs 1:1 and would thus require larger doses for treatment. Paraoxonase-1 (PON-1) is one such catalytic bioscavenger that has been shown to hydrolyze OP insecticides and contribute to detoxification in animals and humans. Here we investigated the effects of a common red wine ingredient, Resveratrol (RSV), to induce the expression of PON-1 in the human hepatic cell line HC04 and evaluated the protection against CWNA simulants. Dose-response curves showed that a concentration of 20 mu M RSV was optimal in inducing PON-1 expression in HC04 cells. RSV at 20 mu M increased the extracellular PON-1 activity approximately 150% without significantly affecting the cells. Higher doses of RSV were cytotoxic to the cells. Resveratrol also induced PON-1 in the human lung cell line A549. RSV pre-treatment significantly (P= 0.05) protected the hepatic cells against exposure to 2 x LD(50) of soman and sarin simulants. However, lung cells were protected against soman simulant exposure but not against sarin simulant exposure following RSV treatment. In conclusion, these studies indicate that dietary inducers, such as RSV, can up-regulate PON-1, a catalytic bioscavenger, which can then hydrolyze and protect against CWNA-induced toxicity, providing a prospective new method to protect against CWNA exposure.  
Keywords: nerve agents, organophosphates, transcriptional inducers, paraoxonase  
ISI Document Delivery No.: 285HP

271. Curwin, Brian D; Hein, Misty J; Barr, Dana B; Striley, Cynthia, and Curwin, Brian D. Comparison of Immunoassay and Hplc-Ms/Ms Used to Measure Urinary Metabolites of Atrazine, Metolachlor, and Chlorpyrifos From Farmers and Non-Farmers in Iowa. 2010 Mar; 20, (2): 205-212.   
Rec #: 40729  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Urine samples were collected from 51 participants in a study investigating pesticide exposure among farm families in Iowa. Aliquots from the samples were sent to two different labs and analyzed for metabolites of atrazine (atrazine mercapturate), metolachlor (metolachlor mercapturate) and chlorpyrifos (TCP) by two different analytical methods: immunoassay and high performance liquid chromatography tandem mass spectrometry (HPLC-MS/MS). HPLC-MS/MS methods tend to be highly specific, but are costly and time consuming. Immunoassay methods are cheaper and faster, but can be less sensitive due to cross reactivity and matrix effects. Three statistical methods were employed to compare the two analytical methods. Each statistical method differed in how the samples that had results below the limit of detection (LOD) were treated. The first two methods involved an imputation procedure and the third method used maximum likelihood estimation (MLE). A fourth statistical method that modeled each lab separately using MLE was used for comparison. The immunoassay and HPLC-MS/MS methods were moderately correlated (correlation 0.40-0.49), but the immunoassay methods consistently had significantly higher geometric mean (GM) estimates for each pesticide metabolite. The GM estimates for atrazine mercapturate, metolachlor mercapturate, and TCP by immunoassay ranged from 0.16-0.98 mu gl super(-1[/s uperscript], 0.24-0.45 mu gl) super(-)1[/s uperscript] and 14-14 mu gl super(-1[/super script], respectively and by HPLC-MS/MS ranged from 0.0015-0.0039 mu gl) super(-) 1 0.12-0.16 mu gl super(-1[/s uperscript], and 2.9-3.0 mu gl) super(-)1[/sup erscript], respectively. Immunoassays tend to be cheaper and faster than HPLC-MS/MS, however, they may result in an upward bias of urinary pesticide metabolite levels.  
Keywords: High-performance liquid chromatography  
Keywords: Metolachlor  
Keywords: Farms  
Keywords: Statistics  
Keywords: Mathematical models  
Keywords: Mass spectrometry  
Keywords: Metabolites  
Keywords: Herbicides  
Keywords: EE 10:General Environmental Engineering  
Keywords: Mass spectroscopy  
Keywords: Environmental Studies  
Keywords: Toxicology Abstracts; Environmental Engineering Abstracts  
Keywords: Chlorpyrifos  
Keywords: USA, Iowa  
Keywords: Urine  
Keywords: Pesticides  
Keywords: Atrazine  
Keywords: Economics  
Keywords: X 24330:Agrochemicals  
Keywords: Immunoassays  
Date revised - 2010-02-01  
Language of summary - English  
Location - USA, Iowa  
Pages - 205-212  
ProQuest ID - 813595937  
SubjectsTermNotLitGenreText - USA, Iowa; Immunoassays; Pesticides; Atrazine; Metabolites; Herbicides; Urine; Chlorpyrifos; Economics; Mass spectrometry; Metolachlor; Statistics; High-performance liquid chromatography; Mass spectroscopy; Farms; Mathematical models  
Last updated - 2011-11-08  
Corporate institution author - Curwin, Brian D; Hein, Misty J; Barr, Dana B; Striley, Cynthia  
DOI - OB-MD-0012741857; 12503153; 1559-0631 English

272. Cyco+ä, Mariusz; ++mijowska, Agnieszka; W+¦jcik, Marcin, and Piotrowska-Seget, Zofia. Biodegradation and bioremediation potential of diazinon-degrading Serratia marcescens to remove other organophosphorus pesticides from soils. 2013 Mar 15-; 117, (0 ): 7-16.   
Rec #: 2750  
Keywords: FATE  
Notes: Chemical of Concern: CPY   
Abstract: The ability of diazinon-degrading Serratia marcescens to remove organophosphorus pesticides (OPPs), i.e. chlorpyrifos (CP), fenitrothion (FT), and parathion (PT) was studied in a mineral salt medium (MSM) and in three soils of different characteristics. This strain was capable of using all insecticides at concentration of 50-ámg/l as the only carbon source when grown in MSM, and 58.9%, 70.5%, and 82.5% of the initial dosage of CP, FT, and PT, respectively was degraded within 14 days. The biodegradation experiment showed that autochthonous microflora in all soils was characterized by a degradation potential of all tested OPPs; however, the initial lag phases for degradation of CP and FT, especially in sandy soil, were observed. During the 42-day experiment, 45.3%, 61.4% and 72.5% of the initial dose of CP, FT, and PT, respectively, was removed in sandy soil whereas the degradation of CP, FT, and PT in the same period, in sandy loam and silty soils reached 61.4%, 79.7% and 64.2%, and 68.9%, 81.0% and 63.6%, respectively. S.-ámarcescens introduced into sterile soils showed a higher degradation potential (5Çô13%) for OPPs removal than those observed in non-sterile soil with naturally occurring attenuation. Inoculation of non-sterile soils with S.-ámarcescens enhanced the disappearance rates of all insecticides, and DT50 for CP, FT, and PT was reduced by 20.7, 11.3 and 13.0 days, and 11.9, 7.0 and 8.1 days, and 9.7, 14.5 and 12.6 days in sandy, sandy loam, and silty soils, respectively, in comparison with non-sterile soils with only indigenous microflora. This ability of S.-ámarcescens makes it a suitable strain for bioremediation of soils contaminated with OPPs. Chlorpyrifos/ Fenitrothion/ Parathion/ Serratia marcescens/ Bioremediation/ Soil

273. Cycon, M.; Wojcik, M., and Piotrowska-Seget, Z. Biodegradation of the organophosphorus insecticide diazinon by Serratia sp and Pseudomonas sp and their use in bioremediation of contaminated soil. 2009; 76, (4): 494-501.   
Rec #: 58529  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An enrichment culture technique was used for the isolation of bacteria responsible for biodegradation of **diazinon** in soil. Three bacterial strains were screened and identified by MIDI-FAME profiling as Serratia liquefaciens, Serratia marcescens and Pseudomonas sp. All isolates were able to grow in mineral salt medium (MSM) supplemented with diazinon (50 mg L(-1)) as a sole carbon source, and within 14 d 80-92% of the initial dose of insecticide was degraded by the isolates and their consortium. Degradation of diazinon was accelerated when MSM was supplemented with glucose. However, this process was linked with the decrease of pH values, after glucose utilization. Studies on biodegradation in sterilized soil showed that isolates and their consortium exhibited efficient degradation of insecticide (100 Ing kg(-1) soil) with a rate constant of 0.032-0.085 d(-1), and DT(50) for diazinon was ranged from 11.5 d to 24.5 d. In contrast, degradation of insecticide in non-sterilized soil, non-supplemented earlier with diazinon, was characterized by a rate constant of 0.014 d(-1) and the 7-d lag phase, during which only 2% of applied dose was degraded. The results suggested a strong correlation between microbial activity and chemical processes during diazinon degradation. Moreover, isolated bacterial strains may have potential for use in bioremediation of diazinon-contaminated soils. (C) 2009 Elsevier Ltd. All rights reserved.  
Keywords: Bioremediation, Organophosphorus insecticides, Diazinon, Serratia sp.,  
ISI Document Delivery No.: 462NU

274. Daam, M. A. ; Cerejeira, M. J.; Van den Brink, P. J., and Brock, T. C. M. Is it possible to extrapolate results of aquatic microcosm and mesocosm experiments with pesticides between climate zones in Europe? 2011; 18, (1): 123-126.   
Rec #: 58539  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: MEDITERRANEAN CONDITIONS, ZOOPLANKTON COMMUNITY, SPECIES SENSITIVITY,  
ISI Document Delivery No.: 703IO

275. Daam, Michiel a; Den Brink, Paul J, and Daam, Michiel A. Implications of Differences Between Temperate and Tropical Freshwater Ecosystems for the Ecological Risk Assessment of Pesticides. 2010 Jan; 19, (1): 24-37.   
Rec #: 48149  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Despite considerable increased pesticide use over the past decades, little research has been done into their fate and effects in surface waters in tropical regions. **In the present review, possible differences in response between temperate and tropical freshwaters to pesticide stress are discussed.** Three underlying mechanisms for these differences are distinguished: (1) climate related parameters, (2) ecosystem sensitivity, and (3) agricultural practices. Pesticide dissipation rates and vulnerability of freshwaters appear not to be consistently higher or lower in tropical regions compared to their temperate counterparts. However, differences in fate and effects may occur for individual pesticides and taxa. Furthermore, intensive agricultural practices in tropical countries lead to a higher input of pesticides and spread of contamination over watersheds. Field studies in tropical farms on pesticide fate in the enclosed and surrounding waterways are recommended, which should ultimately lead to the development of surface water scenarios for tropical countries like developed by the Forum for the co-ordination of pesticide fate models and their use for temperate regions. Future tropical effect assessment studies should evaluate whether specific tropical taxa, not represented by the current standard test species in use, are at risk. If so, tropical model ecosystem studies evaluating pesticide concentration ranges need to be conducted to validate whether selected surrogate indigenous test species are representative for local tropical freshwater ecosystems.  
Keywords: Risk assessment  
Keywords: Farms  
Keywords: agricultural practices  
Keywords: Contamination  
Keywords: Ecosystems  
Keywords: Surface water  
Keywords: Agricultural pollution  
Keywords: SW 3030:Effects of pollution  
Keywords: Tropical Regions  
Keywords: Surface Water  
Keywords: taxa  
Keywords: Watersheds  
Keywords: Risks  
Keywords: Models  
Keywords: Environmental Studies  
Keywords: Agricultural practices  
Keywords: Agricultural Chemicals  
Keywords: Assessments  
Keywords: Ecotoxicology  
Keywords: farms  
Keywords: Vulnerability  
Keywords: X 24330:Agrochemicals  
Keywords: EE 40:Water Pollution: Monitoring, Control & Remediation  
Keywords: Sensitivity  
Keywords: Freshwater environments  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Climate  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Stress  
Keywords: Q5 01504:Effects on organisms  
Keywords: Inland water environment  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Model Studies  
Keywords: Risk  
Keywords: Freshwater ecosystems  
Keywords: Reviews  
Keywords: Tropical environment  
Keywords: Pesticides  
Keywords: Tropical environments  
Keywords: Agricultural Practices  
Keywords: vulnerability  
Keywords: aquatic ecosystems  
Keywords: Toxicology Abstracts; Environment Abstracts; Water Resources Abstracts; Pollution Abstracts; Aqualine Abstracts; Environmental Engineering Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Date revised - 2010-02-01  
Language of summary - English  
Pages - 24-37  
ProQuest ID - 809785322  
SubjectsTermNotLitGenreText - Ecotoxicology; Tropical environment; Agricultural pollution; Climate; Pesticides; Vulnerability; Watersheds; Inland water environment; Risks; Risk assessment; Farms; Contamination; Freshwater environments; Surface water; Stress; Models; Agricultural practices; Freshwater ecosystems; Reviews; Sensitivity; agricultural practices; taxa; farms; Tropical environments; vulnerability; aquatic ecosystems; Risk; Agricultural Chemicals; Assessments; Ecosystems; Agricultural Practices; Tropical Regions; Surface Water; Model Studies  
Last updated - 2011-10-25  
Corporate institution author - Daam, Michiel A; den Brink, Paul J  
DOI - OB-MD-0011941471; 11834370; CS1013408; 0963-9292; 1573-3017 English

276. Daam, Michiel a; Van Den Brink, Paul J, and Daam, Michiel A. Conducting Model Ecosystem Studies in Tropical Climate Zones: Lessons Learned From Thailand and Way Forward. 2011 Apr; 159, (4): 940-946.   
Rec #: 43459  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Little research has been done so far into the environmental fate and side effects of pesticides in the tropics. In addition, those studies conducted in tropical regions have focused almost exclusively on single species laboratory tests. Hence, fate and effects of pesticides on higher-tier levels have barely been studied under tropical conditions. To address this lack of knowledge, four outdoor aquatic model ecosystem experiments using two different test systems were conducted in Thailand evaluating the insecticide chlorpyrifos, the herbicide linuron and the fungicide carbendazim. **Results of these experiments and comparisons of recorded fate and effects with temperate studies have been published previously. The present paper discusses the pros and cons of the methodologies applied and provides indications for i) possible improvements; ii) important aspects that should be considered when performing model ecosystem experiments in the tropics; iii) future research.**  
Keywords: Linuron  
Keywords: Thailand  
Keywords: Tropical climates  
Keywords: Pollution Abstracts; Meteorological & Geoastrophysical Abstracts; Toxicology Abstracts; Environment Abstracts; Sustainability Science Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Environmental factors  
Keywords: Models  
Keywords: Environmental Studies  
Keywords: Environmental pollution  
Keywords: Insecticides  
Keywords: Trophic structure  
Keywords: M2 551.5:General (551.5)  
Keywords: Q5 01505:Prevention and control  
Keywords: Carbendazim  
Keywords: Sampling  
Keywords: X 24330:Agrochemicals  
Keywords: Pollution  
Keywords: Modelling  
Keywords: Climate models  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Climate  
Keywords: Environmental impact  
Keywords: Stress  
Keywords: Herbicides  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Tropical environment  
Keywords: Tropical environments  
Keywords: Pesticides  
Keywords: Fungicides  
Keywords: Zoobenthos  
Keywords: Side effects  
Date revised - 2011-10-01  
Language of summary - English  
Location - Thailand  
Pages - 940-946  
ProQuest ID - 855260358  
SubjectsTermNotLitGenreText - Insecticides; Trophic structure; Tropical environment; Fungicides; Pesticides; Herbicides; Zoobenthos; Environmental factors; Modelling; Linuron; Chlorpyrifos; Climate; Carbendazim; Sampling; Pollution; Side effects; Models; Environmental pollution; Climate models; Tropical climates; Tropical environments; Environmental impact; Stress; Thailand  
Last updated - 2011-12-13  
Corporate institution author - Daam, Michiel A  
DOI - OB-756f85cd-c601-47b5-8443csamfg201; 14366302; CS1146249; 0269-7491 English

277. Dabrowski, J. M.; Murray, K.; Ashton, P. J., and Leaner, J. J. Agricultural impacts on water quality and implications for virtual water trading decisions: Participation and Evaluation for Sustainable River Basin Governance. 2009 Feb 15-; 68, (4): 1074-1082.   
Rec #: 5810  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Research on the flow of virtual water associated with agricultural crop production and trade has focussed almost entirely on water quantity. It is pertinent to consider and quantify the opportunity costs in terms of reduced water quality associated with crop production. This paper investigates the impacts of water quality on virtual water trading by creating a proxy for water quality impacts by calculating the amount of water required to dilute nonpoint-source agrochemical inputs to relevant water quality guideline values. The quantity of water required for dilution of five agrochemicals (two nutrients; nitrogen and phosphorus and three insecticides; azinphos-methyl, chlorpyrifos and endosulfan) was estimated for five crops in South Africa (maize, wheat, sugar cane, citrus and cotton) and compared to consumption of irrigation water (blue water) and rainfall (green water) for the same crops. Results indicate that the volume of water required for dilution is similar to the total sum of green and blue water required for crop production, but significantly greater than blue water use (irrigation use). For all crops phosphorus losses require greater amounts of water for dilution than for nitrogen, while pesticides result in the greatest water quality use. Estimates of water quality use are based on assumptions for a number of input variables (i.e. fertilizer application rates, percentage loss of agrochemicals from cropped areas). A Monte Carlo analysis (5000 iterations) was run to randomly select input variables from within defined ranges. Water quality use was calculated and expressed as a factor of blue water use. For all crops the average factor indicated that the volume of water required for dilution of all agrochemicals was greater than that required for irrigation. The results of this study clearly indicate that the impacts of agriculture on water quality need to be considered in virtual water trading scenarios. The incorporation of a method to predict impacts on water quality provides a comparative tool which generates a more holistic frame of reference for decision making with regard to impacts on the water resource and virtual water trading. Virtual water/ Water quality/ Green water/ Blue water

278. Daglioglu, Nebile; Akcan, Ramazan; Gulmen, Mete Korkut; Yener, Fadile; Efeoglu, Pinar, and Daglioglu, Nebile. Pesticide Intoxications in Cukurova, Turkey: Three Years Analysis. 2011 Dec; 30, (12): 1892-1895.   
Rec #: 46999  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In Cukurova region, pesticide poisonings still remain an unfortunate cause of death, which led to the present study. The autopsy records of Adana Branch of the Council of Forensic Medicine, between 2006 and 2008, were evaluated retrospectively. Deaths that were attributed to pesticide poisoning were included in the scope of the study to identify the type of pesticide, and etiology of intoxication. The frequency and distribution of intoxications were also analyzed in terms of sex and age. In the studied period, a total of 4199 autopsies were referred to the forensic toxicology laboratory for pesticide analysis. Seventy-two cases were positive for pesticide analysis. Of these, 42 (58.33%) were male and 30 (41.67%) were female, with a mean age of 38.8 +/- 20.6 years. Among the inspected pesticides, endosulfan was found to be the most common with 47.2% of prevalence, followed by dichlorvos. This report showed that certain pesticides, endosulfan in particular, remains as common cause of poisonings in Cukurova region.  
Keywords: Intoxication  
Keywords: Autopsy  
Keywords: Age  
Keywords: Etiology  
Keywords: Pharmacy And Pharmacology  
Keywords: Poisoning  
Keywords: Endosulfan  
Keywords: Pesticides  
Keywords: Forensic science  
Keywords: Toxicology Abstracts  
Keywords: X 24330:Agrochemicals  
Keywords: Dichlorvos  
Keywords: Sex  
Date revised - 2012-03-01  
Language of summary - English  
Pages - 1892-1895  
ProQuest ID - 915449070  
SubjectsTermNotLitGenreText - Intoxication; Autopsy; Etiology; Age; Pesticides; Forensic science; Poisoning; Dichlorvos; Sex; Endosulfan  
Last updated - 2012-03-08  
Corporate institution author - Daglioglu, Nebile; Akcan, Ramazan; Gulmen, Mete Korkut; Yener, Fadile; Efeoglu, Pinar  
DOI - OB-09b719aa-16f5-4539-b205mfgefd101; 16150569; 0960-3271 English

279. Dalvie, Mohamed Aqiel; London, Leslie, and Dalvie, Mohamed Aqiel. Risk Assessment of Pesticide Residues in South African Raw Wheat. 2009 Oct; 28, (10): 864-869.   
Rec #: 44569  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The presence of pesticide residues in wheat produced and imported in South Africa was determined and their health risks assessed. Pesticides were detected in all local (median = 1, range: 1-3, n = 71) and imported (median = 1, range: 1-6, n = 13) samples. Multiple pesticides (>1 pesticide) were detected in about 30% local samples and 39% imported samples. Eight different pesticides were detected in total. The most frequently detected pesticides were mercaptothion (99%), permethrin (19%) and chlorpyrifos (17%). Nine (11%) samples exceeded the EU wheat MRL for permethrin (0.05 mg/kg) which included 7 (10%) local samples and 2 (15%) imported samples. The highest fenitrothion level (0.65 mg/kg) corresponds to an intake that was below but near the estimated short-term safety threshold. The results call for an investigation into the levels of pesticide residues in cereal-based food and for tighter regulation and regular monitoring by government and industry.  
Keywords: Chlorpyrifos  
Keywords: wheat  
Keywords: Risk assessment  
Keywords: Triticum aestivum  
Keywords: Pesticide residues  
Keywords: Pesticides  
Keywords: permethrin  
Keywords: Environment Abstracts  
Keywords: South Africa  
Keywords: Crops  
Keywords: ENA 02:Toxicology & Environmental Safety  
Date revised - 2009-09-01  
Language of summary - English  
Location - South Africa  
Pages - 864-869  
ProQuest ID - 20806715  
SubjectsTermNotLitGenreText - Triticum aestivum; South Africa; Pesticide residues; wheat; permethrin; Pesticides; Risk assessment; Chlorpyrifos; Crops  
Last updated - 2011-12-14  
British nursing index edition - Crop Protection [Crop Prot.]. Vol. 28, no. 10, pp. 864-869. Oct 2009.  
Corporate institution author - Dalvie, Mohamed Aqiel; London, Leslie  
DOI - MD-0010463630; 10917659; 0261-2194 English

280. Dalvie, Mohamed Aqiel; Naik, Ina; Channa, Kalavati; London, Leslie, and Dalvie, Mohamed Aqiel. Urinary Dialkyl Phosphate Levels Before and After First Season Chlorpyrifos Spraying Amongst Farm Workers in the Western Cape, South Africa. 2011 Feb; 46, (2): 163-172.   
Rec #: 40009  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The study investigated urinary levels of dialkyl phosphates resulting from pesticide exposure amongst 40 farm workers. Workers were tested (urinary dialkyl phosphate levels, anthropometry, short exposure questionnaire) before and after the first day of seasonal chlorpyrifos spraying. Median baseline urinary dialkyl phosphates was high amongst both non-applicators (1587.5 mu g/g creatinine, n = 8) and applicators (365.6 mu g/g creatinine, n = 9). There was not much evidence of an increase in post-spray dialkyl phosphates levels from pre-spray levels amongst both applicators and non-applicators. Hours mixing, spraying, driving a tractor and hours worked by non-applicators were not significantly associated with an increase in post-spray dialkyl phosphate levels, adjusting for age, height, weight, gender, use of empty pesticide containers and self-reported kidney problems. Past applicator status was weakly positively associated with pre-spray dialkyl phosphate levels adjusting for age, height, weight, and gender, self-reported kidney problems, smoking and alcohol ( beta = 1019.5, p = 0.307, R2= 0.28). The high dialkyl phosphate levels call for an epidemiological investigation into the health effects of organophosphorous pesticides.  
Keywords: Age  
Keywords: South Africa, Western Cape  
Keywords: P 5000:LAND POLLUTION  
Keywords: H 1000:Occupational Safety and Health  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Phosphates  
Keywords: Urine  
Keywords: farms  
Keywords: Pesticides  
Keywords: Gender  
Keywords: Kidney  
Keywords: Pollution Abstracts; Environment Abstracts; Health & Safety Science Abstracts  
Keywords: Occupational exposure  
Date revised - 2011-04-01  
Language of summary - English  
Location - South Africa, Western Cape  
Number of references - 50  
Pages - 163-172  
ProQuest ID - 860378395  
SubjectsTermNotLitGenreText - Chlorpyrifos; Age; Phosphates; Urine; farms; Gender; Pesticides; Kidney; Occupational exposure; South Africa, Western Cape  
Last updated - 2012-12-14  
British nursing index edition - Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants and Agricultural Wastes [J. Environ. Sci. Health, Pt. B: Pestic., Food Contam., Agric. Wastes]. Vol. 46, no. 2, pp. 163-172. Feb 2011.  
Corporate institution author - Dalvie, Mohamed Aqiel; Naik, Ina; Channa, Kalavati; London, Leslie  
DOI - 3f7e2b9f-c6bd-435b-9696mfgefd108; 14432023; 0360-1234; 1532-4109  
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281. Dance-Barnes, S. T.; Kock, N. D.; Floyd, H. S.; Moore, J. E.; Mosley, L. J.; D'agostino, R. B. Jr; Pettenati, M. J., and Miller, M. S. Effects of Mutant Human Ki-Ras(G12c) Gene Dosage on Murine Lung Tumorigenesis and Signaling to Its Downstream Effectors.   
Rec #: 51169  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Studies in cell culture have suggested that the level of RAS expression can influence the transformation of cells and the signaling pathways stimulated by mutant RAS expression. However, the levels of RAS expression in vivo appear to be subject to feedback regulation, limiting the total amount of RAS protein that can be expressed. **We utilized a bitransgenic mouse lung tumor model** that expressed the human Ki-ras(G12C) allele in a tetracycline-inducible, lung-specific manner. Treatment for 12 months with 500 microg/ml of **doxycycline** (DOX) allowed for maximal expression of the human Ki-ras(G12C) allele in the lung, and resulted in the development of focal hyperplasia and adenomas. We determined if different levels of mutant RAS expression would influence the phenotype of the lung lesions. Treatment with 25, 100 and 500 microg/ml of DOX resulted in dose-dependent increases in transgene expression and tumor multiplicity. Microscopic analysis of the lungs of mice treated with the 25 microg/ml dose of DOX revealed infrequent foci of hyperplasia, whereas mice treated with the 100 and 500 microg/ml doses exhibited numerous hyperplastic foci and also adenomas. Immunohistochemical and RNA analysis of the downstream effector pathways demonstrated that different levels of mutant RAS transgene expression resulted in differences in the expression and/or phosphorylation of specific signaling molecules. Our results suggest that the molecular alterations driving tumorigenesis may differ at different levels of mutant Ki-ras(G12C) expression, and this should be taken into consideration when inducible transgene systems are utilized to promote tumorigenesis in mouse models.  
MESH HEADINGS: Animals  
MESH HEADINGS: Anti-Bacterial Agents/pharmacology  
MESH HEADINGS: Dose-Response Relationship, Drug  
MESH HEADINGS: Doxycycline/pharmacology  
MESH HEADINGS: Gene Dosage/\*physiology  
MESH HEADINGS: Genes, ras/\*genetics  
MESH HEADINGS: Immunohistochemistry  
MESH HEADINGS: Lung Neoplasms/\*chemically induced/\*genetics  
MESH HEADINGS: Mice  
MESH HEADINGS: Phenotype  
MESH HEADINGS: RNA, Messenger/biosynthesis/genetics  
MESH HEADINGS: Reverse Transcriptase Polymerase Chain Reaction  
MESH HEADINGS: Signal Transduction/\*drug effects  
MESH HEADINGS: Transgenes/drug effects eng

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Rec #: 2290  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ATZ,BFT,CPY,DCA,DCF,DZ,ESS,FRM,FYC,OXT,PCP,PCZ,PPCP,PPCP2011,STRP,SZ,TBF,TDF,TFR,TTC,VCZ), NO REVIEW (ATZ,BFT,CPY,DCA,DCF,DZ,ESS,FRM,FYC,OXT,PCP,PCZ,PPCP,PPCP2011,STRP,SZ,TBF,TDF,TFR,TTC,VCZ)  
Notes: Chemical of Concern: 24DC,ACY,ATZ,BFT,BPA,CHD,CPY,DBNPA,DCA,DCF,DES,DHD,DZ,EED,EPRN,ESS,FRM,FXT,FYC,HDP,IBP,KTZ,MRX,OXT,PCP,PCZ,PHTH,PPCP,PPCP2011,PRN,PYX,SRL,STRP,SZ,TBF,TDF,TFR,TTC,VCZ

283. Danis, T. G.; Karagiozoglou, D. T.; Tsakiris, I. N.; Alegakis, A. K., and Tsatsakis, A. M. Evaluation of pesticides residues in Greek peaches during 2002-2007 after the implementation of integrated crop management. 2011; 126, (1): 97-103.   
Rec #: 58699  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The incidence and levels of pesticide residues in peaches grown using Integrated Crop Management (ICM) methods in Pella and Imathia, districts of Macedonia, Northern Greece, are hereby presented. A total of 1150 peach samples were collected pre-harvest (June-September) and were analysed during the period of 2002-2007. Residual levels of selected insecticides, fungicides and acaricides were determined by Gas Chromatography-Mass Spectrometry following solid phase extraction. The monitoring program is extended up to 31 pesticides. Twenty-two of them were measured above detection limit, and 8 of them were found present every year. Insecticides represent the highest incidence amongst pesticide categories (654 positive samples, 56.9%) while chlorpyrifos is the most frequent within the category (491 positive samples). The incidence of pyrethrins was the highest in 2007 (26.8%) while bifenthrin was detected most frequently within this category (67 positive samples in 2007). Traceable levels of pesticides were lower than the Maximum Residues Limits (MRLs) in all peach samples. Variances in incidence and levels of pesticides are attributed to some extent to the weather conditions as well as due to abidance by the guidelines of agronomists during blowing and harvest period. Monitoring in agricultural products could be employed as the first step in a chain of biomonitoring studies in humans, and may also be proven to be a good and ample indicator of exposure. (C) 2010 Elsevier Ltd. All rights reserved.  
Keywords: Monitoring, Pesticide residues, Peach, Integrated crop management  
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284. Danner, R.; Chaudhari, S. N.; Rosenberger, J.; Surls, J.; Richie, T. L.; Brumeanu, T. D., and Casares, S. Expression of Hla Class Ii Molecules in Humanized Nod.rag1ko.il2rgcko Mice Is Critical for Development and Function of Human T and B Cells.   
Rec #: 50189  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Nature. 1988 Sep 15;335(6187):256-9 (medline /2970594)  
COMMENTS: Cites: PLoS One. 2009;4(10):e7251 (medline /19802382)  
COMMENTS: Cites: Clin Exp Immunol. 1971 Feb;8(2):305-17 (medline /4929778)  
COMMENTS: Cites: J Infect Dis. 1995 Oct;172(4):974-82 (medline /7561218)  
COMMENTS: Cites: Int Immunol. 1993 Dec;5(12):1509-22 (medline /8312221)  
COMMENTS: Cites: Adv Immunol. 1993;54:229-70 (medline /8379463)  
COMMENTS: Cites: Curr Opin Immunol. 2000 Apr;12(2):179-86 (medline /10712940)  
COMMENTS: Cites: Nat Immunol. 2002 Apr;3(4):383-91 (medline /11862219)  
COMMENTS: Cites: Blood. 2002 Jun 1;99(11):4200-6 (medline /12010826)  
COMMENTS: Cites: J Immunol. 2002 Jul 1;169(1):204-9 (medline /12077246)  
COMMENTS: Cites: Blood. 2002 Nov 1;100(9):3175-82 (medline /12384415)  
COMMENTS: Cites: Science. 2002 Nov 22;298(5598):1630-4 (medline /12446913)  
COMMENTS: Cites: Exp Hematol. 2003 Sep;31(9):789-97 (medline /12962725)  
COMMENTS: Cites: Blood. 1992 Oct 15;80(8):1950-6 (medline /1382714)  
COMMENTS: Cites: Science. 2004 Apr 2;304(5667):104-7 (medline /15064419)  
COMMENTS: Cites: Mod Pathol. 2004 Aug;17(8):918-27 (medline /15263909)  
COMMENTS: Cites: J Immunol. 2004 Nov 1;173(9):5361-71 (medline /15494482)  
COMMENTS: Cites: Blood. 1992 Apr 1;79(7):1704-11 (medline /1558966)  
COMMENTS: Cites: J Immunol. 2005 May 15;174(10):6477-89 (medline /15879151)  
COMMENTS: Cites: Blood. 2005 Sep 1;106(5):1565-73 (medline /15920010)  
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COMMENTS: Cites: Blood. 2006 Jul 15;108(2):487-92 (medline /16410443)  
COMMENTS: Cites: J Immunol. 2006 Feb 15;176(4):2053-8 (medline /16455958)  
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COMMENTS: Cites: Immunol Rev. 1991 Dec;124:139-64 (medline /1666627)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2006 Oct 24;103(43):15951-6 (medline /17038503)  
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COMMENTS: Cites: Curr HIV Res. 2008 Nov;6(6):515-9 (medline /18991616)  
COMMENTS: Cites: J Immunol. 2009 Jan 1;182(1):102-10 (medline /19109140)  
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COMMENTS: Cites: J Exp Med. 2009 Jun 8;206(6):1423-34 (medline /19487422)  
COMMENTS: Cites: Int Immunol. 2009 Jul;21(7):843-58 (medline /19515798)  
COMMENTS: Cites: PLoS One. 2010;5(1):e8639 (medline /20066156)  
COMMENTS: Cites: Clin Immunol. 2010 Apr;135(1):84-98 (medline /20096637)  
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COMMENTS: Cites: J Exp Med. 1990 Oct 1;172(4):1055-63 (medline /2212942)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1989 Oct;86(19):7547-51 (medline /2798426)  
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COMMENTS: Cites: Nat Med. 1996 Dec;2(12):1329-37 (medline /8946831)  
COMMENTS: Cites: J Exp Med. 1997 Nov 3;186(9):1481-6 (medline /9348305)  
COMMENTS: Cites: Immunol Rev. 1997 Dec;160:79-90 (medline /9476667)  
COMMENTS: Cites: Science. 1988 Sep 23;241(4873):1632-9 (medline /2971269)  
ABSTRACT: BACKGROUND: Humanized mice able to reconstitute a surrogate human immune system (HIS) can be used for studies on human immunology and may provide a predictive preclinical model for human vaccines prior to clinical trials. However, current humanized mouse models show sub-optimal human T cell reconstitution and limited ability to support immunoglobulin class switching by human B cells. This limitation has been attributed to the lack of expression of Human Leukocyte Antigens (HLA) molecules in mouse lymphoid organs. Recently, humanized mice expressing HLA class I molecules have been generated but showed little improvement in human T cell reconstitution and function of T and B cells.  
ABSTRACT: METHODS: We have generated NOD.Rag1KO.IL2R&gamma;cKO mice expressing HLA class II (HLA-DR4) molecules under the I-E(d) promoter that were infused as adults with HLA-DR-matched human hematopoietic stem cells (HSC). Littermates lacking expression of HLA-DR4 molecules were used as control.  
ABSTRACT: RESULTS: HSC-infused HLA-DR4.NOD.Rag1KO.IL-2R&gamma;cKO mice developed a very high reconstitution rate (>90%) with long-lived and functional human T and B cells. Unlike previous humanized mouse models reported in the literature and our control mice, the HLA-DR4 expressing mice reconstituted serum levels (natural antibodies) of human IgM, IgG (all four subclasses), IgA, and IgE comparable to humans, and elicited high titers of specific human IgG antibodies upon tetanus toxoid vaccination.  
ABSTRACT: CONCLUSIONS: Our study demonstrates the critical role of HLA class II molecules for development of functional human T cells able to support immunoglobulin class switching and efficiently respond to vaccination.  
MESH HEADINGS: Animals  
MESH HEADINGS: B-Lymphocytes/cytology/\*immunology  
MESH HEADINGS: CD8-Positive T-Lymphocytes/cytology/immunology  
MESH HEADINGS: Hematopoietic Stem Cells/cytology/metabolism  
MESH HEADINGS: Histocompatibility Antigens Class II/\*immunology  
MESH HEADINGS: Homeodomain Proteins/\*metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunization  
MESH HEADINGS: Immunoglobulin Class Switching  
MESH HEADINGS: Immunoglobulins/blood  
MESH HEADINGS: Interleukin Receptor Common gamma Subunit/\*deficiency/metabolism  
MESH HEADINGS: Killer Cells, Natural/cytology/immunology  
MESH HEADINGS: Kinetics  
MESH HEADINGS: Lymphoid Tissue/immunology  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred C57BL  
MESH HEADINGS: Mice, Inbred NOD  
MESH HEADINGS: Mice, Knockout  
MESH HEADINGS: T-Lymphocytes/cytology/\*immunology  
MESH HEADINGS: T-Lymphocytes, Regulatory/cytology/immunology  
MESH HEADINGS: Tetanus Toxin/immunology eng

285. Darko, G; Akoto, O, and Darko, G. Dietary Intake of Organophosphorus Pesticide Residues Through Vegetables From Kumasi, Ghana. 2008 Dec; 46, (12): 3703-3706.   
Rec #: 45379  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Contamination and health risk hazards of organophosphorus pesticides residues in vegetables were studied. Ethyl-chlorpyrifos, observed at an average level of 0.211+/-0.010mgkg super(-) super(1) in 42% of tomato, 0.096+/-0.035mgkg super(-) super(1) in 10% of eggplant and 0.021+ /-0.013mgkg super(-) super(1) in 16% of pepper was below the 0.5mgkg super(-) super(1) MRL. Dichlorvos was the most frequently detected residue in all the samples analyzed. Levels of malathion in tomatoes (0.120+ /-0.101mgkg super(-) super(1)) and pepper (0.143+/-0.042mgkg super(-) super(1)) exceeded the MRL of 0.1mgkg super(-) super(1). Health risks were found to be associated with methyl-chlorpyrifos, ethyl-chlorpyrifos, and omethioate in tomatoes and methyl-chlorpyrifos, ethyl-chlorpyrifos, dichlorvos, monocrotophos and omethioate in eggplant. Routine monitoring of these pollutants in food items is required to prevent, control and reduce the pollution and to minimize health risks.  
Keywords: Food And Food Industries  
Keywords: Diets  
Keywords: Ghana  
Keywords: Pesticides (organophosphorus)  
Keywords: Vegetables  
Keywords: Pesticide residues  
Keywords: Food  
Keywords: dichlorvos  
Keywords: monocrotophos  
Keywords: X 24320:Food Additives & Contaminants  
Keywords: Ingestion  
Keywords: Food contamination  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Dietary intake  
Keywords: Malathion  
Keywords: Lycopersicon esculentum  
Keywords: Pollutants  
Keywords: Pollution Abstracts; Toxicology Abstracts  
Keywords: Pollution  
Keywords: Dichlorvos  
Date revised - 2012-09-01  
Language of summary - English  
Location - Ghana  
Pages - 3703-3706  
ProQuest ID - 289765653  
SubjectsTermNotLitGenreText - Pesticides (organophosphorus); Vegetables; Pollutants; Food; monocrotophos; Food contamination; Dietary intake; Malathion; Pollution; Dichlorvos; Diets; Pesticide residues; dichlorvos; Ingestion; Lycopersicon esculentum; Ghana  
Last updated - 2012-11-09  
Corporate institution author - Darko, G; Akoto, O  
DOI - OB-MD-0009022556; 8836332; 0278-6915 English

286. Das, P. C.; Cao, Y.; Rose, R. L.; Cherrington, N., and Hodgson, E. Enzyme Induction and Cytotoxicity in Human Hepatocytes by Chlorpyrifos and N,N-Diethyl-M-Toluamide (Deet).   
Rec #: 79169  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Xenobiotics, including drugs and environmental chemicals, can influence cytochrome P450 (CYP) levels by altering the transcription of CYP genes. To minimize potential drug-pesticide and pesticide-pesticide interactions it is important to evaluate the potential of pesticides to induce CYP isoforms and to cause cytotoxicity in humans. The present study was designed to examine chlorpyrifos and DEET mediated induction of CYP isoforms and also to characterize their potential cytotoxic effects on primary human hepatocytes. DEET significantly induced CYP3A4, CYP2B6, CYP2A6 and CYP1A2 mRNA expression while chlorpyrifos induced CYP1A1, CYP1A2 and CYP3A4 mRNA, and to a lesser extent, CYP1B1 and CYP2B6 mRNA in primary human hepatocytes. Chlorpyrifos and DEET also mediated the expression of CYP isoforms, particularly CYP3A4, CYP2B6 and CYP1A1, as shown by CYP3A4-specific protein expression, testosterone metabolism and CYP1Al-specific activity assays. DEET is a mild, while chlorpyrifos is a relatively potent, inducer of adenylate kinase and caspase-3/7, an indicator of apoptosis, while inducing 15-20% and 25-30% cell death, respectively. Therefore, DEET and chlorpyrifos mediated induction of CYP mRNA and functional CYP isoforms together with their cytotoxic potential in human hepatocytes suggests that exposure to chlorpyrifos and/or DEET should be considered in human health impact analysis.  
MESH HEADINGS: Adenylate Kinase/metabolism  
MESH HEADINGS: Caspase 3/metabolism  
MESH HEADINGS: Caspase 7/metabolism  
MESH HEADINGS: Cell Death/drug effects  
MESH HEADINGS: Cells, Cultured  
MESH HEADINGS: Chlorpyrifos/\*toxicity  
MESH HEADINGS: Cytochrome P-450 CYP1A1/metabolism  
MESH HEADINGS: Cytochrome P-450 CYP3A/metabolism  
MESH HEADINGS: Cytochrome P-450 Enzyme System/biosynthesis/genetics  
MESH HEADINGS: DEET/\*toxicity  
MESH HEADINGS: Dose-Response Relationship, Drug  
MESH HEADINGS: Enzyme Induction/drug effects  
MESH HEADINGS: Gene Expression Regulation, Enzymologic/drug effects  
MESH HEADINGS: Hepatocytes/\*drug effects/enzymology  
MESH HEADINGS: Humans  
MESH HEADINGS: Insect Repellents/\*toxicity  
MESH HEADINGS: Insecticides/\*toxicity  
MESH HEADINGS: Isoenzymes/biosynthesis/genetics  
MESH HEADINGS: RNA, Messenger/genetics  
MESH HEADINGS: Tumor Cells, Cultured eng

287. Das, Yavuz Kursad; Kaya, Sezai, and Das, Yavuz Kursad. Organophosphorus Insecticide Residues in Honey Produced in Turkey. 2009 Sep; 83, (3): 378-383.   
Rec #: 48339  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In this study, a number of 15 organophoshorus (OP) insecticides were investigated in 275 honey samples in 33 different cities of Turkey, using gas chromatography electron capture detector. The limit of determination values was detected between 0.25 and 9.55ngg super(-1). The correlation coefficients obtained from calibration curves of the OP standards were found to be between 0.992 and 0.999. No insecticide residue was detected in the samples analyzed. This result is highly significant because of its impacts on public health and food safety.  
Keywords: Health & Safety Science Abstracts; Pollution Abstracts; Environment Abstracts; Environmental Engineering Abstracts; Toxicology Abstracts  
Keywords: Organophosphorus compounds  
Keywords: Residues  
Keywords: Food  
Keywords: Turkey  
Keywords: Insecticide residues  
Keywords: EE 10:General Environmental Engineering  
Keywords: Food contamination  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Public health  
Keywords: Insecticides  
Keywords: Gas chromatography  
Keywords: X 24330:Agrochemicals  
Keywords: H 4000:Food and Drugs  
Keywords: Honey  
Keywords: Urban areas  
Date revised - 2010-02-01  
Language of summary - English  
Location - Turkey  
Pages - 378-383  
ProQuest ID - 809525063  
SubjectsTermNotLitGenreText - Insecticides; Gas chromatography; Food; Honey; Public health; Organophosphorus compounds; Residues; Insecticide residues; Food contamination; Urban areas; Turkey  
Last updated - 2011-10-25  
Corporate institution author - Das, Yavuz Kursad; Kaya, Sezai  
DOI - OB-MD-0010969011; 11767831; 0007-4861; 1432-0800 English

288. Dasgupta, S.; Banerjee, K.; Dhumal, K. N., and Adsule, P. G. Optimization of Detection Conditions and Single-Laboratory Validation of a Multiresidue Method for the Determination of 135 Pesticides and 25 Organic Pollutants in Grapes and Wine by Gas Chromatography Time-of-Flight Mass Spectrometry. 2011; 94, (1): 273-285.   
Rec #: 58739  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This paper describes single-laboratory validation of a multiresidue method for the determination of 135 pesticides, 12 dioxin-like polychlorinated biphenyls, 12 polyaromatic hydrocarbons, and bisphenol A in grapes and wine by GC/time-of-flight MS in a total run time of 48 min. The method is based on extraction with ethyl acetate in a sample-to-solvent ratio of 1:1, followed by selective dispersive SPE cleanup for grapes and wine. The GC/MS conditions were optimized for the chromatographic separation and to achieve highest S/N for all 160 target analytes, including the temperature-sensitive compounds, like captan and captafol, that are prone to degradation during analysis. An average recovery of 80-120% with RSD <10% could be attained for all analytes except 17, for which the average recoveries were 70-80%. LOQ ranged within 10-50 ng/g, with <25% expanded uncertainties, for 155 compounds in grapes and 151 in wine. In the incurred grape and wine samples, the residues of buprofezin, chlorpyriphos, metalaxyl, and myclobutanil were detected, with an RSD of <5% (n = 6); the results were statistically similar to previously reported validated methods.  
ISI Document Delivery No.: 719QA

289. Dasgupta, Soma; Banerjee, Kaushik; Patil, Sangram H; Ghaste, Manoj; Dhumal, K N; Adsule, Pandurang G, and Dasgupta, Soma. Optimization of Two-Dimensional Gas Chromatography Time-of-Flight Mass Spectrometry for Separation and Estimation of the Residues of 160 Pesticides and 25 Persistent Organic Pollutants in Grape and Wine. 2010 Jun 11; 1217, (24): 3881-3889.   
Rec #: 47879  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Two-dimensional gas chromatography (GC x GC) coupled with time-of-flight mass spectrometric (TOFMS) method was optimized for simultaneous analysis of 160 pesticides, 12 dioxin-like polychlorinated biphenyls (PCBs), 12 polyaromatic hydrocarbons (PAHs) and bisphenol A in grape and wine. GC x GC-TOFMS could separate all the 185 analytes within 38 min with >85% NIST library-based mass spectral confirmations. The matrix effect quantified as the ratio of the slope of matrix-matched to solvent calibrations was within 0.5-1.5 for most analytes. LOQ of most of the analytes was <=10 mu g/L with nine exceptions having LOQs of 12.5-25 mu g/L. Recoveries ranged between 70 and 120% with <20% expanded uncertainties for 151 and 148 compounds in grape and wine, respectively, with intra-laboratory Horwitz ratio <0.2 for all analytes. The method was evaluated in the incurred grape samples where residues of cypermethrin, permethrin, chlorpyriphos, metalaxyl and etophenprox were detected at below MRL.  
Keywords: polyaromatic hydrocarbons  
Keywords: Cypermethrin  
Keywords: Solvents  
Keywords: X 24320:Food Additives & Contaminants  
Keywords: Permethrin  
Keywords: Toxicology Abstracts; Pollution Abstracts  
Keywords: Mass spectroscopy  
Keywords: Bisphenol A  
Keywords: Metalaxyl  
Keywords: polychlorinated biphenyls  
Keywords: Pollutants  
Keywords: Gas chromatography  
Keywords: Pesticides  
Keywords: Vitaceae  
Keywords: PCB  
Keywords: Wine  
Date revised - 2010-07-01  
Language of summary - English  
Pages - 3881-3889  
ProQuest ID - 744626807  
SubjectsTermNotLitGenreText - polyaromatic hydrocarbons; Cypermethrin; Solvents; Permethrin; Mass spectroscopy; Bisphenol A; polychlorinated biphenyls; Metalaxyl; Pollutants; Gas chromatography; Pesticides; PCB; Wine; Vitaceae  
Last updated - 2011-12-14  
British nursing index edition - Journal of Chromatography A [J. Chromatogr.]. Vol. 1217, no. 24, pp. 3881-3889. 11 Jun 2010.  
Corporate institution author - Dasgupta, Soma; Banerjee, Kaushik; Patil, Sangram H; Ghaste, Manoj; Dhumal, K N; Adsule, Pandurang G  
DOI - 209947ea-4f79-4cb6-9dffcsamfg201; 13139516; 0021-9673 English

290. Davidson, A. L.; Dassa, E.; Orelle, C., and Chen, J. Structure, Function, and Evolution of Bacterial Atp-Binding Cassette Systems.   
Rec #: 51229  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract:   
ABSTRACT: SUMMARY: ATP-binding cassette (ABC) systems are universally distributed among living organisms and function in many different aspects of bacterial physiology. ABC transporters are best known for their role in the import of essential nutrients and the export of toxic molecules, but they can also mediate the transport of many other physiological substrates. In a classical transport reaction, two highly conserved ATP-binding domains or subunits couple the binding/hydrolysis of ATP to the translocation of particular substrates across the membrane, through interactions with membrane-spanning domains of the transporter. Variations on this basic theme involve soluble ABC ATP-binding proteins that couple ATP hydrolysis to nontransport processes, such as DNA repair and gene expression regulation. Insights into the structure, function, and mechanism of action of bacterial ABC proteins are reported, based on phylogenetic comparisons as well as classic biochemical and genetic approaches. The availability of an increasing number of high-resolution structures has provided a valuable framework for interpretation of recent studies, and realistic models have been proposed to explain how these fascinating molecular machines use complex dynamic processes to fulfill their numerous biological functions. These advances are also important for elucidating the mechanism of action of eukaryotic ABC proteins, because functional defects in many of them are responsible for severe human inherited diseases.  
MESH HEADINGS: ATP-Binding Cassette Transporters/genetics/metabolism/\*physiology  
MESH HEADINGS: Adenosine Triphosphate/metabolism  
MESH HEADINGS: Amino Acid Motifs  
MESH HEADINGS: Amino Acid Sequence  
MESH HEADINGS: Biological Transport  
MESH HEADINGS: Evolution, Molecular  
MESH HEADINGS: Gram-Negative Bacteria/genetics/metabolism/\*physiology  
MESH HEADINGS: Models, Molecular  
MESH HEADINGS: Phylogeny  
MESH HEADINGS: Protein Structure, Secondary  
MESH HEADINGS: Sequence Alignment eng

291. Davidson, C.; Stanley, K., and Simonich, S. M. Contaminant residues and declines of the Cascades frog (Rana cascadae) in the California Cascades, USA. 2012; 31, (8): 1895-1902.   
Rec #: 58769  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Populations of Cascades frogs (Rana cascadae) have declined precipitously in the Mount Lassen area, but remain abundant in the other half of their California range in the Klamath Mountains. To evaluate the role of contaminants in Cascade frog declines, we sampled sediment and **frog tadpole tissue** at 31 sites where Cascades frogs had disappeared and sites where Cascades frogs are still present across the Lassen and Klamath regions. Pacific chorus frogs (Pseudacris regilla) were tested and used as surrogates for residue concentrations in Cascades frogs. We analyzed a total of 79 **tadpole samples** for 73 semivolatile contaminants including pesticides, polychlorinated biphenyls (PCBs), and polycyclic aromatic hydrocarbons (PAHs). The most frequently detected residue was endosulfan sulfate, followed by dacthal, chlorpyrifos, PCB 187, endosulfan II, trans-chlordane, and trans-nonachlor. Chorus frogs had similar residue concentrations as Cascades frogs for most but not all chemicals, indicating that chorus frogs can serve as a reasonable proxy for chemical concentrations in Cascades frogs. None of the contaminants in tissue or sediment had significantly higher concentrations at sites where Cascades frogs have disappeared than at sites where Cascades frogs are still present. We found no evidence to support the hypothesis that the contaminants analyzed have contributed to the decline of Cascades frogs in northern California, although we were able to analyze only a handful of the over 300 pesticides currently used in the area. Environ. Toxicol. Chem. 2012; 31: 18951902. (c) 2012 SETAC  
Keywords: Amphibian declines, Pesticides, Rana cascadae, Pseudacris regilla  
ISI Document Delivery No.: 974ZL

292. Davidson, C. M.; Northrup, H.; King, T. M.; Fletcher, J. M.; Townsend, I.; Tyerman, G. H., and Au, K. S. Genes in Glucose Metabolism and Association With Spina Bifida.   
Rec #: 51579  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Am J Hum Genet. 1999 Mar;64(3):861-70 (medline /10053021)  
COMMENTS: Cites: Nat Med. 1998 Dec;4(12):1421-4 (medline /9846581)  
COMMENTS: Cites: Am J Hum Genet. 1999 Oct;65(4):1208-10 (medline /10486344)  
COMMENTS: Cites: Semin Reprod Endocrinol. 1999;17(2):153-65 (medline /10528366)  
COMMENTS: Cites: N Engl J Med. 1999 Nov 11;341(20):1509-19 (medline /10559453)  
COMMENTS: Cites: Diabetes. 1999 Dec;48(12):2454-62 (medline /10580436)  
COMMENTS: Cites: Teratology. 2000 Mar;61(3):231-5 (medline /10661913)  
COMMENTS: Cites: J Biol Chem. 2000 Dec 22;275(51):40252-7 (medline /10995754)  
COMMENTS: Cites: Mech Dev. 2000 Dec;99(1-2):159-62 (medline /11091085)  
COMMENTS: Cites: Trends Endocrinol Metab. 2001 Mar;12(2):78-82 (medline /11167126)  
COMMENTS: Cites: Hum Genet. 2001 Jan;108(1):14-9 (medline /11214902)  
COMMENTS: Cites: Genes Dev. 2001 Jun 1;15(11):1406-18 (medline /11390360)  
COMMENTS: Cites: Mol Cell Biol. 2001 Sep;21(17):5899-912 (medline /11486029)  
COMMENTS: Cites: Epidemiology. 2001 Nov;12(6):630-5 (medline /11679789)  
COMMENTS: Cites: J Med Genet. 2001 Dec;38(12):863-7 (medline /11768390)  
COMMENTS: Cites: Genes Dev. 2002 Mar 15;16(6):676-80 (medline /11914272)  
COMMENTS: Cites: Endocrinology. 2002 May;143(5):1922-31 (medline /11956175)  
COMMENTS: Cites: Science. 2002 Aug 9;297(5583):1007-13 (medline /12114529)  
COMMENTS: Cites: Br J Nutr. 2003 Jan;89(1):3-9 (medline /12568659)  
COMMENTS: Cites: Birth Defects Res A Clin Mol Teratol. 2003 Jun;67(6):429-37 (medline /12962287)  
COMMENTS: Cites: Mol Cell Biol. 2003 Oct;23(20):7315-28 (medline /14517300)  
COMMENTS: Cites: Am J Clin Nutr. 2003 Nov;78(5):972-8 (medline /14594784)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2003 Dec 23;100(26):15613-8 (medline /14673082)  
COMMENTS: Cites: Am J Obstet Gynecol. 2003 Dec;189(6):1713-9 (medline /14710103)  
COMMENTS: Cites: Genes Dev. 2004 Jun 1;18(11):1241-50 (medline /15145827)  
COMMENTS: Cites: Diabetes. 2004 Jun;53(6):1603-8 (medline /15161768)  
COMMENTS: Cites: Mol Cell. 2004 Dec 3;16(5):819-30 (medline /15574336)  
COMMENTS: Cites: Cell. 2004 Dec 17;119(6):831-45 (medline /15607979)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2005 Mar 8;102(10):3846-51 (medline /15731347)  
COMMENTS: Cites: Mol Cell Biol. 2005 Aug;25(16):7323-32 (medline /16055740)  
COMMENTS: Cites: J Hum Genet. 2006;51(2):85-91 (medline /16333525)  
COMMENTS: Cites: Diabetologia. 2006 May;49(5):1027-38 (medline /16508779)  
COMMENTS: Cites: Hum Mol Genet. 2006 Aug 15;15(16):2490-508 (medline /16825284)  
COMMENTS: Cites: Arch Pediatr Adolesc Med. 2007 Aug;161(8):745-50 (medline /17679655)  
COMMENTS: Cites: Am J Obstet Gynecol. 1995 Oct;173(4):1036-41 (medline /7485290)  
COMMENTS: Cites: Biochem Biophys Res Commun. 1995 Apr 6;209(1):95-102 (medline /7726869)  
COMMENTS: Cites: Biochem Biophys Res Commun. 1994 Mar 30;199(3):1525-31 (medline /8147898)  
COMMENTS: Cites: Endocrinology. 1994 Feb;134(2):869-78 (medline /8299581)  
COMMENTS: Cites: JAMA. 1996 Apr 10;275(14):1093-6 (medline /8601928)  
COMMENTS: Cites: Diabetes. 1997 Feb;46(2):313-6 (medline /9000710)  
COMMENTS: Cites: Diabetes. 1997 Jul;46(7):1189-97 (medline /9200655)  
COMMENTS: Cites: Endocrinology. 1997 Aug;138(8):3395-401 (medline /9231793)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1999 May 11;96(10):5598-603 (medline /10318930)  
ABSTRACT: The authors test single nucleotide polymorphisms (SNPs) in coding sequences of 12 candidate genes involved in glucose metabolism and obesity for associations with spina bifida. Genotyping was performed on 507 children with spina bifida and their parents plus anonymous control DNAs from Hispanic and Caucasian individuals. The transmission disequilibrium test was performed to test for genetic associations between transmission of alleles and spina bifida in the offspring (P < .05). A statistically significant association between Lys481 of HK1 (G allele), Arg109Lys of LEPR (G allele), and Pro196 of GLUT1 (A allele) was found ( P = .019, .039, and .040, respectively). Three SNPs on 3 genes involved with glucose metabolism and obesity may be associated with increased susceptibility to spina bifida.  
MESH HEADINGS: Catalase/genetics  
MESH HEADINGS: European Continental Ancestry Group/statistics &amp  
MESH HEADINGS: numerical data  
MESH HEADINGS: Female  
MESH HEADINGS: Gene Expression Profiling  
MESH HEADINGS: Genes, p53  
MESH HEADINGS: Genetic Predisposition to Disease  
MESH HEADINGS: Genotype  
MESH HEADINGS: Glucose Metabolism Disorders/ethnology/\*genetics  
MESH HEADINGS: Glucose Transporter Type 1/\*genetics  
MESH HEADINGS: Hexokinase/\*genetics  
MESH HEADINGS: Hispanic Americans/statistics &amp  
MESH HEADINGS: numerical data  
MESH HEADINGS: Humans  
MESH HEADINGS: Leptin/genetics  
MESH HEADINGS: Male  
MESH HEADINGS: Obesity/ethnology/genetics  
MESH HEADINGS: Polymorphism, Single Nucleotide  
MESH HEADINGS: Receptor, Insulin/genetics  
MESH HEADINGS: Receptors, Leptin/\*genetics  
MESH HEADINGS: Spinal Dysraphism/ethnology/\*genetics  
MESH HEADINGS: Superoxide Dismutase/genetics eng

293. Davies, J; Roberts, D; Eyer, P; Buckley, N; Eddleston, M, and Davies, J. Hypotension in Severe Dimethoate Self-Poisoning. 2008 Nov; 46, (9): 880-884.   
Rec #: 45419  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Introduction. Acute self-poisoning with the organophosphorus (OP) pesticide dimethoate has a human case fatality three-fold higher than poisoning with chlorpyrifos despite similar animal toxicity. The typical clinical presentation of severe dimethoate poisoning is quite distinct from that of chlorpyrifos and other OP pesticides: many patients present with hypotension that progresses to shock and death within 12-48 h post-ingestion. The pathophysiology of this syndrome is not clear. Case reports. We present here three patients with proven severe dimethoate poisoning. Clinically, all had inappropriate peripheral vasodilatation and profound hypotension on presentation, which progressed despite treatment with atropine, i.v. fluids, pralidoxime chloride, and inotropes. All died 2.5-32 h post-admission. Continuous cardiac monitoring and quantification of troponin T provided little evidence for a primary cardiotoxic effect of dimethoate. Conclusion. Severe dimethoate self-poisoning causes a syndrome characterized by marked hypotension with progression to distributive shock and death despite standard treatments. A lack of cardiotoxicity until just before death suggests that the mechanism is of OP-induced low systemic vascular resistance (SVR). Further invasive studies of cardiac function and SVR, and post-mortem histology, are required to better describe this syndrome and to establish the role of vasopressors and high-dose atropine in therapy.  
Keywords: Heart  
Keywords: Hypotension  
Keywords: Troponin T  
Keywords: Carcinoembryonic antigen  
Keywords: Poisoning  
Keywords: Chloride  
Keywords: Toxicity  
Keywords: Chlorpyrifos  
Keywords: Case reports  
Keywords: Shock  
Keywords: Vasodilation  
Keywords: Pesticides  
Keywords: Dimethoate  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Atropine  
Keywords: Vascular system  
Date revised - 2009-01-01  
Language of summary - English  
Pages - 880-884  
ProQuest ID - 19801043  
SubjectsTermNotLitGenreText - Dimethoate; Hypotension; Poisoning; Chlorpyrifos; Atropine; Shock; Pesticides; Heart; Toxicity; Case reports; Chloride; Carcinoembryonic antigen; Vascular system; Troponin T; Vasodilation  
Last updated - 2011-12-14  
British nursing index edition - Clinical Toxicology [Clin. Toxicol.]. Vol. 46, no. 9, pp. 880-884. Nov 2008.  
Corporate institution author - Davies, J; Roberts, D; Eyer, P; Buckley, N; Eddleston, M  
DOI - MD-0009045524; 8859300; 1556-3650 English

294. Davis, M. K.; Boone, J. S.; Moran, J. E.; Tyler, J. W., and Chambers, J. E. Assessing intermittent pesticide exposure from flea control collars containing the organophosphorus insecticide tetrachlorvinphos. 2008; 18, (6): 564-570.   
Rec #: 58789  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Fleas are a persistent problem for pets that require implementation of control measures. Consequently, pesticide use by homeowners for flea control is common and may increase pesticide exposure for adults and children. Fifty-five pet dogs (23 in study 1; 22 in study 2) of different breeds and weights were treated with over-the-counter flea collars containing **tetrachlorvinphos** (TCVP). During study 1, fur of treated dogs was monitored for transferable TCVP residues using cotton gloves to pet the dogs during 5-min rubbings post-collar application. Plasma cholinesterase (ChE) activity was also measured in treated dogs. Average amounts of TCVP transferred from the fur of the neck (rubbing over the collar) and from the back to gloves at 3 days post-collar application were 23,700 +/- 2100 and 260 +/- 50 mu g/glove, respectively. No inhibition of plasma ChE was observed. During study 2, transferable TCVP residues to cotton gloves were monitored during 5-min rubbings post-collar application. Transferable residues were also monitored on cotton tee shirts worn by children and in the first morning urine samples obtained from adults and children. Average amounts of TCVP transferred to gloves at 5 days post-collar application from the neck (over the collar) and from the back were 22,400 +/- 2900 and 80 +/- 20 mu g/glove, respectively. Tee shirts worn by children on days 7-11 contained 1.8 +/- 0.8 mu g TCVP/g shirt. No significant differences were observed between adults and children in urinary 2,4,5-trichloromandelic acid (TCMA) levels; however, all TCMA residues (adults and children) were significantly greater than pretreatment concentrations (alpha=0.05). The lack of ChE inhibition in dogs and the low acute toxicity level of TCVP (rat oral LD(50) of 4-5 g/kg) strongly suggest that TCVP is rapidly detoxified and excreted and therefore poses a very low toxicological risk, despite these high residues.  
Keywords: tetrachlorvinphos, human pesticide exposure, flea control, transferable  
ISI Document Delivery No.: 364CJ

295. Davis, R. W. and Kamble, S. T. Dispersal of permethrin and a water-soluble dye affected by soil types and rodding tips after subsoil applications to control subterranean termites (Isoptera : Rhinotermitidae). 2008; 52, (2): 323-344.   
Rec #: 58799  
Keywords: METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Dispersal of **permethrin** (Dragent (R) FT) affected by soil types (sandy loam and silty clay loam) and rodding tips (straight, 360 degrees, 180 degrees [3.8 and 7.6 liters/min]) was investigated. Dragnet FT diluted in water (0.5% active ingredient [At]) was applied to soil at 6.06 liters per rodding point with a B&G rodding application tool (1.22 m depth) using a constant application pressure (172.4 kPa). Neither rodding tool tips nor soils provided significant differences in permethrin dispersal. The cis- and trans-permethrin isomers distributed similarly in both soils. The largest permethrin concentrations were observed in all applications within 15 cm of the rodding point (> 100 mu g/g [ppm]) and 0.0-1.22 m below the soil surface. Smaller quantities were generally detected in the soil with increase in distance from the rodding point (0-100 mu g/g). To provide sufficient permethrin overlap, rodding spacing should be positioned 15 cm apart. This will create a continuous termiticide barrier from 0.0-1.22 in beneath the soil surface along a structure's foundation for protection from subterranean termites. Rodding spacing of 30 cm will provide a barrier 0.61-1.22 m below the surface, but it may result in untreated areas between the soil surface and the treated soil (0.0-0.61m). Significant differences in permethrin dispersal are not expected regardless of the rodding tips or soil types. The validity of using a water-soluble fluorescent dye to estimate the dispersal patterns of permethrin in soils after rodding was also studied. Dragnet FT (0.5% At) and Pylam D&C Green #8 (hidacid uranine 0.5% AI) dye were concurrently applied in the sandy loam and silty clay loam soils. The dye was easier to visually detect in the sandy loam soil (> 83 mu g/g@ 90% probability) than in the silty clay loam soil (> 143 mu g/g@ 90% probability). The dye dispersal patterns were similar in both soils to those observed for permethrin. Visualdye (>83 mu g/g) and permethrin (> 10.00 mu g/g) were dispersed similarly in 83.7% of the sandy loam soil samples. However, in Silty clay loam, visual dye (> 143 mu g/g) and permethrin (> 10.00 mu g/g) were distributed similarly In 79.7% of the soil samples. Visual dye may be used as a conservative estimator of permethrin (> 10.00 mu g/g) dispersal in the silty clay loam. However, caution should be used when predicting permethrin distribution in sandy loam with a Visual dye because the dye may overestimate permethrin lateral dispersal.  
Keywords: permethrin, subterranean termites, termiticide, dispersal, distribution,  
ISI Document Delivery No.: 347TF

296. Davis, R. W. and Kamble, S. T. Distribution of Chlorpyrifos and a Water-Soluble Dye Affected by Rodding Tips and Soil Types Following Subsoil Applications to Control Subterranean Termites (Isoptera: Rhinotermitidae). SOIL; 2009; 54, (1): 175-198.   
Rec #: 2910  
Keywords: FATE  
Call Number: NO FATE (CPY)  
Notes: Chemical of Concern: CPY

297. Davis, R. W. and Kamble, S. T. Effect of rod tips and soil types on the distribution of imidacloprid and a water soluble dye following subsoil rodding application for subterranean termite control (Isoptera : Rhinotermitidae). 2008; 51, (2): 437-460.   
Rec #: 58809  
Keywords: METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effects of soil type (sandy loam and silty clay loam), and rodding tool tip (straight, 360 degrees, 180 degrees [3.8 and 7.6 liters/min]) on the distribution of Premise (R) 75 (**imidacloprid**) were studied. Water diluted Premise 75 (0.05% AI, 6.06 liters) was applied to the soils per rodding point with a B&G (R) rodding application tool (1.22 m) using a constant application pressure (172.4 kPa). No significant differences in imidacloprid distribution resulted from the rodding tip or soil type. In all applications, the largest imidacloprid concentrations were located within 0.15 m of the injection site (> 10 mu g/g) 0-1.22 m below the soil surface. Generally, lesser termiticide quantities were detected in the soil with an increase in distance from the injection point (0-10 mu g/g). Based on these results, rodding hole spacing 15 cm apart will provide sufficient imidacloprid overlap. This will create a continuous soil termiticide barrier from 0.0-1.22 m beneath the soil surface along a structure's foundation for protection from subterranean termites. Rodding spacing of 30 cm will provide a continuous barrier 0.61-1.22 m below the surface, but may result in untreated soil areas between the soil surface and the treated soil (0.0-61.0 m). Important differences in imidacloprid distribution are not expected regardless of the rodding tip selection or these soil types. The validity of using a water soluble fluorescent dye to estimate the distribution patterns of a termiticide active ingredient in Nebraska soils after rodding also was investigated. Premise 75 (imidacloprid 0.05% AI) and Pylam D&C Green #8 (hidacid uranine 0.5% AI) were concurrently applied. The dye was easier to visually detect in the sandy loam (>83ppm @ 90% probability) than in the silty clay loam (> 143 ppm @ 90% probability). The dye distribution patterns in the soils were similar to those observed for imidacloprid. In the sandy loam, visual dye (>83 ppm) and imidacloprid (> 1.00 mu g/g) were distributed similarly in 88.8% of the soil samples. In the silty clay loam, visual dye (> 143 ppm) and imidacloprid (> 1.00 mu g/g) were distributed similarly in 83.7% of the soil samples. The dye (visual) may be used as a conservative estimator of imidacloprid (> 1.00 mu g/g) distribution in the silty clay loam. However, caution should be exercised when using dye in predicting imidacloprid distribution in sandy loam soils since it may overestimate insecticide lateral dispersion.  
Keywords: subterranean termites, imidacloprid, termiticide distribution, dye,  
ISI Document Delivery No.: 280IL

298. Dayton, S B; Sandler, D P; Blair, a; Alavanja, M; Freeman, Leb; Hoppin, Ja, and Dayton, S B. Pesticide Use and Myocardial Infarction Incidence Among Farm Women in the Agricultural Health Study. 2010 Jul; 52, (7): 693-697.   
Rec #: 44029  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Objective: To evaluate the relationship between pesticide use and myocardial infarction (MI) among farm women. Background: Little is known about the potential association between pesticide use and cardiovascular outcomes. Methods: We used logistic regression to evaluate pesticide use and self-reported incident nonfatal MI among women in the Agricultural Health Study. Results: Of those Mi-free at enrollment (n = 22,425), 168 reported an MI after enrollment. We saw no association with pesticide use overall. Six of 27 individual pesticides evaluated were significantly associated with nonfatal MI, including chlorpyrifos, coumaphos, carbofuran, metalaxyl, pendimethalin, and trifluralin, which all had odds ratios >1.7. These chemicals were used by <10% of the cases, and their use was correlated, making it difficult to attribute the risk elevation to a specific pesticide. Conclusion: Pesticides may contribute to MI risk among farm women.  
Keywords: Chlorpyrifos  
Keywords: Chemicals  
Keywords: Risk Abstracts  
Keywords: myocardial infarction  
Keywords: farms  
Keywords: Occupational Health And Safety  
Keywords: Pesticides  
Keywords: Trifluralin  
Keywords: R2 23060:Medical and environmental health  
Keywords: carbofuran  
Keywords: Females  
Keywords: pendimethalin  
Date revised - 2011-06-01  
Language of summary - English  
Pages - 693-697  
ProQuest ID - 876476730  
SubjectsTermNotLitGenreText - Chlorpyrifos; Chemicals; myocardial infarction; farms; Pesticides; Trifluralin; carbofuran; Females; pendimethalin  
Last updated - 2011-10-24  
Corporate institution author - Dayton, S B; Sandler, D P; Blair, A; Alavanja, M; Freeman, LEB; Hoppin, JA  
DOI - OB-MD-0015856360; 14690980; 1076-2752 English

299. de Cock, M.; Maas, Y. G. H., and van de Bor, M. Does perinatal exposure to endocrine disruptors induce autism spectrum and attention deficit hyperactivity disorders? Review. 2012; 101, (8): 811-818.   
Rec #: 58839  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Aim: To provide an overview of studies on perinatal exposure in humans to endocrine disrupting chemicals (EDCs) in relation to autism spectrum (ASD) and attention deficit hyperactivity (ADHD) disorders. Methods: A review of the literature (PubMed) was performed. Exposure-related keywords, including various chemicals, were matched with keywords describing outcome. Animal studies as well as publications not written in English were excluded. In total, 834 titles were retrieved. The final selection included 21 publications. Results: Positive associations were found for ASD in relation to exposure to all chemicals investigated, which included hazardous air pollutants, pesticides and bisphenol A (BPA). Increased risks of ADHD or positive associations were found for exposure to polychlorinated biphenyls (PCBs), dialkyl phosphate (DAP) and chlorpyrifos. BPA, polybrominated diphenylethers (PBDEs) and low molecular weight (LMW) phthalates were positively associated with externalizing behaviour. Five of 17 studies did not find any association between exposure and ADHD. Conclusion: Perinatal exposure to EDCs appears to be associated with the occurrence of ASD as well as ADHD. Disruption of thyroid hormone function and gamma-aminobutyric acid (GABA)ergic mechanisms may offer an explanation for the observed relations; though, conclusive evidence in humans is limited.  
Keywords: Attention deficit hyperactivity disorders, Autism spectrum disorders,  
ISI Document Delivery No.: 973ZA

300. de Joode, Berna van Wendel; Barraza, Douglas; Ruepert, Clemens; Mora, Ana Mar+ a; C+¦rdoba, Leonel; +ûberg, Mattias; Wesseling, Catharina; Mergler, Donna, and Lindh, Christian. Children nearby organic plantation have lower levels of chlorpyrifos metabolites. 2012 Jun 17-; 211, Supplement, (0): S173.   
Rec #: 2640  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY

301. De Lange, Hendrika J; Lahr, Joost; Van Der Pol, Joost J C; Wessels, Yolanda, and Faber, Jack H. Ecological Vulnerability in Wildlife: an Expert Judgment and Multicriteria Analysis Tool Using Ecological Traits to Assess Relative Impact of Pollutants. 2009 Oct; 28, (10): 2233-40.   
Rec #: 44579  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Nature development in The Netherlands often is planned on contaminated soils and sediments of former agricultural land and in floodplain areas; however, this contamination may present a risk to wildlife species desired at those nature development sites. Specific risk assessment methods are needed, because toxicological information is lacking for most wildlife species. The vulnerability of a species is a combination of its potential exposure, sensitivity to the type of pollutant, and recovery capacity. **We developed a new method to predict ecological vulnerability in wildlife using autecological information.** The analysis results in an ordinal ranking of vulnerable species. The method was applied to six representative contaminants: **copper and zinc (essential metals, low to medium toxicity), cadmium (nonessential metal, high toxicity), DDT (persistent organic pesticide, high toxicity), chlorpyrifos (persistent organophosphate insecticide, high toxicity), and ivermectin (persistent veterinary pharmaceutical, low to medium toxicity).** High vulnerability to the essential metals copper and zinc was correlated with soil and sediment habitat preference of a species and with r-strategy (opportunistic strategy suited for unstable environments). Increased vulnerability to the bioaccumulating substances cadmium and DDT was correlated with higher position of a species in the food web and with life span and K-strategy (equilibrium strategy suited for stable environments). Vulnerability to chlorpyrifos and ivermectin was high for species with a preference for soil habitats. The ecological vulnerability analysis has potential to further our abilities in risk assessment. [PUBLICATION ABSTRACT]  
Keywords: Animals  
Keywords: Ivermectin -- analysis  
Keywords: Copper  
Keywords: Risk Assessment  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos -- analysis  
Keywords: Ivermectin -- toxicity  
Keywords: Ivermectin  
Keywords: Zinc  
Keywords: Cadmium -- toxicity  
Keywords: DDT -- toxicity  
Keywords: Cadmium  
Keywords: Environmental Pollution -- analysis  
Keywords: DDT -- analysis  
Keywords: Decision Support Techniques  
Keywords: Animals, Wild -- physiology  
Keywords: Cadmium -- analysis  
Keywords: Zinc -- toxicity  
Keywords: Ecotoxicology -- methods  
Keywords: Environmental Pollution -- adverse effects  
Keywords: Chlorpyrifos  
Keywords: Environmental Monitoring  
Keywords: Zinc -- analysis  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Geologic Sediments -- analysis  
Keywords: DDT  
Keywords: Copper -- analysis  
Keywords: Species Specificity  
Keywords: Copper -- toxicity  
Copyright - Copyright Allen Press Publishing Services Oct 2009  
Language of summary - English  
Pages - 2233-40  
ProQuest ID - 210333791  
Document feature - Tables; Graphs; References  
Last updated - 2012-02-22  
Place of publication - Oxford  
Corporate institution author - De Lange, Hendrika J; Lahr, Joost; Van der Pol, Joost J C; Wessels, Yolanda; Faber, Jack H  
DOI - 1869191441; 48733951; 68221; ETXC; 19432506; INODETXC0005967668  
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Rec #: 43739  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Nature development in The Netherlands is often planned on contaminated soils or sediments. This contamination may present a risk for wildlife species desired at those nature development sites and must be assessed by specific risk assessment methods. In a previous study, we developed a **method to predict ecological vulnerability** in wildlife species by using autecological data and expert judgment; in the current study, this method is further extended to assess ecological vulnerability of food chains and terrestrial and aquatic habitats typical for The Netherlands. The method is applied to six chemicals: Cd, Cu, Zn, dichlorodiphenyltrichloroethane, chlorpyrifos, and ivermectin. The results indicate that species in different food chains differ in vulnerability, with earthworm-based food chains the most vulnerable. Within and between food chains, vulnerability varied with habitat, particularly at low trophic levels. The concept of habitat vulnerability was applied to a case study of four different habitat types in floodplains contaminated with cadmium and zinc along the river Dommel, The Netherlands. The alder floodplain forest habitat contained the most vulnerable species. The differences among habitats were significant for Cd. We further conclude that the method has good potential for application in mapping of habitat vulnerability.  
Keywords: Chemicals  
Keywords: Food chains  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Wildlife  
Keywords: Forests  
Keywords: Soil contamination  
Keywords: Habitat  
Keywords: flood plains  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos  
Keywords: Risk Abstracts; Environment Abstracts; Toxicology Abstracts; Pollution Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: vulnerability  
Keywords: R2 23050:Environment  
Keywords: Netherlands  
Date revised - 2011-05-01  
Language of summary - English  
Location - Netherlands  
Pages - 2875-2880  
ProQuest ID - 860445661  
SubjectsTermNotLitGenreText - Chlorpyrifos; Chemicals; Food chains; Wildlife; Forests; vulnerability; Soil contamination; flood plains; Habitat; Netherlands  
Last updated - 2011-11-09  
Place of publication - Oxford  
Corporate institution author - De Lange, Hendrika J; Lahr, Joost; Faber, Jack H  
DOI - OB-b9fc9020-1b65-44d5-a675csamfg201; 14430060; 1552-8618 English

303. De Llasera, Martha Pgarcia; Cruz-Reyes, Leopoldo; Vera-Avila, Luz E, and De Llasera, Martha PGarcia. A Method for the Analysis of Organophosphorus Pesticide Residues in Mexican Axolotl. 2010 Jan; 45, ( 1): 25-32.   
Rec #: 44349  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A method based on matrix solid-phase dispersion (MSPD) was developed for quantitative extraction of three organophosphorus pesticides (OPPs) from the Mexican axolotl, Ambystoma mexicanum. The determination was carried out using high- performance liquid chromatography (HPLC) with diode array spectrophotometric UV detection (DAD). The MSPD extraction with octadecylsilyl (C18) sorbent combined with a silica gel clean-up and acetonitrile elution was optimised for chlorpyrifos, fenthion and methyl parathion. The method was validated, yielding recovery values higher than 90%. The precision, expressed as the relative standard deviation (RSD), was less than or equal to 6% in muscle samples at spiking levels of 10 and 5 ppm. Linearity was studied from 15 to 60 ppm for chlorpyrifos and fenthion, and from 7.5 to 30 ppm for methyl parathion. The limits of detection (LODs) were found to be less than or equal to 0.5 ppm.This method was applied to the analysis of samples from a chlorpyrifos-exposed axolotl, demonstrating its use as an analytical tool for toxicological studies.  
Keywords: High-performance liquid chromatography  
Keywords: Molecular structure  
Keywords: Pesticide residues  
Keywords: Chromatographic techniques  
Keywords: silica gel  
Keywords: Q5 01502:Methods and instruments  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Sorbents  
Keywords: Agricultural Chemicals  
Keywords: Organophosphorus Pesticides  
Keywords: Pollutants  
Keywords: Standard Deviation  
Keywords: Ultraviolet radiation  
Keywords: Muscle  
Keywords: Liquid Chromatography  
Keywords: Spectrophotometry  
Keywords: Methyl parathion  
Keywords: Toxicology Abstracts; Environment Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Aqualine Abstracts; Water Resources Abstracts; Pollution Abstracts  
Keywords: Pesticides (organophosphorus)  
Keywords: octadecylsilyl  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: Pollution detection  
Keywords: Agricultural wastes  
Keywords: Wastes  
Keywords: Muscles  
Keywords: X 24320:Food Additives & Contaminants  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Pest control  
Keywords: Food contamination  
Keywords: Fenthion  
Keywords: Ambystoma  
Keywords: Firing pattern  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Standard deviation  
Keywords: Silica  
Keywords: Liquid chromatography  
Keywords: Pesticides  
Keywords: Acetonitrile  
Keywords: Ambystoma mexicanum  
Keywords: Toxicity testing  
Keywords: Pollution control  
Keywords: Parathion  
Keywords: Dispersion  
Date revised - 2011-02-01  
Language of summary - English  
Number of references - 32  
Pages - 25-32  
ProQuest ID - 853470130  
SubjectsTermNotLitGenreText - Molecular structure; Pollution detection; Chromatographic techniques; Ultraviolet radiation; Pesticides; Wastes; Pest control; Dispersion; Pollution control; High-performance liquid chromatography; Pesticides (organophosphorus); octadecylsilyl; Agricultural wastes; silica gel; Muscles; Fenthion; Food contamination; Firing pattern; Chlorpyrifos; Standard deviation; Liquid chromatography; Spectrophotometry; Methyl parathion; Acetonitrile; Toxicity testing; Sorbents; Pesticide residues; Parathion; Silica; Agricultural Chemicals; Organophosphorus Pesticides; Standard Deviation; Pollutants; Muscle; Liquid Chromatography; Ambystoma mexicanum; Ambystoma  
Last updated - 2012-12-14  
British nursing index edition - Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants and Agricultural Wastes [J. Environ. Sci. Health, Pt. B: Pestic., Food Contam., Agric. Wastes]. Vol. 45, no. 1, pp. 25-32. Jan 2010.  
Corporate institution author - De Llasera, Martha PGarcia; Cruz-Reyes, Leopoldo; Vera-Avila, Luz E  
DOI - fb1e84ba-e31e-4ea5-b73cmfgefd107; 13810497; CS1247478; 0360-1234; 1532-4109  
 English

304. de Oliveira, T. A.; dos Santos, J. B.; Camelo, G. N.; Botelho, R. G., and de Lazari, T. M. EFFECT OF SEQUENTIAL NICOSULFURON AND CHLORPYRIFOS APPLICATION ON SEED BANK AND SOIL MICROBIAL CHARACTERISTICS. 2009; 33, (3): 563-570.   
Rec #: 58919  
Keywords: NON-ENGLISH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the period of competition of weeds and the incidence of fall armyworm in the corn crop there is a need for herbicide and insecticide such as nicosulfuron and chlorpyrifos application within short time intervals. The aim of this study was to evaluate the effect of sequential applications of nicosulfuron and chlorpyrifos on the emergence of seedlings of the seed bank in the soil, the basal CO(2) emission rate, and the microbial biomass carbon (MBC) of soil. Sequential applications of nicosulfuron (doses from 0 to 64 g ha(-1)) with or without chlorpyrifos (0 and 240 g ha(-1)) were performed. At 20, 40 and 60 days after application (DAA) of the products, the species of all seedlings that emerged from the seed bank were identified, and the frequency, density and abundance estimated, as well as the importance value IV. Sixty DAA the CO(2) emission rate and CBM were were also determined, and based on the relationship between the accumulated CO(2) and total soil MBC the metabolic coefficient (qCO(2)) was estimated. The application of nicosulfuron rates of over 20 g ha(-1) severely affected the seedling dry weight and number of species. In the presence of the herbicide, the species with highest IV were Boehavia diffusa and Commelina bengalensis. There was a decrease in the basal soil respiration rate with increasing nicosulfuron doses, in the presence as well as in the absence of the insecticide chlorpyrifos. There was a linear decrease in MBC in all cases regardless of the chlorpyrifos application, although the reduction was 4.5 times greater in soil that received the combined application of the insecticide and nicosulfuron. The qCO(2) confirmed the negative effect of the application of insecticide and herbicide. It was concluded that the application of chlorpyrifos + nicosulfuron causes a negative impact on the seeds in the soil and the soil microbial activity.  
Keywords: pesticides, microbial biomass carbon, environmental impact, synergism  
ISI Document Delivery No.: 481LL POR, http://www.scielo.br/scielo.php?pid=S0100-06832009000300009&script=sci\_abstract

305. de Pinho, G. P.; Neves, A. A.; de Queiroz, Melr, and Silverio, F. O. Optimization of the liquid-liquid extraction method and low temperature purification (LLE-LTP) for pesticide residue analysis in honey samples by gas chromatography. 2010; 21, (10): 1307-1311.   
Rec #: 58929  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This work optimized a simple and practical method for identification and quantification of the pesticides chlorpyrifos, lambda-cyhalothrin, cypermethrin and deltamethrin in honey samples. The method was based on liquid-liquid extraction and low temperature purification using acetonitrile: ethyl acetate (6.5 mL:1.5 mL) as the solvent for extraction. A final clean up step with 2 g florisil was performed before analysis by gas chromatography using electron-capture-detector. The technique was proven satisfactory with efficiency exceeding 85% and linear chromatographic response for the tested pesticides, ranging from 0.033 to 1.7 mu g g(-1) with correlation coefficients above 0.99. Detection and quantification limits were lower than 0.016 and 0.032 mu g g(-1) respectively. The proposed method was applied to 11 honey samples. Chlorpyrifos and lambda-cyhalothrin residues were found in two samples at concentrations below maximum residue limit (MRL) established for food products. The presence of these compounds was confirmed by mass spectrometry in SIM mode (GC-MS-SIM). (C) 2010 Published by Elsevier Ltd.  
Keywords: Extraction method, Honey, Pesticide, Gas chromatography  
ISI Document Delivery No.: 621WW

306. ---. Pesticide determination in tomatoes by solid-liquid extraction with purification at low temperature and gas chromatography. 2010; 121, (1): 251-256.   
Rec #: 58939  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In this work, a simple and low cost method, based on solid-liquid extraction with low temperature purification (SLE-LTP), was optimized and validated for the determination of chlorpyrifos,;,lambda-cyhalothrin, cypermethrin and deltamethrin in tomato samples. The analyses were performed by the GC-ECD and confirmed by the GC-MS. The method requires 4 g of tomato and an extraction mixture (8.0 mL acetonitrile, 0.5 mL water and 1.5 mL ethyl acetate), which was established by mixture experimental design. After optimization, pesticide recovery rates ranged from 79% to 97%, with a standard deviation of less than 5%. The SLE-LTP analytical characteristics were compared very favorably to the matrix solid phase dispersion technique, which used ethyl acetate and Florisil for extraction. (C) 2009 Elsevier Ltd. All rights reserved.  
Keywords: Pesticide, Tomato, Food analysis, Extraction methods, Gas chromatography  
ISI Document Delivery No.: 566HH

307. Dean, C.; Liu, H.; Staudt, T.; Stahlberg, M. A.; Vingill, S.; BCkers, J.; Kamin, D.; Engelhardt, J.; Jackson, M. B.; Hell, S. W., and Chapman, E. R. Distinct Subsets of Syt-Iv/Bdnf Vesicles Are Sorted to Axons Versus Dendrites and Recruited to Synapses by Activity.   
Rec #: 49929  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Curr Opin Neurobiol. 2003 Oct;13(5):560-7 (medline /14630218)  
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ABSTRACT: BDNF plays a critical role in the regulation of synaptic strength and is essential for long-term potentiation, a phenomenon that underlies learning and memory. However, whether BDNF acts in a diffuse manner or is targeted to specific neuronal subcompartments or synaptic sites to affect circuit function remains unknown. Here, using photoactivation of BDNF or syt-IV (a regulator of exocytosis present on BDNF-containing vesicles) in transfected rat hippocampal neurons, we discovered that distinct subsets of BDNF vesicles are targeted to axons versus dendrites and are not shared between these compartments. Moreover, syt-IV- and BDNF-harboring vesicles are recruited to both presynaptic and postsynaptic sites in response to increased neuronal activity. Finally, using syt-IV knockout mouse neurons, we found that syt-IV is necessary for both presynaptic and postsynaptic scaling of synaptic strength in response to changes in network activity. These findings demonstrate that BDNF-containing vesicles can be targeted to specific sites in neurons and suggest that syt-IV-regulated BDNF secretion is subject to spatial control to regulate synaptic function in a site-specific manner.  
MESH HEADINGS: Activated-Leukocyte Cell Adhesion Molecule/metabolism  
MESH HEADINGS: Animals  
MESH HEADINGS: Animals, Newborn  
MESH HEADINGS: Axons/\*metabolism  
MESH HEADINGS: Brain-Derived Neurotrophic Factor/genetics/metabolism  
MESH HEADINGS: Cells, Cultured  
MESH HEADINGS: Coculture Techniques  
MESH HEADINGS: Dendrites/\*metabolism  
MESH HEADINGS: Embryo, Mammalian  
MESH HEADINGS: Excitatory Amino Acid Agents/pharmacology  
MESH HEADINGS: Excitatory Postsynaptic Potentials/drug effects/genetics  
MESH HEADINGS: Female  
MESH HEADINGS: Forskolin/pharmacology  
MESH HEADINGS: Glycine/pharmacology  
MESH HEADINGS: Hippocampus/cytology  
MESH HEADINGS: Humans  
MESH HEADINGS: Intracellular Signaling Peptides and Proteins/metabolism  
MESH HEADINGS: Luminescent Proteins/genetics/metabolism  
MESH HEADINGS: Male  
MESH HEADINGS: Membrane Proteins/metabolism  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Knockout  
MESH HEADINGS: Microtubule-Associated Proteins/metabolism  
MESH HEADINGS: Neurons/\*cytology/metabolism  
MESH HEADINGS: Patch-Clamp Techniques  
MESH HEADINGS: Rats  
MESH HEADINGS: Receptors, AMPA/metabolism  
MESH HEADINGS: Sodium Channel Blockers/pharmacology  
MESH HEADINGS: Synapses/physiology  
MESH HEADINGS: Synaptic Vesicles/\*classification/\*metabolism  
MESH HEADINGS: Synaptophysin/metabolism  
MESH HEADINGS: Synaptotagmins/deficiency/\*metabolism  
MESH HEADINGS: Tetrodotoxin/pharmacology  
MESH HEADINGS: Time Factors  
MESH HEADINGS: Transfection  
MESH HEADINGS: Vesicular Glutamate Transport Protein 1/metabolism  
MESH HEADINGS: Vesicular Inhibitory Amino Acid Transport Proteins/metabolism eng

308. Deb, I.; Poddar, R., and Paul, S. Oxidative Stress-Induced Oligomerization Inhibits the Activity of the Non-Receptor Tyrosine Phosphatase Step61.   
Rec #: 50289  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Curr Opin Cell Biol. 1998 Apr;10(2):248-53 (medline /9561849)  
COMMENTS: Cites: J Biol Chem. 1997 Jul 25;272(30):18518-21 (medline /9228012)  
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COMMENTS: Cites: J Biol Chem. 1998 Jun 19;273(25):15366-72 (medline /9624118)  
ABSTRACT: The neuron-specific tyrosine phosphatase STriatal Enriched Phosphatase (STEP) is emerging as an important mediator of glutamatergic transmission in the brain. STEP is also thought to be involved in the etiology of neurodegenerative disorders that are linked to oxidative stress such as Alzheimer's disease and cerebral ischemia. However, the mechanism by which oxidative stress can modulate STEP activity is still unclear. In this study, we have investigated whether dimerization may play a role in regulating the activity of STEP. Our findings show that STEP(61), the membrane associated isoform, can undergo homodimerization under basal conditions in neurons. Dimerization of STEP(61) involves intermolecular disulfide bond formation between two cysteine residues (Cys 65 and Cys 76 respectively) present in the hydrophobic region at the N-terminus specific to STEP(61). Oxidative stress induced by hydrogen peroxide leads to a significant increase in the formation of dimers and higher-order oligomers of STEP(61). Using two substrates, para-nitrophenylphosphate and extracellular-regulated kinase MAPK we further demonstrate that oligomerization leads to a significant reduction in its enzymatic activity.  
MESH HEADINGS: Animals  
MESH HEADINGS: Brain/cytology/metabolism  
MESH HEADINGS: Cells, Cultured  
MESH HEADINGS: Cercopithecus aethiops  
MESH HEADINGS: Cysteine/metabolism  
MESH HEADINGS: \*Dimerization  
MESH HEADINGS: Dose-Response Relationship, Drug  
MESH HEADINGS: Embryo, Mammalian  
MESH HEADINGS: Female  
MESH HEADINGS: Gene Expression Regulation, Enzymologic/drug effects/genetics/physiology  
MESH HEADINGS: Hydrogen Peroxide/pharmacology  
MESH HEADINGS: Immunoprecipitation/methods  
MESH HEADINGS: Male  
MESH HEADINGS: Mitogen-Activated Protein Kinase Kinases/metabolism  
MESH HEADINGS: Neurons/drug effects/metabolism  
MESH HEADINGS: Nitrophenols/metabolism  
MESH HEADINGS: Organophosphorus Compounds/metabolism  
MESH HEADINGS: Oxidative Stress/drug effects/\*physiology  
MESH HEADINGS: Phosphorylation/drug effects  
MESH HEADINGS: Pregnancy  
MESH HEADINGS: Protein Tyrosine Phosphatases, Non-Receptor/\*chemistry/genetics/\*metabolism  
MESH HEADINGS: Rats  
MESH HEADINGS: Rats, Sprague-Dawley  
MESH HEADINGS: Transfection/methods eng

309. DeJoux, C. Ecotoxicological Consequences of the Antivectorial Battle in Tropical Countries: The Situation in African Lotic Ecosystems (Consequences Ecotoxicologiques de la Lutte Antivectorielle en pays Tropicaux: La Situation des Milieux Lotiques Africains). 1990; 97-98, 799-813(FRE) (ENG ABS).   
Rec #: 590  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

310. Del Pilar Crespo, M.; Avery, T. D.; Hanssen, E.; Fox, E.; Robinson, T. V.; Valente, P.; Taylor, D. K., and Tilley, L. Artemisinin and a Series of Novel Endoperoxide Antimalarials Exert Early Effects on Digestive Vacuole Morphology.   
Rec #: 51389  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Artermisinin and its derivatives are now the mainstays of antimalarial treatment; however, their mechanism of action is only poorly understood. We report on the synthesis of a novel series of epoxy-endoperoxides that can be prepared in high yields from simple starting materials. Endoperoxides that are disubstituted with alkyl or benzyl side chains show efficient inhibition of the growth of both chloroquine-sensitive and -resistant strains of Plasmodium falciparum. A trans-epoxide with respect to the peroxide linkage increases the activity compared to that of its cis-epoxy counterpart or the parent endoperoxide. The novel endoperoxides do not show a strong interaction with artemisinin. We have compared the mechanism of action of the novel endoperoxides with that of artemisinin. Electron microscopy reveals that the novel endoperoxides cause the early accumulation of endocytic vesicles, while artemisinin causes the disruption of the digestive vacuole membrane. At longer incubation times artemisinin causes extensive loss of organellar structures, while the novel endoperoxides cause myelin body formation as well as the accumulation of endocytic vesicles. An early event following endoperoxide treatment is the redistribution of the pH-sensitive probe LysoSensor Blue from the digestive vacuole to punctate structures. By contrast, neither artemisinin nor the novel endoperoxides caused alterations in the morphology of the endoplasmic reticulum nor showed antagonistic antimalarial activity when they were used with thapsigargin. Analysis of rhodamine 123 uptake by P. falciparum suggests that disruption of the mitochondrial membrane potential occurs as a downstream effect rather than as an initiator of parasite killing. The data suggest that the digestive vacuole is an important initial site of endoperoxide antimalarial activity.  
MESH HEADINGS: Animals  
MESH HEADINGS: Antimalarials/chemistry/\*pharmacology  
MESH HEADINGS: Artemisinins/\*pharmacology  
MESH HEADINGS: Drug Interactions  
MESH HEADINGS: Endoplasmic Reticulum/drug effects/ultrastructure  
MESH HEADINGS: Humans  
MESH HEADINGS: Inhibitory Concentration 50  
MESH HEADINGS: Mitochondria/drug effects/ultrastructure  
MESH HEADINGS: Parasitic Sensitivity Tests  
MESH HEADINGS: Peroxides/chemical synthesis/chemistry/\*pharmacology  
MESH HEADINGS: Plasmodium falciparum/\*drug effects/growth &amp  
MESH HEADINGS: development/ultrastructure  
MESH HEADINGS: Time Factors  
MESH HEADINGS: Vacuoles/\*drug effects/\*ultrastructure eng

311. Delgado-Moreno, L.; Lin, K.; Veiga-Nascimento, R., and Gan, J. Occurrence and Toxicity of Three Classes of Insecticides in Water and Sediment in Two Southern California Coastal Watersheds. 2011; 59, (17): 9448-9456.   
Rec #: 2150  
Keywords: MIXTURE  
Call Number: NO MIXTURE (BFT,CPMR,CPY,CYF,CYP,DM,DZ,EFV,FPN,FPP,LCYT,TPMR)  
Notes: Chemical of Concern: BFT,CPMR,CPY,CYF,CYP,DM,DZ,EFV,FPN,FPP,LCYT,TPMR

312. DeLorenzo, M. E. and Fulton, M. H. Comparative risk assessment of permethrin, chlorothalonil, and diuron to coastal aquatic species. 2012; 64, (7): 1291-1299.   
Rec #: 59029  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The precise application of risk assessment can lead to different conclusions about risk depending on how species are grouped in the assessment. We compared the use of different risk assessment methods for three different classes of pesticide, the herbicide **diuron**, the fungicide **chlorothalonil**, and the insecticide **permethrin** for marine and estuarine species. Permethrin was the most toxic pesticide to marine and estuarine crustaceans. Diuron was the most toxic pesticide to algae, and chlorothalonil was most toxic to early life stages of molluscs and other invertebrates. Toxicity data (96 h LC50/EC50 values) were analyzed using a probability distribution on the ranked toxicity values and 10th centile values were calculated based on different groups of species and for all species combined. Our results indicate that an assessment of risk based on smaller taxonomic groups can be informative, especially for pesticides of less specific modes of action such as chlorothalonil. Published by Elsevier Ltd.  
Keywords: Risk assessment, Acute toxicity, Pesticides, Estuarine species  
ISI Document Delivery No.: 983UA

313. Delpuech, J. M.; Dupont, C., and Allemand, R. Decrease in Fecundity Induced by Interspecific Mating Between Two Trichogramma Parasitoid Species. 2010; 103, (2): 308-313.   
Rec #: 59049  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Trichogramma are used for the biological control of numerous pests. For Trichogramma, as for other insects, the specificity of matings is ensured by several barriers that prevent copulation attempts between insects from different species. We have recently shown that insecticides may totally suppress species recognition that occurs from pheromonal communications between two Tri-chogramtna species, a sublethal effect that will increase mating attempts between two different species. In this work, we have assessed the fitness cost of such interspecific matings and demonstrate that they are very costly for females. After an interspecific mating, females can generate only males because fertilized eggs degenerate (Trichogramma are haplo-diploid species; males are issued from unfertilized eggs and females from fertilized eggs). The resulting offspring are reduced in number by more than half, corresponding to the missing progeny from fertilized eggs. After an interspecific mating, the fecundity of females cannot be restored even if females subsequently mate intraspecifically. These results highlight the strong fitness cost of any event that would decrease the specificity of matings in Trichogramma. Because Trichogramma are key species regulating insect populations, these effects must be considered in the context of sustainable development.  
Keywords: Trichogramma evanescens, Trichogramma semblidis, biological control,  
ISI Document Delivery No.: 576SX

314. Demirda-Ramazan; Yerlikaya, Emrah; Aksakal, Erc++ment; K++frevio-lu, +űmer Irfan, and Ekinci, Deniz. Influence of pesticides on the pH regulatory enzyme, carbonic anhydrase, from European Seabass liver and bovine erythrocytes. 2012 Sep; 34, (2): 218-222.   
Rec #: 5690  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: The objective of this study was to assess the inhibitory effects of six commonly used pesticides, cyhalothrin, cypermethrin, dichlorvos, methamidophos, chlorpyrifos and methylparathion, on the pH regulatory enzyme carbonic anhydrase (CA) of Dicentrarchus labrax (European Seabass) liver (dCA) and bovine erythrocytes (bCA). Results of the study showed that the pesticides displayed quite variable inhibition profiles with KI values ranging from 0.376 to 26.164 ++M against dCA, and from 1.174 to 53.281 ++M against bCA. Methylparathion was the most effective inhibitor for both enzymes. Overall data show that all of the tested pesticides inhibit both dCA and bCA at low concentrations indicating that indiscriminate use of these pesticides might cause disruption of acid base regulation resulting in animal deaths. Our results also point out that susceptibility to these pesticides varies among CAs from different organisms. CA/ Purification/ Organophosphate/ Pesticide/ Inhibition

315. Dengiz, Orhan; Ozcan, Hesna; Koksal, Eselim; Baskan, Oguz; Kosker, Yakup, and Dengiz, Orhan. Sustainable Natural Resource Management and Environmental Assessment in the Salt Lake (Tuz Golu) Specially Protected Area. 2010 Feb; 161, (1-4): 327-342.   
Rec #: 48099  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The Salt Lake Specially Protected Area is a unique ecosystem for both agricultural activities and natural life in Turkey. In the present study, an attempt was made to develop a conceptual land use strategy and methodology, taking into account ecological factors for regional development in the Salt Lake Specially Protected Area. A detailed Geographic Information System (GIS) analysis was done to create a comprehensive database including land use, land suitability, and environmental factors (soil, climate, water quality, fertilizing status, and heavy metal and pesticide pollution). The results of the land suitability survey for agricultural use showed that, while 62.6% of the study area soils were classified as best and relatively good, about 15% were classified as problematic and restricted lands, only 22.2% of the study area soils were not suitable for agricultural uses. However, this is not enough to derive maximum benefit with minimum degradation. Therefore, environmental factors and ecological conditions were combined to support this aim and to protect the ecosystem. Excessive irrigation practices, fertilizer and pesticide application, and incorrect management practices all accelerate salinization and degradation. In addition to this, it was found that a multi-layer GIS analysis made it easy to develop a framework for optimum land use and could increase the production yield preserving the environmental conditions. Finally, alternative management and crop patterns were undertaken to sustain this unique ecosystem, considering water, soil, climate, land use characteristics, and to provide guidance for planners or decision makers.  
Keywords: Land Use  
Keywords: Turkey, Tuz L.  
Keywords: Ecosystems  
Keywords: Degradation  
Keywords: Climates  
Keywords: Pollution Abstracts; Sustainability Science Abstracts; Environment Abstracts; Aqualine Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Environmental Engineering Abstracts; Meteorological & Geoastrophysical Abstracts  
Keywords: Turkey  
Keywords: AQ 00003:Monitoring and Analysis of Water and Wastes  
Keywords: Environmental Studies  
Keywords: Salts  
Keywords: SW 1030:Use of water of impaired quality  
Keywords: Agricultural Chemicals  
Keywords: Assessments  
Keywords: Pesticides  
Keywords: Geographical Information Systems  
Date revised - 2010-02-01  
Language of summary - English  
Location - Turkey, Tuz L.; Turkey  
Pages - 327-342  
ProQuest ID - 809953729  
SubjectsTermNotLitGenreText - Land Use; Salts; Agricultural Chemicals; Degradation; Assessments; Ecosystems; Pesticides; Climates; Geographical Information Systems; Turkey, Tuz L.; Turkey  
Last updated - 2012-08-02  
Corporate institution author - Dengiz, Orhan; Ozcan, Hesna; Koksal, ESelim; Baskan, Oguz; Kosker, Yakup  
DOI - OB-74e9f985-02a4-4f33-bb65mfgefd101; 12597280; 0167-6369; 1573-2959 English

316. DeNoyelles, F. Jr.; Dewey, S. L.; Huggins, D. G., and Kettle, W. D. Aquatic Mesocosms in Ecological Effects Testing: Detecting Direct and Indirect Effects of Pesticides. 1994: 577-603.   
Rec #: 1690  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (24D,24DXY,ATZ,CBF,CBL,CPY,CYP,CuS,DCA,DDVP,DFZ,MP,PCP,PMR,PPZ,PRO,SZ), NO REVIEW (24D,24DXY,ATZ,CBF,CBL,CPY,CYP,CuS,DCA,DDVP,DFZ,MP,PCP,PMR,PPZ,PRO,SZ)  
Notes: Chemical of Concern: 24D,24DXY,ATZ,AsO3Na,CBF,CBL,CPY,CYP,CuS,DCA,DDVP,DFZ,MP,MXC,PCP,PMR,PPZ,PRO,SZ

317. Deribe, Ermias; Rosseland, Bjoern Olav; Borgstroem, Reidar; Salbu, Brit; Gebremariam, Zinabu; Dadebo, Elias; Norli, Hans Ragnar; Eklo, Ole Martin, and Deribe, Ermias. Bioaccumulation of Persistent Organic Pollutants (Pops) in Fish Species From Lake Koka, Ethiopia: the Influence of Lipid Content and Trophic Position. 2011 Dec 1; 410-411, 136-145.   
Rec #: 47009  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The concentrations and bioaccumulation of persistent organic pollutants (POPs) were determined in four fish species from Lake Koka, Ethiopia, representing 2-3 levels in the food chain of the lake. Dichlorodiphenyltrichloroethanes (DDTs), endosulfans, polychlorinated biphenyls (PCBs) and chlorpyrifos were identified, with DDTs as the most predominant pesticide, with concentration ranging from 0.05 to 72.53ngg-1 wet weight (ww). All fish tissue samples collected from different species of the lake contained residues of DDTs. The maximum level of DDTs was found in the fattiest, African sharptooth catfish (Clarias gariepinus) sampled from the lake, with a mean concentration of 15.15ngg-1ww. The significant (P<0.05) relationship between concentrations of DDTs and delta 15N indicates that DDTs biomagnified in the food web of the lake. The 4,4'-DDE to 4,4'-DDT ratio in Oreochromis niloticus (0.6) and Cyprinus carpio (0.5) were below 1, indicating ongoing use of DDTs in the study area and recent exposure of these fish species.  
Keywords: persistent organic pollutants  
Keywords: Lipids  
Keywords: Clarias gariepinus  
Keywords: Lakes  
Keywords: Ethiopia  
Keywords: Bioaccumulation  
Keywords: Cyprinus carpio  
Keywords: Meteorological & Geoastrophysical Abstracts; Environment Abstracts; Pollution Abstracts  
Keywords: DDT  
Keywords: Pesticides  
Keywords: Africa  
Keywords: Fish  
Keywords: Nitrogen isotopes  
Keywords: PCB compounds  
Keywords: food webs  
Keywords: Oreochromis niloticus  
Date revised - 2011-12-01  
Language of summary - English  
Location - Ethiopia; Africa  
Number of references - 4  
Pages - 136-145  
ProQuest ID - 911159387  
SubjectsTermNotLitGenreText - Nitrogen isotopes; Lakes; Bioaccumulation; persistent organic pollutants; Lipids; Pesticides; DDT; Fish; food webs; PCB compounds; Cyprinus carpio; Clarias gariepinus; Oreochromis niloticus; Ethiopia; Africa  
Last updated - 2012-09-24  
British nursing index edition - Science of the Total Environment [Sci. Total Environ.]. Vol. 410-411, pp. 136-145. 1 Dec 2011.  
Corporate institution author - Deribe, Ermias; Rosseland, Bjoern Olav; Borgstroem, Reidar; Salbu, Brit; Gebremariam, Zinabu; Dadebo, Elias; Norli, Hans Ragnar; Eklo, Ole Martin  
DOI - 5e0c305a-3431-406c-9d2bcsamfg201; 16077657; 0048-9697  
Alexander J., FrĂ Ě§yland L., Hemre G.I., Jacobsen B.K., Lund E., Meltzer H.M. A comprehensive assessment of fish and other seafood in the Norwegian diet.  
FAO. "Prevention and disposal of obsolete and banned pesticides stocks." 5th FAO Consultation meeting.  
FLDP. "Lake Fisheries Development Project." Phase II.Final Report.  
Gebre-Mariam, Z, Gebre-Mariam, Z 2002 "The Ethiopian Rift Valley Lakes: Major threats and strategies for conservation" ETHIOPIAN RIFT VALLEY LAKES 259-271 English

318. Desai, P.; Patlolla, R. R., and Singh, M. Interaction of Nanoparticles and Cell-Penetrating Peptides With Skin for Transdermal Drug Delivery.   
Rec #: 50429  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY   
Abstract: ABSTRACT: Topical or transdermal drug delivery is challenging because the skin acts as a natural and protective barrier. Therefore, several methods have been examined to increase the permeation of therapeutic molecules into and through the skin. One approach is to use the nanoparticulate delivery system. Starting with liposomes and other vesicular systems, several other types of nanosized drug carriers have been developed such as solid lipid nanoparticles, nanostructured lipid carriers, polymer-based nanoparticles and magnetic nanoparticles for dermatological applications. **This review article discusses how different particulate systems can interact and penetrate into the skin barrier. In this review, the effectiveness of nanoparticles, as well as possible mode of actions of nanoparticles, is presented.** In addition to nanoparticles, cell-penetrating peptide (CPP)-mediated drug delivery into the skin and the possible mechanism of CPP-derived delivery into the skin is discussed. Lastly, the effectiveness and possible mechanism of CPP-modified nanocarriers into the skin are addressed.  
MESH HEADINGS: Administration, Cutaneous  
MESH HEADINGS: Animals  
MESH HEADINGS: Cell-Penetrating Peptides/\*administration &amp  
MESH HEADINGS: dosage/chemistry  
MESH HEADINGS: Drug Carriers/chemistry  
MESH HEADINGS: Drug Delivery Systems/\*methods  
MESH HEADINGS: Humans  
MESH HEADINGS: Lipids/chemistry  
MESH HEADINGS: Liposomes/\*pharmacokinetics  
MESH HEADINGS: Nanoparticles/\*administration &amp  
MESH HEADINGS: dosage/chemistry  
MESH HEADINGS: Pharmaceutical Preparations/administration &amp  
MESH HEADINGS: dosage/chemistry  
MESH HEADINGS: Rats  
MESH HEADINGS: \*Skin/anatomy &amp  
MESH HEADINGS: histology/metabolism eng

319. Desneux, N.; Decourtye, A., and Delpuech, J. M. The Sublethal Effects of Pesticides on Beneficial Arthropods. desne001@umn.edu//: 2007; 52, 81-106.   
Rec #: 2000  
Keywords: REVIEW  
Call Number: NO REVIEW (AZD,CPY,CYH,CYP,DM,DMT,ES,FNT,FPN,IMC,LCYT,MP,TUZ)  
Notes: EcoReference No.: 99528  
Chemical of Concern: AZD,CPY,CYH,CYP,DM,DMT,ES,FNT,FPN,IMC,LCYT,MP,TUZ

320. Deziel, Nicole C; Viet, Susan M; Rogers, John W; Camann, David E; Marker, David a; Heikkinen, Maire Sa; Yau, Alice Y; Stout, Daniel M; Dellarco, Michael, and Deziel, Nicole C. Comparison of Wipe Materials and Wetting Agents for Pesticide Residue Collection From Hard Surfaces. 2011 Sep 15; 409, (20): 4442-4448.   
Rec #: 47119  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Different wipe materials and wetting agents have been used to collect pesticide residues from surfaces, but little is known about their comparability. To inform the selection of a wipe for the National Children's Study, the analytical feasibility, collection efficiency, and precision of Twillwipes wetted with isopropanol (TI), Ghost Wipes (GW), and Twillwipes wetted with water (TW), were evaluated. Wipe samples were collected from stainless steel surfaces spiked with high and low concentrations of 27 insecticides, including organochlorines, organophosphates, and pyrethroids. Samples were analyzed by GC/MS/SIM. No analytical interferences were observed for any of the wipes. The mean percent collection efficiencies across all pesticides for the TI, GW, and TW were 69.3%, 31.1%, and 10.3% at the high concentration, respectively, and 55.6%, 22.5%, and 6.9% at the low concentration, respectively. The collection efficiencies of the TI were significantly greater than that of GW or TW (p<0.0001). Collection efficiency also differed significantly by pesticide (p<0.0001) and spike concentration (p<0.0001). The pooled coefficients of variation (CVs) of the collection efficiencies for the TI, GW, and TW at high concentration were 0.08, 0.17, and 0.24, respectively. The pooled CV of the collection efficiencies for the TI, GW, and TW at low concentration were 0.15, 0.19, and 0.36, respectively. The TI had significantly lower CVs than either of the other two wipes (p=0.0008). Though the TI was superior in terms of both accuracy and precision, it requires multiple preparation steps, which could lead to operational challenges in a large-scale study.  
Keywords: Feasibility studies  
Keywords: Insecticides  
Keywords: Organochlorine compounds  
Keywords: P 9999:GENERAL POLLUTION  
Keywords: ENA 09:Land Use & Planning  
Keywords: Organophosphates  
Keywords: Pesticide residues  
Keywords: Pollution Abstracts; Environment Abstracts  
Keywords: Steel  
Keywords: Pyrethroids  
Keywords: Children  
Keywords: Environmental Studies  
Date revised - 2012-01-01  
Language of summary - English  
Pages - 4442-4448  
ProQuest ID - 889685985  
SubjectsTermNotLitGenreText - Feasibility studies; Insecticides; Organochlorine compounds; Organophosphates; Pesticide residues; Steel; Pyrethroids; Children  
Last updated - 2012-08-02  
Corporate institution author - Deziel, Nicole C; Viet, Susan M; Rogers, John W; Camann, David E; Marker, David A; Heikkinen, Maire SA; Yau, Alice Y; Stout, Daniel M; Dellarco, Michael  
DOI - OB-27574729-9056-4022-b043csamfg201; 15619618; 0048-9697 English

321. Dhillon, a S; Tarbutton, G L; Levin, J L; Plotkin, G M; Lowry, L K; Nalbone, J T; Shepherd, S, and Dhillon, A S. Pesticide/Environmental Exposures and Parkinson's Disease in East Texas. 2008; 13, (1): 37-48.   
Rec #: 46259  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Epidemiological evidence suggests that pesticides and other environmental exposures may have a role in the etiology of idiopathic Parkinson's disease (PD). However, there is little human data on risk associated with specific pesticide products, including organic pesticides such as rotenone with PD. Using a case-control design, this study examined self-reports of exposure to pesticide products, organic pesticides such as rotenone, and other occupational and environmental exposures on the risk of PD in an East Texas population. The findings demonstrated significantly increased risk of PD with use of organic pesticides such as rotenone in the past year in gardening (OR = 10.9; 95% CI = 2.5-48.0) and any rotenone use in the past (OR = 10.0; 95% CI = 2.9-34.3). Use of chlorpyrifos products (OR = 2.0; 95% CI = 1.02-3.8), past work in an electronics plant (OR = 5.1; 95% CI = 1.1-23.6), and exposure to fluorides (OR = 3.3; 95% CI = 1.03-10.3) were also associated with significantly increased risk. A trend of increased PD risk was observed with work history in paper/lumber mill (OR = 6.35; 95% CI = 0.7-51.8), exposure to cadmium (OR = 5.3; 95% CI = 0.6-44.9), exposure to paraquat (OR = 3.5; 95% CI = 0.4-31.6), and insecticide applications to farm animals/animal areas and agricultural processes (OR = 4.4; 95% CI = 0.5-38.1). Cigarette smoking, alcohol use, and fish intake were associated with reduced risk. In summary, this study demonstrates an increased risk of PD associated with organic pesticides such as rotenone and certain other pesticides and environmental exposures in this population.  
Keywords: Historical account  
Keywords: Farms  
Keywords: Cigarettes  
Keywords: Parkinson's disease  
Keywords: risk reduction  
Keywords: X 24380:Social Poisons & Drug Abuse  
Keywords: Insecticides  
Keywords: Rotenone  
Keywords: Fluoride  
Keywords: farms  
Keywords: Cigarette smoking  
Keywords: Toxicology Abstracts; CSA Neurosciences Abstracts; Environment Abstracts; Health & Safety Science Abstracts  
Keywords: alcohols  
Keywords: Cadmium  
Keywords: N3 11027:Neurology & neuropathology  
Keywords: Fluorides  
Keywords: Occupational exposure  
Keywords: Paraquat  
Keywords: Alcohol  
Keywords: Etiology  
Keywords: Data processing  
Keywords: H 1000:Occupational Safety and Health  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Neurodegenerative diseases  
Keywords: Movement disorders  
Keywords: Pesticides  
Keywords: lumber  
Keywords: Fish  
Keywords: USA, Texas  
Date revised - 2010-07-01  
Language of summary - English  
Location - USA, Texas  
Pages - 37-48  
ProQuest ID - 745641885  
SubjectsTermNotLitGenreText - Etiology; Data processing; Farms; Parkinson's disease; Chlorpyrifos; Neurodegenerative diseases; Insecticides; Movement disorders; Rotenone; Fluoride; Pesticides; Cigarette smoking; alcohols; Cadmium; Paraquat; Occupational exposure; Alcohol; Historical account; Cigarettes; risk reduction; farms; lumber; Fish; Fluorides; USA, Texas  
Last updated - 2011-12-14  
British nursing index edition - Journal of Agromedicine [J. Agromed.]. Vol. 13, no. 1, pp. 37-48. 2008.  
Corporate institution author - Dhillon, A S; Tarbutton, G L; Levin, J L; Plotkin, G M; Lowry, L K; Nalbone, J T; Shepherd, S  
DOI - MD-0013819520; 13135254; 1059-924X English

322. Diamanti-Kandarakis, E.; Bourguignon, J. P.; Giudice, L. C.; Hauser, R.; Prins, G. S.; Soto, A. M.; Zoeller, R. T., and Gore, A. C. Endocrine-Disrupting Chemicals: An Endocrine Society Scientific Statement. 2009; 30, (4): 293-342.   
Rec #: 1820  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ATZ,As,CPY,DZ,PMR,VCZ), NO REVIEW (ATZ,As,CPY,DZ,PMR,VCZ)  
Notes: Chemical of Concern: ATZ,As,BPA,CPY,DDE,DDT,DES,DMBA,DXN,DZ,EPRN,HCCH,MXC,PCB,PMR,PPCP,PRN,TBT,TCC,TCDD,VCZ

323. Dias, J. C. and Jemmio, A. [About an Insecticidal Paint for Controlling Triatoma Infestans, in Bolivia].   
Rec #: 80069  
Keywords: NON-ENGLISH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Preliminary evaluations of an insecticidal paint based on diazinon, chlorpyrifos and pyriproxyfen in a micro-encapsulated formulation (Inesfly 5A IGR) have shown that it has effective and persistent activity against Triatoma infestans inside homes and in areas surrounding homes, in a highly infested region of the Bolivian Chaco. Furthermore, the evaluations have highlighted that the product presents good handling characteristics and gives a good appearance to houses and outhouses that have been treated, and that its acceptance among the population and the local sanitary authorities is excellent. This encourages new investigations and the use of the product on a larger scale and against other vector species for Chagas disease.  
MESH HEADINGS: Animals  
MESH HEADINGS: Chagas Disease/prevention &amp  
MESH HEADINGS: control  
MESH HEADINGS: Chlorpyrifos  
MESH HEADINGS: Consumer Satisfaction  
MESH HEADINGS: Diazinon  
MESH HEADINGS: Humans  
MESH HEADINGS: \*Insect Vectors  
MESH HEADINGS: \*Insecticides  
MESH HEADINGS: \*Paint  
MESH HEADINGS: Pyridines  
MESH HEADINGS: Time Factors  
MESH HEADINGS: \*Triatoma por. Sobre uma pintura inseticida para o controle de Triatoma infestans, na Bol¡via.

324. Diaz-Gomez, O.; Lagunes-Tejeda, A.; Sanchez-Arroyo, H., and Alatorre-Rosas, R. Susceptibility of Plutella xylostella L. to Synthetic Organic Insecticides (Susceptibilidad de Plutella xylostella L. a Insecticidas Organosinteticos). 1994; 19, (1): 83-88(SPA) (ENG ABS).   
Rec #: 600  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (AZ,CPY,ES,FNV,PMR)  
Notes: Chemical of Concern: AZ,CPY,ES,FNV,PMR

325. Ding, G. D.; Wang, P.; Tian, Y.; Zhang, J.; Gao, Y.; Wang, X. J.; Shi, R.; Wang, G. Q., and Shen, X. M. Organophosphate Pesticide Exposure and Neurodevelopment in Young Shanghai Children. 2012; 46, (5): 2911-2917.   
Rec #: 59139  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A large amount of organophosphate pesticides (OPs) is used throughout China. Animal studies have suggested that even moderate doses are toxic to neurodevelopment, but there are a few studies in humans. We investigated both the urinary levels of OP metabolites in children and their relationship with child neurodevelopment. Participating 301 young children (23-25 months of age) were recruited from two community hospitals in Shanghai between February and October 2008. We measured five nonspecific dialkyl phosphate (DAP) metabolite levels of OPs in the children's urine and examined their association with the children's developmental quotients (DQs) based on the Gesell Developmental Schedules (GDS). The creatinine-adjusted geometric means (GMs) of OP metabolites in urine samples were 11.27 mu g/g for DMP; 6.99 mu g/g for DMTP; 7.96 mu g/g for DEP; 14.19 mu g/g for DETP; and 4.55 mu g/g for DEDTP. The children had relatively higher levels of OP urinary metabolites compared with those reported in developed countries, no association was found between child urinary levels of OP metabolites and any of the DQ scores. However, our results should be interpreted with caution, and more studies of children living in China are warranted given the relatively high levels of child OP urinary metabolites in Shanghai.  
Keywords: MEXICAN-AMERICAN CHILDREN, CHLORPYRIFOS, ASSOCIATION, METABOLITES,  
ISI Document Delivery No.: 902FJ

326. Ding, S. J.; Carr, J.; Carlson, J. E.; Ton, L.; Xue, W. H.; Li, Y. F.; Schopfer, L. M.; Li, B.; Nachon, F.; Asojo, O.; Thompson, C. M.; Hinrichs, S. H.; Masson, P., and Lockridge, O. Five tyrosines and two serines in human albumin are labeled by the organophosphorus agent FP-biotin. 2008; 21, (9): 1787-1794.   
Rec #: 59149  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Tyrosine 411 of human albumin is an established site for covalent attachment of 10-fluoroethoxyphosphinyl-N-biotinamidopentyldecanamide (FP-biotin), diisopropylfluorophosphate, chlorpyrifos oxon, soman, sarin, and dichlorvos. This work investigated the hypothesis that other residues in albumin could be modified by organophosphorus agents (OP). Human plasma was aggressively treated with FP-biotin; plasma proteins were separated into high and low abundant portions using a proteome partitioning antibody kit, and the proteins were digested with trypsin. The FP-biotinylated tryptic peptides were isolated by binding to monomeric avidin beads. The major sites of covalent attachment identified by mass spectrometry were Y138, Y148, Y401, Y411, Y452, S232, and S287 of human albumin. Prolonged treatment of pure human albumin with chlorpyrifos oxon labeled Y138, Y150, Y161, Y401, Y411, and Y452. To identify the most reactive residue, albumin was treated for 2 h with DFP, FP-biotin, chlorpyrifos oxon, or soman, digested with trypsin or pepsin, and analyzed by mass spectrometry. The most reactive residue was always Tyr 411. Diethoxyphosphate-labeled Tyr 411 was stable for months at pH 7.4. These results will be useful in the development of specific antibodies to detect OP exposure and to engineer albumin for use as an OP scavenger.  
Keywords: HUMAN-SERUM-ALBUMIN, GLUTATHIONE-S-TRANSFERASE, MASS-SPECTROMETRY, HUMAN  
ISI Document Delivery No.: 349IU

327. Ding, Y. P. ; Landrum, P. F.; You, J.; Harwood, A. D., and Lydy, M. J. Use of solid phase microextraction to estimate toxicity: Relating fiber concentrations to body residues-part II. 2012; 31, (9): 2168-2174.   
Rec #: 59169  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the companion paper, solid phase **microextraction (SPME) fiber concentrations were used as a dose metric to** evaluate the toxicity of hydrophobic pesticides, and concentrationresponse relationships were found for the hydrophobic pesticides tested in the two test species. The present study extends the use of fiber concentrations to organism body residues to specifically address biotransformation and provide the link to toxic response. Test compounds included the organochlorines p,p'-dichlorodiphenyltrichloroethane (p,p'-DDT), p,p'-dichlorodiphenyldichloroethane (p,p'-DDD), and p,p'-dichlorodiphenyldichloroethylene (p,p'-DDE); two pyrethroids, permethrin and bifenthrin; and an organophosphate, chlorpyrifos. **Toxicity, body residues, and biotransformation of the target compounds were determined for the midge Chironomus dilutus** and the amphipod Hyalella azteca. Significant regression relationships were found without regard to chemical, extent of biotransformation, or whether the chemical reached steady state in the organisms. The equilibrium SPME fiber concentrations correlated with the parent compound concentration in the biota; however, the regressions were duration specific. Furthermore, th**e SPME fiber-based toxicity values yielded sp**ecies-specific regressions with the parent compoundbased toxicity values linking the use of SPME fiber as a dose metric with tissue residues to estimate toxic response. Environ. Toxicol. Chem. 2012; 31: 21682174. (c) 2012 SETAC  
Keywords: Biotransformation, Body residue, Chironomus dilutus, Hyalella azteca,  
ISI Document Delivery No.: 994NW

328. Ding, Yuping; Harwood, Amanda D; Foslund, Heather M; Lydy, Michael J, and Ding, Yuping. Distribution and Toxicity of Sediment-Associated Pesticides in Urban and Agricultural Waterways From Illinois, Usa. 2010 Jan 1; 29, (1): 149-157.   
Rec #: 44339  
Keywords: SEDIMENT CONC  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A statewide investigation of insecticide presence and sediment toxicity was conducted in Illinois, USA, from June to August 2008. Twenty sediment samples were collected from urban areas throughout Illinois, and 49 sediment samples were collected from 14 agriculture-dominated counties in central and southern Illinois. Ten-day sediment toxicity tests were conducted using the amphipod Hyalella azteca, and 59% of the urban sites and 2% of the agricultural locations sampled caused significant mortality in the amphipods. The field sediments were analyzed for 29 pesticides, including 19 organochlorines, one organophosphate, and nine pyrethroids. The detection frequencies of organochlorines, chlorpyrifos, and pyrethroids were 95, 65, and 95%, respectively, for urban sites, and 45, 6.1, and 47%, respectively, for agricultural sites. Based on toxic unit analysis, bifenthrin was the main contributor to the detected mortality in urban sediments. The present study provides the first broad assessment of pesticide prevalence in both urban and agriculture areas in Illinois.  
Keywords: Environmental Engineering Abstracts (EN); CSA / ASCE Civil Engineering Abstracts (CE)  
Date revised - 2011-05-01  
Language of summary - English  
Pages - 149-157  
ProQuest ID - 858424250  
Last updated - 2012-12-05  
British nursing index edition - Environmental Toxicology and Chemistry [Environ. Toxicol. Chem.]. Vol. 29, no. 1, pp. 149-157. 1 Jan 2010.  
Corporate institution author - Ding, Yuping; Harwood, Amanda D; Foslund, Heather M; Lydy, Michael J  
DOI - 8e015f13-1f83-4939-af7ccsamfg201; 14429973; 1552-8618 English

329. Dishaw, Laura V; Powers, Christina M; Ryde, Ian T; Roberts, Simon C; Seidler, Frederic J; Slotkin, Theodore a; Stapleton, Heather M, and Dishaw, Laura V. Is the Pentabde Replacement, Tris (1,3-Dichloro-2-Propyl) Phosphate (Tdcpp), a Developmental Neurotoxicant? Studies in Pc12 Cells. 2011 Nov 1; 256, (3): 281-289.   
Rec #: 43079  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphate flame retardants (OPFRs) are used as replacements for the commercial PentaBDE mixture that was phased out in 2004. OPFRs are ubiquitous in the environment and detected at high concentrations in residential dust, suggesting widespread human exposure. OPFRs are structurally similar to neurotoxic organophosphate pesticides, raising concerns about exposure and toxicity to humans. This study evaluated the neurotoxicity of tris (1,3-dichloro-2-propyl) phosphate (TDCPP) compared to the organophosphate pesticide, chlorpyrifos (CPF), a known developmental neurotoxicant. We also tested the neurotoxicity of three structurally similar OPFRs, tris (2-chloroethyl) phosphate (TCEP), tris (1-chloropropyl) phosphate (TCPP), and tris (2,3-dibromopropyl) phosphate (TDBPP), and 2,2',4,4'-tetrabromodiphenyl ether (BDE-47), a major component of PentaBDE. Using undifferentiated and differentiating PC12 cells, changes in DNA synthesis, oxidative stress, differentiation into dopaminergic or cholinergic neurophenotypes, cell number, cell growth and neurite growth were assessed. TDCPP displayed concentration-dependent neurotoxicity, often with effects equivalent to or greater than equimolar concentrations of CPF. TDCPP inhibited DNA synthesis, and all OPFRs decreased cell number and altered neurodifferentiation. Although TDCPP elevated oxidative stress, there was no adverse effect on cell viability or growth. TDCPP and TDBPP promoted differentiation into both neuronal phenotypes, while TCEP and TCPP promoted only the cholinergic phenotype. BDE-47 had no effect on cell number, cell growth or neurite growth. Our results demonstrate that different OPFRs show divergent effects on neurodifferentiation, suggesting the participation of multiple mechanisms of toxicity. Additionally, these data suggest that OPFRs may affect neurodevelopment with similar or greater potency compared to known and suspected neurotoxicants.  
Keywords: Organophosphates  
Keywords: Fire retardant chemicals  
Keywords: Dust  
Keywords: Differentiation  
Keywords: Dopamine  
Keywords: Pheochromocytoma cells  
Keywords: Oxidative stress  
Keywords: Axonogenesis  
Keywords: Ethers  
Keywords: X 24330:Agrochemicals  
Keywords: DNA biosynthesis  
Keywords: Pesticides (organophosphorus)  
Keywords: Environment Abstracts; Toxicology Abstracts  
Keywords: Data processing  
Keywords: Cell number  
Keywords: Toxicity  
Keywords: organophosphates  
Keywords: oxidative stress  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Phosphates  
Keywords: Phosphate  
Keywords: Pesticides  
Keywords: Neurotoxicity  
Keywords: DNA  
Keywords: Fire retardants  
Keywords: Side effects  
Date revised - 2011-12-01  
Language of summary - English  
Pages - 281-289  
ProQuest ID - 911157707  
SubjectsTermNotLitGenreText - DNA biosynthesis; Pesticides (organophosphorus); Data processing; Cell number; organophosphates; Fire retardant chemicals; Dust; Chlorpyrifos; Differentiation; Dopamine; Pheochromocytoma cells; Phosphate; Oxidative stress; Neurotoxicity; Axonogenesis; Ethers; Side effects; Phosphates; Organophosphates; Pesticides; DNA; Fire retardants; Toxicity; oxidative stress  
Last updated - 2012-03-29  
British nursing index edition - Toxicology and Applied Pharmacology [Toxicol. Appl. Pharmacol.]. Vol. 256, no. 3, pp. 281-289. 1 Nov 2011.  
Corporate institution author - Dishaw, Laura V; Powers, Christina M; Ryde, Ian T; Roberts, Simon C; Seidler, Frederic J; Slotkin, Theodore A; Stapleton, Heather M  
DOI - a9f0a390-9f6d-4c8a-af66csamfg201; 15964962; 0041-008X English

330. Djogbenou, L.; Pasteur, N.; Akogbeto, M.; Weill, M., and Chandre, F. Insecticide resistance in the Anopheles gambiae complex in Benin: a nationwide survey. 2011; 25, (3): 256-267.   
Rec #: 59199  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Benin has embraced World Health Organization-recommended preventive strategies to control malaria. Its National Malaria Control Programme is implementing and/or coordinating various actions and conducting evaluation trials of mosquito control strategies. Mosquito control is based on the use of insecticide-treated nets and indoor residual spraying, but the efficacy of these strategies to control malaria vectors is endangered by insecticide resistance. Here, **we present the results of a nationwide survey** on the status of insecticide susceptibility and resistance in Anopheles gambiae s.l. (Diptera: Culicidae) carried out in Benin in 2006-2007 (i.e. before extensive vector control was undertaken). Overall, our study showed that the S molecular form of An. gambiae s. s. predominates and is widely distributed across the country, whereas the frequency of the M form shows a strong decline with increasing latitude. Susceptibility to DDT, permethrin, carbosulfan and chlorpyrifos-methyl was assessed; individual mosquitoes were identified for species and molecular forms, and genotyped for the kdr and ace-1 loci. Full susceptibility to chlorpyrifos-methyl was recorded and very few samples displayed resistance to carbosulfan. High resistance levels to permethrin were detected in most samples and almost all samples displayed resistance to DDT. The kdr-Leu-Phe mutation was present in all localities and in both molecular forms of An. gambiae s. s. Furthermore, the ace-1(R) mutation was predominant in the S form, but absent from the M form. By contrast, no target modification was observed in Anopheles arabiensis. Resistance in the An. gambiae S molecular form in this study seemed to be associated with agricultural practices. Our study showed important geographic variations which must be taken into account in the vector control strategies that will be applied in different regions of Benin. It also emphasizes the need to regularly monitor insecticide resistance across the country and to adapt measures to manage resistance.  
Keywords: Anopheles gambiae s.l., ace-1(R) mutation, insecticides, kdr(R)  
ISI Document Delivery No.: 803DJ

331. Doganlar, Z. B. Physiological and Genetic Responses to Pesticide Mixture Treatment of Veronica beccabunga. Department of Biology, Faculty of Science and Art, Agri Ibrahim Cecen University, 04200, Agri, Turkey, Springer Science+Business Media, Van Godewijckstraat 30 Dordrecht 3311 GX Netherlands//: SOIL; 2012; 223, (9): 6201-6212.   
Rec #: 2700  
Keywords: MIXTURE  
Call Number: NO MIXTURE (ATZ,CPY,DS,MLX)  
Notes: Chemical of Concern: ATZ,CPY,DS,ETN,MLX

332. Doggett, S. L.; Dwyer, D. E.; Pe¤as, P. F., and Russell, R. C. Bed Bugs: Clinical Relevance and Control Options.   
Rec #: 73389  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract:   
ABSTRACT: Since the late 1990s, bed bugs of the species Cimex lectularius and Cimex hemipterus have undergone a worldwide resurgence. These bed bugs are blood-sucking insects that readily bite humans. Cutaneous reactions may occur and can start out as small macular lesions that can develop into distinctive wheals of around 5 cm in diameter, which are accompanied by intense itching. Occasionally, bullous eruptions may result. If bed bugs are numerous, the patient can present with widespread urticaria or eythematous rashes. Often, bites occur in lines along the limbs. Over 40 pathogens have been detected in bed bugs, but there is no definitive evidence that they transmit any disease-causing organisms to humans. Anemia may result when bed bugs are numerous, and their allergens can trigger asthmatic reactions. The misuse of chemicals and other technologies for controlling bed bugs has the potential to have a deleterious impact on human health, while the insect itself can be the cause of significant psychological trauma. The control of bed bugs is challenging and should encompass a multidisciplinary approach utilizing nonchemical means of control and the judicious use of insecticides. For accommodation providers, risk management procedures should be implemented to reduce the potential of bed bug infestations.  
MESH HEADINGS: Animals  
MESH HEADINGS: Bedbugs/\*growth &amp  
MESH HEADINGS: development  
MESH HEADINGS: Communicable Diseases/\*transmission  
MESH HEADINGS: Ectoparasitic Infestations/complications/\*epidemiology/\*prevention &amp  
MESH HEADINGS: control/psychology  
MESH HEADINGS: Humans  
MESH HEADINGS: Insect Bites and Stings/\*epidemiology  
MESH HEADINGS: Prevalence  
MESH HEADINGS: World Health eng

333. Domingues, I.; Agra, A. R.; Monaghan, K.; Soares, A. M. V. M., and Nogueira, A. J. A. Cholinesterase and Glutathione-S-Transferase Activities in Freshwater Invertebrates as Biomarkers to Assess Pesticide Contamination. 2010; 29, (1): 5-18.   
Rec #: 70  
Keywords: REVIEW  
Call Number: NO REVIEW (ACP,ADC,AZ,CBF,CBL,CPY,DDVP,ES,FNT,MLN,PIRM,PPX,TCF)  
Notes: EcoReference No.: 152619  
Chemical of Concern: ACP,ADC,AZ,CBF,CBL,CPY,DDVP,EPRN,ES,FNT,MLN,PIRM,PPX,PRN,TCF

334. Dos Santos, Luciane G; Lourencetti, Carolina; Pinto, Alicio a; Pignati, Wanderlei a; Dores, Eliana Fgc, and Dos Santos, Luciane G. Validation and Application of an Analytical Method for Determining Pesticides in the Gas Phase of Ambient Air. 2011 Feb; 46, (2): 150-162.   
Rec #: 43569  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A method for determining atmospheric concentrations of eight pesticides applied to corn and soybean crops in Mato Grosso state, Brazil is presented. The method involved a XAD-2 resin cartridge coupled to a low volume air pump at 2 L min-1 over 8 hours. Pesticides were recovered from the resin using sonication with n-hexane:ethyl acetate and determined by GC-MS. Good accuracy (76-128%) and precision (CV < 20%) were obtained for atrazine, chlorpyrifos, alpha - and beta -endosulfan, endosulfan sulfate, flutriafol, malathion, metolachlor and permethrin. Method detection ranged from 9.0 to 17.9 ng m super(-3). This method was applied to 61 gas phase samples collected between December 2008 and June 2009. Atrazine and endosulfan were detected both in urban and rural areas indicating the importance of atmospheric dispersion of pesticides in tropical areas. The simple and efficient extraction method and sampling system employed was considered suitable for identifying pesticides in areas of intense agricultural production.  
Keywords: Resins  
Keywords: Pollution detection  
Keywords: P 0000:AIR POLLUTION  
Keywords: Agricultural production  
Keywords: Pollution dispersion  
Keywords: Wastes  
Keywords: Environment Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Pollution Abstracts  
Keywords: Herbicides  
Keywords: Q5 01502:Methods and instruments  
Keywords: Malathion  
Keywords: Endosulfan  
Keywords: Chlorpyrifos  
Keywords: Acetate  
Keywords: Atrazine  
Keywords: Pesticides  
Keywords: Pumps  
Keywords: Brazil, Mato Grosso  
Keywords: ENA 01:Air Pollution  
Keywords: Dispersion  
Date revised - 2011-04-01  
Language of summary - English  
Location - Brazil, Mato Grosso  
Number of references - 53  
Pages - 150-162  
ProQuest ID - 860377750  
SubjectsTermNotLitGenreText - Pollution detection; Acetate; Pesticides; Wastes; Pumps; Herbicides; Dispersion; Chlorpyrifos; Resins; Agricultural production; Pollution dispersion; Atrazine; Malathion; Endosulfan; Brazil, Mato Grosso  
Last updated - 2012-12-14  
British nursing index edition - Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants and Agricultural Wastes [J. Environ. Sci. Health, Pt. B: Pestic., Food Contam., Agric. Wastes]. Vol. 46, no. 2, pp. 150-162. Feb 2011.  
Corporate institution author - Dos Santos, Luciane G; Lourencetti, Carolina; Pinto, Alicio A; Pignati, Wanderlei A; Dores, Eliana FGC  
DOI - 3d82958a-bee8-40c2-a841mfgefd101; 14432022; CS1146869; 0360-1234; 1532-4109  
Agriculture & Environment Research Unit The Pesticide Properties Database, University of Hertfordshire, Hatfield, UK  
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Rec #: 59259  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A fast and simple model which uses lower animals on the evolutionary scale is beneficial for developing procedures for the reversal of neurobehavioral teratogenicity with neural stem cells. Here, we established a procedure for the derivation of chick neural stem cells, establishing embryonic day (E) 10 as optimal for progression to neuronal phenotypes. Cells were obtained from the embryonic cerebral hemispheres and incubated for 5-7 days in enriched medium containing epidermal growth factor (EGF) and basic fibroblast growth factor (FGF2) according to a procedure originally developed for mice. A small percentage of the cells survived, proliferated and formed nestin-positive neurospheres. After removal of the growth factors to allow differentiation (5 days), 74% of the cells differentiated into all major lineages of the nervous system, including neurons (Beta Ill tubulin-positive, 54% of the total number of differentiated cells), astrocytes (GFAP-positive, 26%), and oligodendrocytes (04-positive, 20%). These findings demonstrate that the cells were indeed neural stem cells. Next, the cells were transplanted in two allograft chick models; (1) direct cerebral transplantation to 24-h-old chicks, followed by post-transplantation cell tracking at 24 h, 6 days and 14 days, and (2) intravenous transplantation to chick embryos on E13, followed by cell tracking on E19. With both methods, transplanted cells were found in the brain. The chick embryo provides a convenient, precisely-timed and unlimited supply of neural progenitors for therapy by transplantation, as well as constituting a fast and simple model in which to evaluate the ability of neural stem cell transplantation to repair neural damage, steps that are critical for progress toward therapeutic applications. (C) 2010 Elsevier Inc. All rights reserved.  
Keywords: Chick, Neural stem cell derivation, Intra-cerebral transplantation,  
ISI Document Delivery No.: 620VF

336. Douard, V. and Ferraris, R. P. Regulation of the Fructose Transporter Glut5 in Health and Disease.   
Rec #: 51159  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Annu Rev Physiol. 1989;51:601-19 (medline /2653198)  
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COMMENTS: Cites: J Nutr. 2006 Sep;136(9):2308-13 (medline /16920846)  
COMMENTS: Cites: Curr Opin Clin Nutr Metab Care. 2006 Sep;9(5):535-9 (medline /16912547)  
ABSTRACT: Fructose is now such an important component of human diets that increasing attention is being focused on the fructose transporter GLUT5. In this review, we describe the regulation of GLUT5 not only in the intestine and testis, where it was first discovered, but also in the kidney, skeletal muscle, fat tissue, and brain where increasing numbers of cell types have been found to have GLUT5. GLUT5 expression levels and fructose uptake rates are also significantly affected by diabetes, hypertension, obesity, and inflammation and seem to be induced during carcinogenesis, particularly in the mammary glands. We end by highlighting research areas that should yield information needed to better understand the role of GLUT5 during normal development, metabolic disturbances, and cancer.  
MESH HEADINGS: Animals  
MESH HEADINGS: Diabetes Mellitus/metabolism  
MESH HEADINGS: Fructose/metabolism  
MESH HEADINGS: Glucose Transporter Type 5/blood/\*metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Hypertension/metabolism  
MESH HEADINGS: Inflammation/metabolism  
MESH HEADINGS: Intestines/metabolism  
MESH HEADINGS: Obesity/metabolism eng

337. Dounin, V.; Constantinof, A.; Schulze, H.; Bachmann, T. T., and Kerman, K. Electrochemical detection of interaction between Thioflavin T and acetylcholinesterase. 2011; 136, (6): 1234-1238.   
Rec #: 59269  
Keywords: METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The electrochemical oxidation of the benzothiazole dye Thioflavin T (ThT) was found to be modulated by its interaction with electric eel acetylcholinesterase (AChE). Modifications of AChE by trace amounts of small molecule inhibitors such as carbachol and paraoxon were detectable electrochemically using minimal reagents and with greater sensitivity than attainable through conventional fluorescence approaches. This property appears to be unique to ThT, since its closely related neutral derivative BTA-1 only interacts with AChE, but is not significantly affected by the presence of small molecule inhibitors.  
Keywords: PERIPHERAL SITE, CHLORPYRIFOS OXON, METHYL PARAOXON, ACYLATION SITE,  
ISI Document Delivery No.: 727MV

338. Dow Chemical Co. Determination of Chlorpyrifos and 3,5,6-Trichloro-2-Pyridinol in Green Plants, Kernels, Kernels and Cobs, Cobs and Husks, and Husks of Sweet Corn Growth From Seed Treated with Lorsban Insecticide. SOIL; 1974.  
Rec #: 680  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

339. ---. Determination of Residues of Chloropyrifos and 3,5,6-Trichloro-2-Pyridinol in Tissues of Cattle Receiving a Single Treatment of Dursban Spoton. 1976.  
Rec #: 690  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

340. ---. Determination of Residues of Chloropyrifos its Oxygen Analog and 3,5,6-Trichloro-2-Pyridinol in Tissues of Cattle Fed Chloropyrifos. 1972.  
Rec #: 640  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
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341. ---. Determination of Residues of Chlorpyrifos and Its Oxygen Analog in Peaches by Gas Chromatography. SOIL; 1969.  
Rec #: 620  
Keywords: NOT PURSUING,HUMAN HEALTH  
Call Number: NO HUMAN HEALTH (CPY)  
Notes: Chemical of Concern: CPY

342. ---. Dursban Mosquito Issue. 1968; 24, (2): 1.   
Rec #: 2040  
Keywords: INCORRECT CITATION  
Notes: Chemical of Concern: CPY

343. ---. Dursban Residues in the Omental Fat of Cattle Following Two Dip Applications. 1967.  
Rec #: 610  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

344. ---. The Effect of Formulation of Dursban Residues in Omental Fat of Cattle Following Single Spray Application. 1966.  
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Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
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345. ---. Report No. NBA-9: Absorption, Excretion, and Distribution of 0-0 Diethyl 0-3,5,6-Trichloro-2,6-C14-2-Pyridyl Phosphorothiate (C-14-Dowco 179) in Rats. 1971.  
Rec #: 630  
Keywords: NO SOURCE  
Notes: Chemical of Concern: CPY

346. ---. Residues of Chloropyrifos and 3,5,6-Trichloro-2-Pyridinol in Tissues of Swine Fed Chloropyrifos. 1972.  
Rec #: 650  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

347. ---. Residues of Chloropyrifos, Its Oxygen Analog, and 3,5,6-Trichloro-2-Pyridinol in Milk and Cream from Cows Fed Chloropyrifos. 1972.  
Rec #: 670  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

348. ---. Residues of Chlorpyrifos and 3,5,6-Trichlor-2-Pyridinol in Field Corn Following Multiple Applications of Lorsban Insecticides. SOIL; 1981.  
Rec #: 710  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

349. ---. Residues of Chlorpyrifos and 3,5,6-Trichloro-2-Pyridinol in Corn Process Fractions Following Treatment of Grain with Lorsban 4E Insecticide. SOIL; 1981.  
Rec #: 720  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

350. ---. Residues of Chlorpyrifos and 3,5,6-Trichloro-2-Pyridinol in Grain and Milling Fractions Following Multiple Applications of Lorsban 4E Insecticide to Sorghum. SOIL; 1978.  
Rec #: 700  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

351. ---. Residues of Chlorpyrifos and 3,5,6-Trichloro-2-Pyridinol in Sorghum Green Plant, Silage, dry Plant and Grain Following Multiple Applications with Lorsban Insecticide. SOIL; 1976.  
Rec #: 740  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

352. ---. Residues of Chlorpyrifos and 3,5,6-Trichloro-2-Pyridinol in Tissues and Eggs from Chickens Fed Chlorpyrifos. 1972.  
Rec #: 660  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

353. Drury, D. D.; Baker, C. A.; Gundlach, J. C., and Ahmadpour, J. Chlorination - Dechlorination and Toxicity Testing. D.D.Drury, Chino Basin Municipal Water District, Fontana, CA//: 1997; 9, (7): 49-52.   
Rec #: 750  
Keywords: SURVEY  
Call Number: NO SURVEY (CPY)  
Notes: Chemical of Concern: CPY

354. Druzina, B. and Stegu, M. Degradation study of selected organophosphorus insecticides in natural waters. 2007; 87, (15): 1079-1093.   
Rec #: 59289  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The degradation of 15 organophosphorus insecticides was studied in drinking, ground, and surface waters under different laboratory-controlled and environmental conditions. Surface waters originated from rivers Savinja (near the city of Celje) and Kamniska Bistrica (at the spring), which both belong to the Danube river basin. Groundwater was collected from wells (70m deep) in Ljubljana, which are the direct source of drinking water for the capital. These matrices were selected on the basis of their different chemical composition and microbial activity. Major factors influencing the degradation were determined, such as temperature, oxygen, sunlight, pH, and type of water. The degradation of atrazine, present in many water sources in Slovenija, was followed simultaneously as a reference under the same conditions. The degradation kinetics was followed by gas chromatography with mass-selective detection, which also allowed the identification of some degradation by-products, such as oxon analogues paraoxon, dyfoxon, malaoxon, phenyl-methyl sulfoxide, fenthion sulfone, phorate sulfoxide, and phorate sulfone. The results show that the half-lives of the selected organophosphorus insecticides varied from 4 to 192 days or more, depending on the water source and experimental conditions. As a result, kinetically constants and half-lives were calculated for every tested insecticide, and major degradation products were determined.  
Keywords: organophosphorus insecticides, environmental fate, degradation  
ISI Document Delivery No.: 223VV

355. Du, D.; Wang, J.; Wang, L. M.; Lu, D. L., and Lin, Y. H. Integrated Lateral Flow Test Strip with Electrochemical Sensor for Quantification of Phosphorylated Cholinesterase: Biomarker of Exposure to Organophosphorus Agents. 2012; 84, (3): 1380-1385.   
Rec #: 59299  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An integrated lateral flow test strip with an electrochemical sensor (LFTSES) device with rapid, selective, and sensitive response for quantification of exposure to organophosphorus (OP) pesticides and nerve agents has been developed. The principle of this approach is based on parallel measurements of postexposure and baseline acetylcholinesterase (AChE) enzyme activity, where reactivation of the phosphorylated AChE is exploited to enable measurement of the total amount of AChE (including inhibited and active) which is used as a baseline for calculation of AChE inhibition. Quantitative measurement of phosphorylated adduct (OP-AChE) was realized by subtracting the active AChE from the total amount of AChE. The proposed LFTSES device integrates immunochromatographic test strip technology with electrochemical measurement using a disposable screen printed electrode which is located under the test zone. It shows a linear response between AChE enzyme activity and enzyme concentration from 0.05 to 10 nM, with a detection limit of 0.02 nM. On the basis of this reactivation approach, the LFTSES device has been successfully applied for in vitro red blood cells inhibition studies using chlorpyrifos oxon as a model OP agent. This approach not only eliminates the difficulty in screening of low-dose OP exposure because of individual variation of normal AChE values but also avoids the problem in overlapping substrate specificity with cholinesterases and avoids potential interference from other electroactive species in biological samples. It is baseline free and thus provides a rapid, sensitive, selective, and inexpensive tool for in-field and point-of-care assessment of exposures to OP pesticides and nerve agents.  
Keywords: CHEMICAL WARFARE AGENTS, NERVE AGENTS, ACETYLCHOLINESTERASE BIOSENSOR,  
ISI Document Delivery No.: 886OH

356. Du, M.; Butchi, N. B.; Woods, T., and Peterson, K. E. Poly-Thymidine Oligonucleotides Mediate Activation of Murine Glial Cells Primarily Through Tlr7, Not Tlr8.   
Rec #: 50099  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: The functional role of murine TLR8 in the inflammatory response of the central nervous system (CNS) remains unclear. Murine TLR8 does not appear to respond to human TLR7/8 agonists, due to a five amino acid deletion in the ectodomain. However, recent studies have suggested that murine TLR8 may be stimulated by alternate ligands, which include vaccinia virus DNA, phosphothioate oligodeoxynucleotides (ODNs) or the combination of phosphothioate poly-thymidine oligonucleotides (pT-ODNs) with TLR7/8 agonists. In the current study, we analyzed the ability of pT-ODNs to induce activation of murine glial cells in the presence or absence of TLR7/8 agonists. We found that TLR7/8 agonists induced the expression of glial cell activation markers and induced the production of multiple proinflammatory cytokines and chemokines in mixed glial cultures. In contrast, pT-ODNs alone induced only low level expression of two cytokines, CCL2 and CXCL10. The combination of pT-ODNs along with TLR7/8 agonists induced a synergistic response with substantially higher levels of proinflammatory cytokines and chemokines compared to CL075. This enhancement was not due to cellular uptake of the agonist, indicating that the pT-ODN enhancement of cytokine responses was due to effects on an intracellular process. Interestingly, this response was also not due to synergistic stimulation of both TLR7 and TLR8, as the loss of TLR7 abolished the activation of glial cells and cytokine production. Thus, pT-ODNs act in synergy with TLR7/8 agonists to induce strong TLR7-dependent cytokine production in glial cells, suggesting that the combination of pT-ODNs with TLR7 agonists may be a useful mechanism to induce pronounced glial activation in the CNS.  
MESH HEADINGS: Animals  
MESH HEADINGS: Cell Shape/drug effects  
MESH HEADINGS: Cerebral Cortex/cytology  
MESH HEADINGS: Cytokines/metabolism  
MESH HEADINGS: Down-Regulation/drug effects  
MESH HEADINGS: Endocytosis/drug effects  
MESH HEADINGS: Endosomes/drug effects/metabolism  
MESH HEADINGS: Membrane Glycoproteins/antagonists &amp  
MESH HEADINGS: inhibitors/\*metabolism  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred C57BL  
MESH HEADINGS: Neuroglia/drug effects/\*metabolism  
MESH HEADINGS: Oligonucleotides/\*pharmacology  
MESH HEADINGS: Poly T/\*pharmacology  
MESH HEADINGS: Quinolines/pharmacology  
MESH HEADINGS: RNA, Messenger/genetics/metabolism  
MESH HEADINGS: Thiazoles/pharmacology  
MESH HEADINGS: Toll-Like Receptor 7/antagonists &amp  
MESH HEADINGS: inhibitors/\*metabolism  
MESH HEADINGS: Toll-Like Receptor 8/antagonists &amp  
MESH HEADINGS: inhibitors/\*metabolism  
MESH HEADINGS: Up-Regulation/drug effects eng

357. Duan, H-M; Wang, K-Y; Wang, M; Jiang, L-L; Qiao, K; Ren, X-X, and Duan, H-M. Degradative Characteristics of Bacillus Cereus Hy-1 to Methyl-Parathion and Chlorpyrifos. 2010 Mar; 29, (3): 437-443.   
Rec #: 40709  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A bacterial strain, Bacillus cereus HY-1, was isolated from the treatment system of the pesticide enterprises and its degradative characteristics to methyl-parathion and chlorpyrifos were studied by using the methods of enrichment culturing and the ultraviolet spectrophotometer determination. The results showed that the bacteria could utilize the methyl-parathion or chlorpyrifos as the unique phosphorus source. The optimal conditions for degrading methyl-parathion were as follows: the temperature of 30 similar to 35 degree C, the initial pH of 6 similar to 8, the initial methyl-parathion concentration of 10 similar to 50 mg times L super(-1) and the inoculation amount of 20% in the experiment(v/v). The results also indicated that the optimal conditions for degrading chlorpyrifos was similar as above, except the different concentration of glucose or the substrate concentration.  
Keywords: Chlorpyrifos  
Keywords: ENA 09:Land Use & Planning  
Keywords: Pesticides  
Keywords: Temperature  
Keywords: Phosphorus  
Keywords: Environment Abstracts  
Keywords: spectrophotometers  
Keywords: pH  
Date revised - 2010-02-01  
Language of summary - English  
Pages - 437-443  
ProQuest ID - 813813380  
SubjectsTermNotLitGenreText - Chlorpyrifos; Pesticides; Temperature; Phosphorus; spectrophotometers; pH  
Last updated - 2012-08-02  
Corporate institution author - Duan, H-M; Wang, K-Y; Wang, M; Jiang, L-L; Qiao, K; Ren, X-X  
DOI - OB-MD-0013562522; 12927715; 1672-2043 English

358. Duangkaew, P.; Pethuan, S.; Kaewpa, D.; Boonsuepsakul, S.; Sarapusit, S., and Rongnoparut, P. CHARACTERIZATION OF MOSQUITO CYP6P7 AND CYP6AA3: DIFFERENCES IN SUBSTRATE PREFERENCE AND KINETIC PROPERTIES. 2011; 76, (4): 236-248.   
Rec #: 59309  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Cytochrome P450 monooxygenases are involved in insecticide resistance in insects. We previously observed an increase in CYP6P7 and CYP6AA3 mRNA expression in Anopheles minimus mosquitoes during the selection for deltamethrin resistance in the laboratory. CYP6AA3 has been shown to metabolize deltamethrin, while no information is known for CYP6P7. In this study, CYP6P7 was heterologously expressed in the **Spodoptera frugiperda (Sf9) insect cells** via baculovirus-mediated expression system. The expressed CYP6P7 protein was used for exploitation of its enzymatic activity against insecticides after reconstitution with the **An. minimus NADPH-cytochrome P450 reductase enzyme in vitro.** The ability of CYP6P7 to metabolize pyrethroids and insecticides in the organophosphate and carbamate groups was compared with CYP6AA3. The results revealed that both CYP6P7 and CYP6AA3 proteins could metabolize permethrin, cypermethrin, and deltamethrin pyrethroid insecticides, but showed the absence of activity against bioallethrin (pyrethroid), chlorpyrifos (organophosphate), and propoxur (carbamate). CYP6P7 had limited capacity in metabolizing l-cyhalothrin (pyrethroid), while CYP6AA3 displayed activity toward l-cyhalothrin. Kinetic properties suggested that CYP6AA3 had higher efficiency in metabolizing type I than type II pyrethroids, while catalytic efficiency of CYP6P7 toward both types was not significantly different. Their kinetic parameters in insecticide metabolism and preliminary inhibition studies by test compounds in the flavonoid, furanocoumarin, and methylenedioxyphenyl groups elucidated that CYP6P7 had different enzyme properties compared with CYP6AA3. (C) 2011 Wiley Periodicals, Inc.  
Keywords: cytochrome P450, pyrethroid, CYP6P7, CYP6AA3, kinetic study  
ISI Document Delivery No.: 737BP

359. Dubey, K. K. and Fulekar, M. H. Chlorpyrifos Bioremediation in Pennisetum Rhizosphere by a Novel Potential Degrader Stenotrophomonas maltophilia MHF ENV20. 2012; 28, (4): 1715-1725.   
Rec #: 2770  
Keywords: BACTERIA  
Call Number: NO BACTERIA (CPY)  
Notes: Chemical of Concern: CPY

360. Dubinion, J. H.; Da Silva, A. A., and Hall, J. E. Enhanced Blood Pressure and Appetite Responses to Chronic Central Melanocortin-3/4 Receptor Blockade in Dietary-Induced Obesity.   
Rec #: 50539  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Hypertension. 2003 Mar;41(3 Pt 2):625-33 (medline /12623970)  
COMMENTS: Cites: J Hypertens. 2002 Jul;20(7):1245-50 (medline /12131511)  
COMMENTS: Cites: J Neurosci. 2003 Jul 9;23(14):5998-6004 (medline /12853417)  
COMMENTS: Cites: Hypertension. 2006 Feb;47(2):259-64 (medline /16380516)  
COMMENTS: Cites: Endocr Rev. 2006 Dec;27(7):736-49 (medline /17077189)  
COMMENTS: Cites: N Engl J Med. 2009 Jan 1;360(1):44-52 (medline /19092146)  
COMMENTS: Cites: Nat Med. 1995 Dec;1(12):1311-4 (medline /7489415)  
COMMENTS: Cites: Nature. 1997 Jan 9;385(6612):165-8 (medline /8990120)  
COMMENTS: Cites: J Clin Invest. 1997 Jul 15;100(2):270-8 (medline /9218503)  
COMMENTS: Cites: Hypertension. 1997 Sep;30(3 Pt 2):619-23 (medline /9322991)  
COMMENTS: Cites: Nature. 1997 Nov 27;390(6658):349 (medline /9389472)  
COMMENTS: Cites: Diabetes. 1997 Dec;46(12):2040-3 (medline /9392493)  
COMMENTS: Cites: Hypertension. 1999 Jan;33(1 Pt 2):542-7 (medline /9931162)  
COMMENTS: Cites: Hypertension. 2006 Jul;48(1):58-64 (medline /16754792)  
COMMENTS: Cites: Prev Med. 1987 Mar;16(2):235-51 (medline /3588564)  
COMMENTS: Cites: Hypertension. 1998 Jan;31(1 Pt 2):409-14 (medline /9453337)  
COMMENTS: Cites: Neurosci Lett. 1998 Jun 19;249(2-3):107-10 (medline /9682828)  
COMMENTS: Cites: J Clin Endocrinol Metab. 2000 Nov;85(11):4000-2 (medline /11095422)  
COMMENTS: Cites: Ann N Y Acad Sci. 2002 Jun;967:379-88 (medline /12079865)  
COMMENTS: Cites: Hypertension. 2003 Mar;41(3 Pt 2):768-74 (medline /12623994)  
ABSTRACT: METHOD: We examined the role of central nervous system (CNS) endogenous melanocortin 3/4 receptors (MC3/4R) activity in controlling cardiovascular and metabolic functions in Sprague Dawley rats fed a high-fat diet (n = 6) for 10 months compared with rats fed a standard chow (normal fat, n = 8) starting at 3 weeks of age.  
ABSTRACT: RESULTS: At 7 months of age, high-fat rats were heavier (473 +/- 3 vs. 424 +/- 7 g), consumed more calories with larger, less frequent meals and had reduced respiratory quotient (RQ) compared with normal-fat rats. After 10 months on the diets, arterial and venous catheters were implanted for measurement of mean arterial pressure (MAP) and heart rate (HR) 24-h/day and i.v. (intravenous) infusions, and a 21G steel cannula was placed in the lateral ventricle for intracerebroventricular (ICV) infusions. High-fat rats were heavier (528 +/- 14 vs. 477 +/- 11 g) with increased visceral adiposity and significantly higher MAP (108 +/- 3 vs. 102 +/- 1 mmHg). After a 5-day control period, the rats were infused with a MC3/4R antagonist (SHU-9119, 1 nmol/h, ICV) for 10 days followed by a 5-day recovery period. SHU-9119 infusion for 10 days increased caloric intake significantly more in high-fat rats (159 +/- 19 vs. 64 +/- 8 kcal). Despite increasing caloric intake and rapid weight gain, MC3/4R antagonism reduced MAP more in high-fat diet compared with normal-fat rats (-7.9 +/- 0.3 vs. -4.7 +/- 1.3 mmHg, average reduction of last 4 days of blockade).  
ABSTRACT: CONCLUSION: These observations suggest that a high-fat diet increases endogenous activity of the CNS MC3/4R and that an intact MC3/4 appears to play an important role in linking increased blood pressure with diet-induced obesity.  
MESH HEADINGS: Animals  
MESH HEADINGS: \*Appetite/drug effects  
MESH HEADINGS: Azaperone  
MESH HEADINGS: Blood Pressure/\*physiology  
MESH HEADINGS: Dietary Fats/adverse effects  
MESH HEADINGS: Energy Intake  
MESH HEADINGS: Heart Rate/physiology  
MESH HEADINGS: Hypertension/complications  
MESH HEADINGS: Melanocyte-Stimulating Hormones  
MESH HEADINGS: Obesity/blood/\*metabolism/\*physiopathology  
MESH HEADINGS: Random Allocation  
MESH HEADINGS: Rats  
MESH HEADINGS: Rats, Sprague-Dawley  
MESH HEADINGS: Receptor, Melanocortin, Type 3/\*antagonists &amp  
MESH HEADINGS: inhibitors  
MESH HEADINGS: Receptor, Melanocortin, Type 4/\*antagonists &amp  
MESH HEADINGS: inhibitors  
MESH HEADINGS: Weight Gain eng

361. Duffner, A. ; Ingwersen, J.; Hugenschmidt, C., and Streck, T. Pesticide Transport Pathways from a Sloped Litchi Orchard to an Adjacent Tropical Stream as Identified by Hydrograph Separation. 2012; 41, (4): 1315-1323.   
Rec #: 59329  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study was performed to identify the transport pathways of pesticides from a sloped litchi (Litchi chinensis Sonn.) orchard to a nearby stream based on a three-component hydrograph separation (baseflow, interflow, surface runoff). Dissolved silica and electrical conductivity were chosen as representative tracers. During the study period (30 d), 0.4 and 0.01% of the applied mass of atrazine and chlorpyrifos, respectively, were detected in the stream aft er 151 mm of rainfall. Baseflow (80-96%) was the dominant hydrological flow component, followed by interflow (3-18%) and surface runoff (1-7%). Despite its small contribution to total discharge, surface runoff was the dominant atrazine transport pathway during the first days aft er application because pesticide concentrations in the surface runoff flow component declined quickly within several days. Preferential transport with interflow became the dominant pathway of atrazine. Because chlorpyrifos was detected in the stream water only twice, it was not included in the hydrograph separation. A feature of the surface runoff pathway was the coincidence of pesticide and discharge peaks. In contrast, peak concentrations of pesticides transported by interflow occurred during the hydrograph recession phases. Stormflow generation and pesticide transport depended on antecedent rainfall. The combination of high-resolution pesticide concentration measurements with a three-component hydrograph separation has been shown to be a suitable method to identify pesticide transport pathways under tropical conditions.  
Keywords: CLIMATE-SOIL CONTROLS, OPEN-FRACTURED SOIL, HYDROLOGICAL PROCESSES,  
ISI Document Delivery No.: 968HA

362. Duirk, S. E.; Desetto, L. M., and Davis, G. M. Transformation of Organophosphorus Pesticides in the Presence of Aqueous Chlorine: Kinetics, Pathways, and Structure-Activity Relationships. 2009; 43, (7): 2335-2340.   
Rec #: 59339  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The fate of organophosphorus (OP) pesticides in the presence of aqueous chlorine was investigated under simulated drinking water treatment conditions. Intrinsic rate coefficients were found for the reaction of hypochlorous acid (k(HOCl,OP)) and hypochlorite ion (k(OCl,OP)) for several OP pesticides. The reaction of hypochlorous acid (HOCl) with each OP pesticide was relatively rapid near neutral pH, k(HOCl,OP) = 0.86 - 3.56 x 10(6) M(-1)h(-1). HOCl reacts at the thiophosphate (P = S) moiety of the OP pesticide resuffing in the formation of the corresponding oxon (P = 0), which is more toxic than the parent pesticide. Hypochlorite ion (OCl(-)) was found not to oxidize OP pesticides but act like a nucleophile accelerating hydrolysis, k(OCl,OP) = 37.3-15 910 M(-1)h(-1). Both the k(HOCl,OP) and the k(OCl,OP) were found to correlate well with molecular descriptors within each subgroup of the OP pesticide class. A model was developed to predict the transformation of OP pesticides in the presence of aqueous chlorine. With hydrolysis rate coefficients, the transformation of OP pesticides under drinking water treatment conditions was found to be adequately predicted. The structure-activity relationships and model developed here could be used by risk assessors to determine exposure to OP pesticides and their transformation products in potable water.  
Keywords: CONTAINING S-TRIAZINES, NATURAL-WATERS, DEGRADATION, CHLORPYRIFOS,  
ISI Document Delivery No.: 427DI

363. Duirk, Stephen E; Desetto, Lisa M; Davis, Gary M; Lindell, Cristal; Cornelison, Christopher T , and Duirk, Stephen E. Chloramination of Organophosphorus Pesticides Found in Drinking Water Sources. 2010 Feb; 44, (3): 761-768.   
Rec #: 48119  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The degradation of commonly detected organophosphorus (OP) pesticides, in drinking water sources, was investigated under simulated chloramination conditions. Due to monochloramine autodecomposition, it is difficult to observe the direct reaction of monochloramine with each OP pesticide. Therefore, a model was developed to examine the reaction of monochloramine (NH2Cl) and dichloramine (NHCl2) with chlorpyrifos (CP), diazinon (DZ), and malathion (MA). Monochloramine was found not to be very reactive with each OP pesticides, kNH2Cl,OP=11-21M super(-1)h super(-1). While, dichloramine (NHCl2) was found to be 2 orders of magnitude more reactive with each of the OP pesticides than monochloramine, kNHCl2,OP=2000-2900M super(-1)h super(-1), which is still three orders of magnitude less than the hypochlorous acid reaction rate coefficient with each OP pesticide. For each pesticide, the reactivity of the three chlorinated oxidants was then found to correlate with half-wave potentials (E1/2) of each oxidant. With reaction rate coefficients for the three chlorinated oxidations as well as neutral and alkaline hydrolysis rate coefficients for the pesticides, the model was used to determine the dominant reaction pathways as a function of pH. At pH 6.5, OP pesticide transformation was mostly due to the reaction of hypochlorous acid and dichloramine. Above pH 8, alkaline hydrolysis or the direct reaction with monochloramine was the primary degradation pathway responsible for the transformation of OP pesticides. This demonstrates the ability of models to be used as tools to elucidate degradation pathways and parameterize critical reaction parameters when used with select yet comprehensive data sets.  
Keywords: Environmental Engineering Abstracts (EN); CSA / ASCE Civil Engineering Abstracts (CE)  
Date revised - 2013-01-01  
Language of summary - English  
Number of references - 2  
Pages - 761-768  
ProQuest ID - 746073711  
Last updated - 2013-01-07  
British nursing index edition - Water Research [Water Res.]. Vol. 44, no. 3, pp. 761-768. Feb 2010.  
Corporate institution author - Duirk, Stephen E; Desetto, Lisa M; Davis, Gary M; Lindell, Cristal; Cornelison, Christopher T  
DOI - d5d56f36-bd19-4fec-a3b8csaobj202; 12930523; 0043-1354  
Gray, Margerum, Huffman. Organometals and Organometalloids: Occurrence and Fate in the Environment.  
Standard Methods for the Examination of Water and Wastewater. English

364. Dunn, a M; Julien, G; Ernst, W R; Cook, a; Doe, K G; Jackman, P M, and Dunn, A M. Evaluation of Buffer Zone Effectiveness in Mitigating the Risks Associated With Agricultural Runoff in Prince Edward Island. 2011 Feb 1; 409, (5): 868-882.   
Rec #: 47459  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: To minimize the risk posed by runoff from row crops, Prince Edward Island introduced buffer legislation in 2000. The legislation mandates 10-m and 20-m buffers, respectively, for moderate sloped (i.e. 5%) agricultural fields that border streams. Since 2001, Environment Canada has been evaluating the effectiveness of various buffer widths on operational farms in reducing toxicity and contaminant concentrations in runoff. Sample collectors, placed in 44 fields at the field edge (0m), 10m and at distances out to 30m, collected overland flow following rainfall-induced runoff events. Samples were collected within 24 hours of an event and analysed for seven pesticides (**endosulfan, chlorothalonil, carbofuran, linuron, metribuzin, metalaxyl, mancozeb**), water quality parameters and **Daphnia magna toxicity**. The 10-m buffer required for moderate sloped fields was effective at reducing contaminant concentrations but not always to less than lethal concentrations to Daphnia magna. Limited data beyond 10m for fields of both slope types precluded making recommendations on a suitable buffer width for shallow sloped fields and evaluating the effectiveness of 20-m buffers for steep sloped fields. When paired data were combined and statistically tested for all fields, the studied pesticides underwent a 52-98% and 68-100% reduction in aqueous and particulate concentrations within 10m and 30m, respectively. In addition, by 10m, soluble phosphorus, nitrate-nitrogen and total suspended solids were reduced by 34%, 38% and 64%, respectively. Results suggest buffer zones on operational farms are capable of achieving contaminant reductions comparable to those reported for controlled experiments. Inconsistent siting of sample collectors beyond 10m limited the evaluation of the effects of field slope and buffer width on buffer effectiveness on working farms. Future studies on buffer efficiency on operational farms should focus on building the data set beyond 10m and evaluating load reductions.  
Keywords: Farms  
Keywords: M2 556:General (556)  
Keywords: buffers  
Keywords: Phosphorus  
Keywords: Statistical analysis  
Keywords: Particulates  
Keywords: Q5 01502:Methods and instruments  
Keywords: Water quality  
Keywords: Freshwater  
Keywords: Toxicity tests  
Keywords: Environmental factors  
Keywords: Daphnia magna  
Keywords: Risks  
Keywords: Environmental Studies  
Keywords: Agricultural Chemicals  
Keywords: Islands  
Keywords: Pollutants  
Keywords: farms  
Keywords: Freshwater crustaceans  
Keywords: Slopes  
Keywords: Agricultural runoff  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: Rainfall runoff  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Toxicity  
Keywords: Overland flow  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: R2 23090:Policy and planning  
Keywords: Risk  
Keywords: Canada, Prince Edward Island  
Keywords: Lethal limits  
Keywords: Water Pollution Effects  
Keywords: Pesticides  
Keywords: Fungicides  
Keywords: Pollution Abstracts; Risk Abstracts; Environment Abstracts; Meteorological & Geoastrophysical Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Aqualine Abstracts; Water Resources Abstracts  
Keywords: Runoff  
Keywords: Legislation  
Date revised - 2011-10-01  
Language of summary - English  
Location - Canada, Prince Edward Island  
Pages - 868-882  
ProQuest ID - 855515698  
SubjectsTermNotLitGenreText - Lethal limits; Freshwater crustaceans; Pesticides; Toxicity; Environmental factors; Toxicity tests; Agricultural runoff; Risks; Legislation; Rainfall runoff; Statistical analysis; Water quality; Overland flow; Islands; farms; buffers; Fungicides; Phosphorus; Particulates; Risk; Agricultural Chemicals; Farms; Pollutants; Water Pollution Effects; Slopes; Runoff; Daphnia magna; Canada, Prince Edward Island; Freshwater  
Last updated - 2012-08-02  
Corporate institution author - Dunn, A M; Julien, G; Ernst, W R; Cook, A; Doe, K G; Jackman, P M  
DOI - OB-ef973e89-e460-48a6-bd18csamfg201; 14366916; CS1146295; 0048-9697 English

365. Durieux, E. D. H.; Farver, T. B.; Fitzgerald, P. S.; Eder, K. J., and Ostrach, D. J. Natural factors to consider when using acetylcholinesterase activity as neurotoxicity biomarker in Young-Of-Year striped bass (Morone saxatilis). 2011; 37, (1): 21-29.   
Rec #: 59379  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Acetylcholinesterase (AChE) activity is one of the most common biomarkers of neurotoxicity used in aquatic organisms. However, compared to its extensive use as biomarker, the effects of natural factors on AChE activity remain unclear especially in estuarine fishes. **The aim of this study was to evaluate the effects of natural factors on AChE activity of striped bass (Morone saxatilis) juveniles.** Brain AChE activity was measured in YOY (Young-Of-Year) individuals collected monthly from August 2007 to January 2008 at 12 different sites in the San Francisco Estuary system. The spatio-temporal variability of AChE was analyzed relative to water temperature and salinity as well as fish size. AChE activity was highly positively correlated with water temperature and to a lesser extent negatively with fish size while no relationship was detected with salinity. Taking into account these natural factors when using AChE as a biomarker will help to determine and understand the effects of neurotoxic contaminants on fish in estuarine systems.  
Keywords: Fish, Biomarker, Acetylcholinesterase, Brain, Temperature, Salinity,  
ISI Document Delivery No.: 733HO

366. Dusch, M. E.; Westlake, W. E., and Gunther, F. A. Determination of Dursban Insecticide in Water, Mud, Vegetation, Fish, Ducks, Insects, and Crustacea. 1970; 18, (1): 178-179.   
Rec #: 1770  
Keywords: CHEM METHODS  
Call Number: NO CHEM METHODS (CPY)  
Notes: Chemical of Concern: CPY

367. Dutta, Moutushi; Sardar, Devashis; Pal, Raktim, and Kole, Ramen K. Effect of Chlorpyrifos on Microbial Biomass and Activities in Tropical Clay Loam Soil. 2010 Jan; 160, (1-4): 385-91.   
Rec #: 40809  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Clay loam soil from agricultural field of Gangetic alluvial zone of West Bengal was investigated to evaluate the effect of chlorpyrifos application at field rate (0.5 mg kg-1 soil) and 100 times of the field rate (50 mg kg-1 soil) on soil microbial variables under laboratory conditions. Acetone-induced stress on soil microorganisms was evident in the initial stages in terms of microbial biomass carbon (MBC) content in soil and basal soil respiration (BSR) in control soil samples which received acetone only as compared to control soil without acetone. The soil MBC content increased significantly by application of chlorpyrifos. The BSR and the fluorescein diacetate hydrolysing activity (FDHA) were not adversely affected by chlorpyrifos at field rate, whilst the chemical at higher dosage significantly decreased the metabolic activities of soil microbes in terms of BSR and FDHA. [PUBLICATION ABSTRACT]  
Keywords: Soil Pollutants -- toxicity  
Keywords: 8640:Chemical industry  
Keywords: Pesticide Residues  
Keywords: 9179:Asia & the Pacific  
Keywords: 9130:Experimental/theoretical  
Keywords: Biomass  
Keywords: Pesticide Residues -- toxicity  
Keywords: Environmental Studies  
Keywords: Soil Pollutants  
Keywords: Chlorpyrifos  
Keywords: Environmental Monitoring  
Keywords: Soil Microbiology  
Keywords: Chlorpyrifos -- toxicity  
Keywords: 1530:Natural resources  
Keywords: 8400:Agriculture industry  
Keywords: West Bengal India  
Copyright - Springer Science+Business Media B.V. 2010  
Language of summary - English  
Location - West Bengal India  
Pages - 385-91  
ProQuest ID - 221985001  
Document feature - Equations; Tables; References  
SubjectsTermNotLitGenreText - West Bengal India  
Last updated - 2012-03-04  
Place of publication - Dordrecht  
Corporate institution author - Dutta, Moutushi; Sardar, Devashis; Pal, Raktim; Kole, Ramen K  
DOI - 1919402701; 49831681; 108264; EVMT; 19083110; SPVLEVMT10661160702 English

368. Dyk, M. B.; Liu, Y.; Chen, Z. S.; Vega, H., and Krieger, R. I. Fate and distribution of fipronil on companion animals and in their indoor residences following spot-on flea treatments. 2012; 47, (10): 913-924.   
Rec #: 59439  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Use of fipronil {5-amino-1-[2,6-dichloro-4-(trifluoromethyl) phenyl]-4-trifluoromethyl)sulfinyl]-1H-pyrazole-3-carbonitrile CAS 120068-37-3} topical pet products on dogs and cats introduces low level residues into residences. Distribution and fate studies of fipronil on pets and in residences were performed to evaluate potential determinants of human exposure. Fipronil, desulfinyl fipronil, fipronil sulfone and fipronil sulfide were measured on hair clippings and brushed hair. The derivatives usually represented <10% of fipronil applied. Cotton gloves worn over impervious nitrile gloves, cotton cloths placed indoors in locations frequented by pets, and cotton socks worn by residents as direct dosimeters collected fipronil and its derivatives listed above in low amounts during 4-week study periods. Subsequent acid hydrolysis urine biomonitoring did not reveal significant excretion of biomarkers at ppb levels. The human exposure potential of fipronil is low relative to levels of health concern.  
Keywords: Fipronil, companion animals, flea control, biomonitoring, exposure  
ISI Document Delivery No.: 001BG

369. Dyk, Melinda Bigelow; Chen, Zhenshan; Mosadeghi, Sasan; Vega, Helen; Krieger, Robert, and Dyk, Melinda Bigelow. Pilot Biomonitoring of Adults and Children Following Use of Chlorpyrifos Shampoo and Flea Collars on Dogs. 2011 Jan; 46, (1): 97-104.   
Rec #: 40129  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticide handlers and pet owners who use products such as shampoos and dips and insecticide-impregnated collars to treat and control fleas on companion animals are exposed to a variety of active ingredients. Chlorpyrifos exposures of adults and children were measured using urine biomonitoring following use of over-the-counter products on dogs. Age and gender-specific measurements of urinary 3, 5, 6-trichloro-2-pyridinol (TCPy) revealed modest elevations of biomarker excretion following shampoo/dips. Smaller TCPy increments were measured following application of impregnated dog collars. The extent of indoor activity and potential pet contact were important determinants of urine biomarker level. Children without direct pet contact excreted more TCPy following collar application. Pet collars may be a source of indoor surface contamination and human exposure. Children excreted up to 4 times more TCPy than adults when urine volumes were adjusted using age-specific creatinine excretion levels. Although chlorpyrifos is no longer used in the United States in pet care products, results of this research provide perspective on the extent of human exposure from similar pet care products. These pilot studies demonstrated that pet care products such as insecticidal shampoos and dips and impregnated collars may expose family members to low levels of insecticide relative to toxic levels of concern.  
Keywords: Collars  
Keywords: Bioindicators  
Keywords: Age  
Keywords: X 24340:Cosmetics, Toiletries & Household Products  
Keywords: Agricultural wastes  
Keywords: Handlers  
Keywords: Food contamination  
Keywords: Children  
Keywords: biomarkers  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: USA  
Keywords: Creatinine  
Keywords: Insecticides  
Keywords: Urine  
Keywords: Toxicology Abstracts; Environment Abstracts  
Keywords: Pesticides  
Keywords: Gender  
Keywords: biomonitoring  
Keywords: Excretion  
Keywords: Shampoos  
Date revised - 2012-01-01  
Language of summary - English  
Location - USA  
Number of references - 22  
Pages - 97-104  
ProQuest ID - 918040684  
SubjectsTermNotLitGenreText - Collars; Age; Agricultural wastes; Handlers; Children; Food contamination; biomarkers; Chlorpyrifos; Creatinine; Insecticides; Urine; Pesticides; biomonitoring; Excretion; Shampoos; Bioindicators; Gender; USA  
Last updated - 2012-12-14  
British nursing index edition - Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants and Agricultural Wastes [J. Environ. Sci. Health, Pt. B: Pestic., Food Contam., Agric. Wastes]. Vol. 46, no. 1, pp. 97-104. Jan 2011.  
Corporate institution author - Dyk, Melinda Bigelow; Chen, Zhenshan; Mosadeghi, Sasan; Vega, Helen; Krieger, Robert  
DOI - ecdee296-fef7-485c-aa30mfgefd101; 14296422; 0360-1234; 1532-4109  
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370. Eddleston, Michael; Eyer, Peter; Worek, Franz; Juszczak, Edmund; Alder, Nicola; Mohamed, Fahim; Senarathna, Lalith; Hittarage, Ariyasena; Azher, Shifa; Jeganathan, K; Jayamanne, Shaluka; Von Meyer, Ludwig; Dawson, Andrew H; Sheriff, Mohamed Hussain Rezvi, and Buckley, Nick a. Pralidoxime in Acute Organophosphorus Insecticide Poisoning--a Randomised Controlled Trial. 2009 Jun 30; 6, (6): 1-e1000104.   
Rec #: 48469  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Poisoning with organophosphorus (OP) insecticides is a major global public health problem, causing an estimated 200,000 deaths each year. Although the World Health Organization recommends use of pralidoxime, this antidote's effectiveness remains unclear. We aimed to determine whether the addition of pralidoxime chloride to atropine and supportive care offers benefit. We performed a double-blind randomised placebo-controlled trial of pralidoxime chloride (2 g loading dose over 20 min, followed by a constant infusion of 0.5 g/h for up to 7 d) versus saline in patients with organophosphorus insecticide self-poisoning. Mortality was the primary outcome; secondary outcomes included intubation, duration of intubation, and time to death. We measured baseline markers of exposure and pharmacodynamic markers of response to aid interpretation of clinical outcomes. Two hundred thirty-five patients were randomised to receive pralidoxime (121) or saline placebo (114). Pralidoxime produced substantial and moderate red cell acetylcholinesterase reactivation in patients poisoned by diethyl and dimethyl compounds, respectively. Mortality was nonsignificantly higher in patients receiving pralidoxime: 30/121 (24.8%) receiving pralidoxime died, compared with 18/114 (15.8%) receiving placebo (adjusted hazard ratio [HR] 1.69, 95% confidence interval [CI] 0.88-3.26, p = 0.12). Incorporating the baseline amount of acetylcholinesterase already aged and plasma OP concentration into the analysis increased the HR for patients receiving pralidoxime compared to placebo, further decreasing the likelihood that pralidoxime is beneficial. The need for intubation was similar in both groups (pralidoxime 26/121 [21.5%], placebo 24/114 [21.1%], adjusted HR 1.27 [95% CI 0.71-2.29]). To reduce confounding due to ingestion of different insecticides, we further analysed patients with confirmed chlorpyrifos or dimethoate poisoning alone, finding no evidence of benefit. Despite clear reactivation of red cell acetylcholinesterase in diethyl organophosphorus pesticide poisoned patients, we found no evidence that this regimen improves survival or reduces need for intubation in patients with organophosphorus insecticide poisoning. The reason for this failure to benefit patients was not apparent. Further studies of different dose regimens or different oximes are required.  
Keywords: 51-55-8  
Keywords: Acetylcholinesterase  
Keywords: Humans  
Keywords: Pralidoxime Compounds -- adverse effects  
Keywords: P7MU9UTP52  
Keywords: Insecticides  
Keywords: Pralidoxime Compounds -- pharmacokinetics  
Keywords: Acetylcholinesterase -- metabolism  
Keywords: Adult  
Keywords: Organoplatinum Compounds  
Keywords: EC 3.1.1.7  
Keywords: Poisoning -- mortality  
Keywords: Atropine -- pharmacology  
Keywords: Male  
Keywords: Antidotes  
Keywords: Intubation, Intratracheal  
Keywords: Antidotes -- therapeutic use  
Keywords: Pralidoxime Compounds -- therapeutic use  
Keywords: Antidotes -- pharmacokinetics  
Keywords: pralidoxime  
Keywords: Drug Therapy, Combination  
Keywords: Insecticides -- poisoning  
Keywords: Organoplatinum Compounds -- poisoning  
Keywords: 0  
Keywords: Antidotes -- adverse effects  
Keywords: Female  
Keywords: Atropine  
Keywords: Pralidoxime Compounds  
Date completed - 2009-07-23  
Date created - 2009-06-30  
Date revised - 2012-12-20  
Language of summary - English  
Pages - e1000104  
ProQuest ID - 67437257  
Genetic sequence - ISRCTN55264358; ISRCTN  
SuppNotes - Cites: Br J Clin Pharmacol. 2008 Oct;66(4):451-2[18662291]; Cites: Clin Chim Acta. 1999 Oct;288(1-2):73-90[10529460]; Cites: BMC Public Health. 2007;7:357[18154668]; Cites: Lancet. 2008 Feb 16;371(9612):579-87[18280328]; Cites: Lancet. 2008 Feb 16;371(9612):597-607[17706760]; Cites: Int J Epidemiol. 2007 Dec;36(6):1235-42[17726039]; Cites: Lancet. 2006 Dec 16;368(9553):2136-41[17174705]; Cites: Lancet. 2006 Dec 16;368(9553):2110-1[17174692]; Cites: Inj Prev. 2006 Oct;12(5):333-7[17018677]; Cites: J Appl Toxicol. 2006 May-Jun;26(3):262-8[16583462]; Cites: Hum Exp Toxicol. 2006 Mar;25(3):157-62[16634335]; Cites: Crit Care Med. 2006 Feb;34(2):502-10[16424734]; Cites: Lancet. 2005 Oct 22-28;366(9495):1452-9[16243090]; Cites: Crit Care. 2004 Dec;8(6):R391-7[15566582]; Cites: N Engl J Med. 1955 Aug 18;253(7):266-71[13244813]; Cites: J Assoc Physicians India. 1996 Aug;44(8):529-31[9251423]; Cites: Lancet. 1992 May 9;339(8802):1136-8[1349368]; Cites: Lancet. 1992 Jul 4;340(8810):64[1351653]; Cites: Anaesth Intensive Care. 1986 Nov;14(4):458-60[3551677]; Cites: Indian J Med Res. 1977 Sep;66(3):460-8[598919]; Cites: J Pharm Sci. 1972 Nov;61(11):1765-9[4569114]; Cites: Toxicol Rev. 2003;22(3):165-90[15181665]; Cites: J Toxicol Clin Toxicol. 2004;42(1):113-6[15083947]; Cites: Arch Toxicol. 2002 Sep;76(9):523-9[12242610]; Cites: Neth J Med. 2008 Apr;66(4):146-8[18424860]  
Last updated - 2013-01-19  
British nursing index edition - PLoS medicine, June 30, 2009, 6(6):e1000104  
Corporate institution author - Eddleston, Michael; Eyer, Peter; Worek, Franz; Juszczak, Edmund; Alder, Nicola; Mohamed, Fahim; Senarathna, Lalith; Hittarage, Ariyasena; Azher, Shifa; Jeganathan, K; Jayamanne, Shaluka; von Meyer, Ludwig; Dawson, Andrew H; Sheriff, Mohamed Hussain Rezvi; Buckley, Nick A  
DOI - MEDL-19564902; 19564902; PMC2696321; 1549-1676 eng

371. Edwards, M. D.; Bartlett, W., and Booth, I. R. Pore Mutations of the Escherichia Coli Mscs Channel Affect Desensitization but Not Ionic Preference.   
Rec #: 51309  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Mechanosensitive channels rescue bacterial cells from a fate of lysis when they transfer from a high- to low-osmolarity environment. Of three Escherichia coli mechanosensitive proteins studied to date, only MscS-Ec demonstrates a small anionic preference and a desensitized, nonconducting state under sustained pressure. Little is known about the mechanisms generating these distinctive properties. Eliminating the sole positive charge in the MscS-Ec pore region (Arg(88)) did not alter anionic preference. Adding positive charges at either end of the pore did not augment anionic preference, and placing negative charges within the pore did not diminish it. Thus, pore charges do not control this characteristic. However, from this analysis we identified mutations in the hinge region of the MscS-Ec pore helix (at Gly(113)) that profoundly affected ability of the channel to desensitize. Substitution with nonpolar (Ala, Pro) or polar (Asp, Arg, Ser) residues inhibited transition to the desensitized state. Interestingly, Gly(113) replaced with Met did not impede desensitization. Thus, although Gly is not specifically required at position 113, MscS desensitization is strongly influenced by the residue situated here. Mutations at residues further into the pore also regulated desensitization. Transition to this unique mechanosensitive channel state is discussed in terms of existing data.  
MESH HEADINGS: Amino Acid Substitution  
MESH HEADINGS: Cell Membrane/chemistry/\*physiology  
MESH HEADINGS: Computer Simulation  
MESH HEADINGS: Escherichia coli Proteins/chemistry/\*genetics  
MESH HEADINGS: Ion Channel Gating/\*physiology  
MESH HEADINGS: Ion Channels/chemistry/\*genetics  
MESH HEADINGS: Lipid Bilayers/chemistry  
MESH HEADINGS: Mechanotransduction, Cellular/\*physiology  
MESH HEADINGS: \*Models, Biological  
MESH HEADINGS: Models, Chemical  
MESH HEADINGS: Models, Molecular  
MESH HEADINGS: \*Mutagenesis, Site-Directed  
MESH HEADINGS: Porosity  
MESH HEADINGS: Stress, Mechanical eng

372. Egeghy, P P; Hubal, Eac; Tulve, N S; Melnyk, L J; Morgan, M K; Fortmann, R C; Sheldon, L S, and Egeghy, P P. Review of Pesticide Urinary Biomarker Measurements From Selected Us Epa Children's Observational Exposure Studies. 2011 May; 8, (5): 1727-1754.   
Rec #: 43399  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Children are exposed to a wide variety of pesticides originating from both outdoor and indoor sources. Several studies were conducted or funded by the EPA over the past decade to investigate children's exposure to organophosphate and pyrethroid pesticides and the factors that impact their exposures. Urinary metabolite concentration measurements from these studies are consolidated here to identify trends, spatial and temporal patterns, and areas where further research is required. Namely, concentrations of the metabolites of chlorpyrifos (3,5,6-trichloro-2-pyridinol or TCPy), diazinon (2-isopropyl-6-methyl-4-pyrimidinol or IMP), and permethrin (3-phenoxybenzoic acid or 3-PBA) are presented. Information on the kinetic parameters describing absorption and elimination in humans is also presented to aid in interpretation. Metabolite concentrations varied more dramatically across studies for 3-PBA and IMP than for TCPy, with TCPy concentrations about an order of magnitude higher than the 3-PBA concentrations. Temporal variability was high for all metabolites with urinary 3-PBA concentrations slightly more consistent over time than the TCPy concentrations. Urinary biomarker levels provided only limited evidence of applications. The observed relationships between urinary metabolite levels and estimates of pesticide intake may be affected by differences in the contribution of each exposure route to total intake, which may vary with exposure intensity and across individuals.  
Keywords: Chlorpyrifos  
Keywords: Bioindicators  
Keywords: EPA  
Keywords: USA  
Keywords: Urine  
Keywords: Organophosphates  
Keywords: Pesticides  
Keywords: Absorption  
Keywords: Metabolites  
Keywords: Children  
Keywords: Pollution Abstracts  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Date revised - 2011-10-01  
Language of summary - English  
Location - USA  
Pages - 1727-1754  
ProQuest ID - 899137691  
SubjectsTermNotLitGenreText - Chlorpyrifos; Bioindicators; EPA; Organophosphates; Urine; Pesticides; Absorption; Metabolites; Children; USA  
Last updated - 2012-05-07  
British nursing index edition - International Journal of Environmental Research and Public Health [Int. J. Environ. Res. Public Health]. Vol. 8, no. 5, pp. 1727-1754. May 2011.  
Corporate institution author - Egeghy, P P; Hubal, EAC; Tulve, N S; Melnyk, L J; Morgan, M K; Fortmann, R C; Sheldon, L S  
DOI - MD-0017487831; 15772622; 1660-4601 English

373. Ehrich, M.; Van Tassell, R.; Li, Y. B.; Zhou, Z. G., and Kepley, C. L. Fullerene antioxidants decrease organophosphate-induced acetylcholinesterase inhibition in vitro. 2011; 25, (1): 301-307.   
Rec #: 59549  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Although organophosphate (OP)-induced acetylcholinesterase (AChE) inhibition is the critical mechanism causing toxicities that follow exposure, other biochemical events, including oxidative stress, have been reported to contribute to OP toxicity. Fullerenes are carbon spheres with antioxidant activity. Thus, we hypothesized that fullerenes could counteract the effects of OP compounds and tested this hypothesis using two in vitro test systems, hen brain and human neuroblastoma SH-SY5Y cells. Cells were incubated with eight different derivatized fullerene compounds before challenge with paraoxon (0 control, 5 x 10(-8), 10(-7), 2 x 10(-7) or 5 x 10(-7) M) or diisopropylphosphorofluoridate (DFP, 0 = control, 5 x 10(-6), 10(-5), 2 x 10(-5), and 5 x 10(-5) M) and measurement of AChE activities. Activities of brain and SH-SY5Y AChE with OP compounds alone ranged from 55-83% lower than non-treated controls after paraoxon and from 60-92% lower than non-treated controls after DFP. Most incubations containing 1 and 10 mu M fullerene derivatives brought AChE activity closer to untreated controls, with improvements in AChE activity often >20%. Using dissipation of superoxide anion radicals as an indicator (xanthine oxidation as a positive control), all fullerene derivatives demonstrated significant antioxidant capability in neuroblastoma cells at 1 mu M concentrations. No fullerene derivative at 1 mu M significantly affected neuroblastoma cell viability, when determined using either Alamar Blue dye retention or a luminescent assay for ATP production. These studies suggest that derivatized fullerene nanomaterials have potential capability to ameliorate OP-induced AChE inhibition resulting in toxicities. (C) 2010 Elsevier Ltd. All rights reserved.  
Keywords: Fullerenes, Organophosphates, Acetylcholinesterase inhibition  
ISI Document Delivery No.: 716YY

374. Eisenhauer, N.; Klier, M.; Partsch, S.; Sabais, A. C. W.; Scherber, C.; Weisser, W. W., and Scheu, S. No Interactive Effects of Pesticides and Plant Diversity on Soil Microbial Biomass and Respiration. 2009; 42, (1): 31-36.   
Rec #: 2850  
Keywords: BACTERIA  
Call Number: NO BACTERIA (CPY,DMT,FTZ)  
Notes: Chemical of Concern: CPY,DMT,FTZ

375. Eisenhauer, N.; Sabais, A. C. W.; Schonert, F., and Scheu, S. Soil Arthropods Beneficially Rather than Detrimentally Impact Plant Performance in Experimental Grassland Systems of Different Diversity. Georg-August-University Goettingen, J.F. Blumenbach Institute of Zoology and Anthropology, Berliner Str. 28, 37073 Goettingen, Germany, Elsevier Science, P.O. Box 800 Kidlington Oxford OX5 1DX UK//: SOIL; 2010; 42, (9): 1418-1424.   
Rec #: 2810  
Keywords: NO CONC  
Call Number: NO CONC (CPY)  
Notes: EcoReference No.: 160326  
Chemical of Concern: CPY

376. Ellero, S.; Chakhtoura, G.; Barreau, C.; Langouet, S.; Benelli, C.; Penicaud, L.; Beaune, P., and de Waziers, I. Xenobiotic-Metabolizing Cytochromes P450 in Human White Adipose Tissue: Expression and Induction. 2010; 38, (4): 679-686.   
Rec #: 59639  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Lipophilic pollutants can accumulate in human white adipose tissue (WAT), and the consequences of this accumulation are still poorly understood. Cytochromes P450 (P450s) have recently been found in rat WAT and shown to be inducible through mechanisms similar to those in the liver. The aim of our study was to describe the cytochrome P450 pattern and their induction mechanisms in human WAT. Explants of subcutaneous and visceral WAT and primary culture of subcutaneous adipocytes were used as WAT models, and liver biopsies and primary culture of hepatocytes were used as liver models to characterize P450 expression in both tissues. The WAT and liver models were then treated with typical P450 inducers (rifampicin, phenobarbital, and 2,3,7,8-tetrachlorodibenzo- p-dioxin) and lipophilic pollutants (lindane, prochloraz, and chlorpyrifos), and the effects on P450 expression were studied. P450 expression was considerably lower in WAT than in the liver, except for CYP1B1 and CYP2U1, which were the most highly expressed adipose P450s in all individuals. 2,3,7,8-Tetrachloro-dibenzo-p-dioxin and prochloraz induced CYP1A1 and CYP1B1 expression in both tissues. The aryl hydrocarbon receptor was also present in WAT. In contrast, neither phenobarbital nor rifampicin treatment induced CYP2 or CYP3 mRNA in WAT, and constitutive androstane receptor and pregnane X receptor were almost undetectable. These results suggest that the mechanisms by which P450s of family 1 are regulated in the liver are also functional in human WAT, but those regulating CYP2 and CYP3 expression are not.  
Keywords: BREAST-CANCER, AH RECEPTOR, GUINEA-PIG, ENZYMES, CELLS, RAT,  
ISI Document Delivery No.: 570JJ

377. Ellison, C. A.; Tian, Y.; Knaak, J. B.; Kostyniak, P. J., and Olson, J. R. Human Hepatic Cytochrome P450-Specific Metabolism of the Organophosphorus Pesticides Methyl Parathion and Diazinon. 2012; 40, (1): 1-5.   
Rec #: 59689  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorus pesticides (OPs) are a public health concern due to their worldwide use and documented human exposures. Phosphorothioate OPs are metabolized by cytochrome P450s (P450s) through either a dearylation reaction to form an inactive metabolite, or through a desulfuration reaction to form an active oxon metabolite, which is a potent cholinesterase inhibitor. This study investigated the rate of desulfuration (activation) and dearylation (detoxification) of methyl parathion and diazinon in human liver microsomes. In addition, recombinant human P450s were used to determine the P450-specific kinetic parameters (K(m) and V(max)) for each compound for future use in refining human physiologically based pharmacokinetic/pharmacodynamic (PBPK/PD) models of OP exposure. The primary enzymes involved in bioactivation of methyl parathion were CYP2B6 (K(m) = 1.25 mu M; V(max) = 9.78 nmol . min(-1) . nmol P450(-1)), CYP2C19 (Km = 1.03 mu M; V(max) = 4.67 nmol . min(-1) . nmol P450(-1)), and CYP1A2 (K(m) = 1.96 = mu M; V(max) = 5.14 nmol . min(-1) . nmol P450(-1)), and the bioactivation of diazinon was mediated primarily by CYP1A1 (K(m) = 3.05 mu M; V(max) = 2.35 nmol . min(-1) . nmol P450(-1)), CYP2C19 (K(m) = 7.74 mu M; V(max) = 4.14 nmol . min(-1) . nmol P450(-1)), and CYP2B6 (K(m) = 14.83 mu M; V(max) = 5.44 nmol . min(-1) . nmol P450(-1)). P450-mediated detoxification of methyl parathion only occurred to a limited extent with CYP1A2 (K(m) = 16.8 mu M; V(max) = 1.38 nmol . min(-1) . nmol P450(-1)) and 3A4 (K(m) = 104 mu M; V(max) = 5.15 nmol . min(-1) . nmol P450(-1)), whereas the major enzyme involved in diazinon detoxification was CYP2C19 (K(m) = 5.04 mu M; V(max) = 5.58 nmol . min(-1) . nmol P450(-1)). The OP-and P450-specific kinetic values will be helpful for future use in refining human PBPK/PD models of OP exposure.  
Keywords: HUMAN LIVER-MICROSOMES, PBPK/PD MODELS, CHLORPYRIFOS, BIOTRANSFORMATION,  
ISI Document Delivery No.: 866UZ

378. Ellison, Corie a; Abou El-Ella, Soheir S; Tawfik, Maha; Lein, Pamela J; Olson, James R, and Ellison, Corie A. Allele and Genotype Frequencies of Cyp2b6 and Cyp2c19 Polymorphisms in Egyptian Agricultural Workers. 2012 Jan; 75, (4): 232-241.   
Rec #: 42969  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Genetic variability in cytochrome P-450 (CYP) has the potential to modify pharmacological and toxicological responses to many chemicals. Both CYP2B6 and CYP2C19 are pharmacologically and toxicologically relevant due to their ability to metabolize multiple drugs and environmental contaminants, including the organophosphorus (OP) pesticide chlorpyrifos. The aim of this study was to determine the prevalence of CYP2B6 and CYP2C19 variants in an indigenous Egyptian population (n = 120) that was shown to be occupationally exposed to chlorpyrifos. Further, the genotyping data was compared for Egyptians with previously studied populations to determine between population differences. Allelic frequencies were CYP2B6 1459C > T (3.8%), CYP2B6 785A > G (30.4%), CYP2B6 516G > T (28.8%), CYP2C19 681G > A (3.8%), and CYP2C19 431G > A (0%). The most prevalent CYP2B6 genotype combinations were CYP2B6 \*1/\*1 (44%), \*1/\*6 (38%), \*6/\*6 (8%), and \*1/\*5 (6%). The frequency of the CYP2C19 genotype combinations were CYP2C19 \*1/\*1 (93%), \*1/\*2 (6%), and \*2/\*2 (1%). The frequency of the CYP2B6 516G > T and CYP2B6 785A > G polymorphisms in this Egyptian cohort is similar to that found North American and European populations but significantly different from that reported for West African populations, while that of CYP2B6 1459C > T is similar to that found in Africans and African Americans. The observed frequency of CYP2C19 681G > A in Egyptians is similar to that of African pygmies but significantly different from other world populations, while CYP2C19 431 G > A was significantly different from that of African pygmies but similar to other world populations.  
Keywords: Environmental Engineering Abstracts (EN); CSA / ASCE Civil Engineering Abstracts (CE)  
Date revised - 2012-11-01  
Language of summary - English  
Pages - 232-241  
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Last updated - 2012-11-06  
British nursing index edition - Journal of Toxicology and Environmental Health, Part A: Current Issues [J. Toxicol. Environ. Health, A: Curr. Iss.]. Vol. 75, no. 4, pp. 232-241. Jan 2012.  
Corporate institution author - Ellison, Corie A; Abou El-Ella, Soheir S; Tawfik, Maha; Lein, Pamela J; Olson, James R  
DOI - 55182b7f-ce83-43d9-9924mfgefd107; 17139341; 1528-7394; 1087-2620 English

379. Ellison, Corie a; Crane, Alice L; Bonner, Matthew R; Knaak, James B; Browne, Richard W; Lein, Pamela J; Olson, James R, and Ellison, Corie A. Pon1 Status Does Not Influence Cholinesterase Activity in Egyptian Agricultural Workers Exposed to Chlorpyrifos. 2012 Dec 15; 265, (3): 308-315.   
Rec #: 38459  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Animal studies have shown that paraoxonase 1 (PON1) genotype can influence susceptibility to the organophosphorus pesticide chlorpyrifos (CPF). However, Monte Carlo analysis suggests that PON1 genotype may not affect CPF-related toxicity at low exposure conditions in humans. The current study sought to determine the influence of PON1 genotype on the activity of blood cholinesterase as well as the effect of CPF exposure on serum PON1 in workers occupationally exposed to CPF. Saliva, blood and urine were collected from agricultural workers (n=120) from Egypt's Menoufia Governorate to determine PON1 genotype, blood cholinesterase activity, serum PON1 activity towards chlorpyrifos-oxon (CPOase) and paraoxon (POase), and urinary levels of the CPF metabolite 3,5,6-trichloro-2-pyridinol (TCPy). The PON1 55 (P less than or equal to 0.05) but not the PON1 192 genotype had a significant effect on CPOase activity. However, both the PON1 55 (P less than or equal to 0.05) and PON1 192 (P less than or equal to 0.001) genotypes had a significant effect on POase activity. Workers had significantly inhibited AChE and BuChE after CPF application; however, neither CPOase activity nor POase activity was associated with ChE depression when adjusted for CPF exposure (as determined by urinary TCPy levels) and stratified by PON1 genotype. CPOase and POase activity were also generally unaffected by CPF exposure although there were alterations in activity within specific genotype groups. Together, these results suggest that workers retained the capacity to detoxify chlorpyrifos-oxon under the exposure conditions experienced by this study population regardless of PON1 genotype and activity and that effects of CPF exposure on PON1 activity are minimal.  
Keywords: Agriculture  
Keywords: Pesticides (organophosphorus)  
Keywords: Egypt, Arab Rep.  
Keywords: Depression  
Keywords: paraoxonase 1  
Keywords: Population studies  
Keywords: H 1000:Occupational Safety and Health  
Keywords: Health & Safety Science Abstracts; Environment Abstracts; Toxicology Abstracts  
Keywords: Metabolites  
Keywords: Paraoxon  
Keywords: Genotypes  
Keywords: Toxicity  
Keywords: Cholinesterase  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Blood levels  
Keywords: Chlorpyrifos  
Keywords: Blood  
Keywords: Urine  
Keywords: Pesticides  
Keywords: Saliva  
Keywords: X 24330:Agrochemicals  
Keywords: Occupational exposure  
Date revised - 2012-12-01  
Language of summary - English  
Location - Egypt, Arab Rep.  
Pages - 308-315  
ProQuest ID - 1257740101  
SubjectsTermNotLitGenreText - Agriculture; Pesticides (organophosphorus); Depression; paraoxonase 1; Population studies; Metabolites; Genotypes; Toxicity; Paraoxon; Cholinesterase; Chlorpyrifos; Blood; Urine; Saliva; Occupational exposure; Pesticides; Blood levels; Egypt, Arab Rep.  
Last updated - 2013-01-25  
British nursing index edition - Toxicology and Applied Pharmacology [Toxicol. Appl. Pharmacol.]. Vol. 265, no. 3, pp. 308-315. 15 Dec 2012.  
Corporate institution author - Ellison, Corie A; Crane, Alice L; Bonner, Matthew R; Knaak, James B; Browne, Richard W; Lein, Pamela J; Olson, James R  
DOI - 3b02d6a3-36e6-4d29-a1c2csamfg201; 17425627; 0041-008X English

380. Ellison, Corie Anthony and Olson, James R. Assessing the Human Health Risks of Exposure to Organophosphorus Pesticides. 2012: (UMI# 3495181 ).   
Rec #: 51639  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorus pesticides (OPs) are the most widely used insecticide in the United States and throughout the world, and as such, human exposure to OPs is a concern. The development of human data regarding OP exposure, metabolism, effects and susceptibility are all important needs for the human risk assessment process. The work presented within this dissertation focuses on generating data that will be relevant for the human risk assessment of two common OPs, **chlorpyrifos (CPF) and methyl parathion**. OPs undergo cytochrome P-450 (CYP) mediated metabolism to form an active, highly toxic oxon intermediate metabolite which is the metabolite primarily responsible for the inhibition of cholinesterase enzymes. Detoxification of the active oxon metabolite occurs primarily by enzymatic hydrolysis by paraoxonase 1 (PON1). The balance between activation and detoxification should, in-part, determine the risk to humans for a given OP. Metabolism of methyl parathion by recombinant human CYPs identified CYP2B6 and CYP2C19 as being the major enzymes involved in methyl parathion metabolism. These results are consistent with previous findings that CYP2B6 and CYP2C19 are the major enzymes involved in other OP metabolism, such as CPF. Additional work was conducted utilizing human biomonitoring data collected from Egyptian agricultural workers with known CPF exposure. Biological sample collection included urine, saliva and blood. Urinary levels of the CPF metabolite 3,5,6-trichloro-2-pyridinol (TCPy) were determined as a marker of CPF exposure. Saliva was used to genotype participants for polymorphisms within the main enzymes involved in CPF metabolism, CYP2B6, CYP2C19 and PON1. Whole blood was used to monitor cholinesterase activity while serum was used to determine PON1 activity towards chlorpyrifos-oxon (e.g., CPOase activity of PON1). Findings from the Egyptian population demonstrated a dose-effect relationship between urinary TCPy and both plasma butyrylcholinesterase (BuChE) and red blood cell acetylcholinesterase (AChE) in humans exposed occupationally to CPF. The no-effect level (or inflection point) of the exposure-effect relationships has an average urinary TCPy level of 114 ÎĽg/g creatinine for BuChE and 3,161 ÎĽg/g creatinine for AChE. The most prevalent CYP2B6 genotype combinations within the population were CYP2B6 \*1/\*1 (44%), \*1/\*6 (38%), \*6/\*6 (8%) and \*1/\*5 (6%), while the frequency of the CYP2C19 genotype combinations were CYP2C19 \*1/\*1 (93%), \*1/\*2 (6%), \*2/\*2 (1%). The PON1 55 (p â‰¤ 0.05) but not the PON1 192 genotype had a significant effect on CPOase activity. When adjusted for urinary TCPy excretion and stratified by PON1 genotype, CPOase activity did not have a significant effect on cholinesterase inhibition. The biomonitoring data collected from the Egyptian agricultural workers was used to develop and optimize a human physiologically based pharmacokinetic and pharmacodynamic (PBPK/PD) model for dermal CPF exposure. The human PBPK/PD model is able to account for differences in worker habit (e.g. duration of exposure, skin exposure area, time to wash off) as well as interindividual differences in key metabolizing enzymes (i.e. CYP2B6, CYP2C19 and PON1). An assessment of the pharmacokinetics and pharmacodynamics of CPF in rats under exposure conditions which more closely reflects occupational exposure was also conducted. Results from the animal study were used to update an existing PBPK/PD rat model for CPF exposure so that it can account for repeated CPF exposures. Taken together, the results presented within this dissertation will contribute to future risk assessment efforts and mechanistic studies for OP exposure.  
Start Page: 379  
ISSN/ISBN: 9781267183477  
Keywords: Chlorpyrifos  
Keywords: 0383:Surgery  
Keywords: 0470:Environmental Health  
Keywords: 0419:Pharmacology  
Keywords: Pesticide exposure  
Keywords: Organophosphorus pesticides  
Keywords: 0383:Toxicology  
Keywords: Methyl parathion  
Keywords: Health and environmental sciences  
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Organophosphorus pesticides  
0383: Toxicology  
66569  
0383: Surgery  
0419: Pharmacology  
n/a  
English  
922423887  
Chlorpyrifos  
3495181  
2591280661  
Pesticide exposure  
Copyright ProQuest, UMI Dissertations Publishing 2012  
0470: Environmental Health  
2012  
Ellison, Corie Anthony  
Health and environmental sciences  
Methyl parathion  
2012-03-01 English

381. Engel, S. M.; Berkowitz, G. S.; Barr, D. B.; Teitelbaum, S. L.; Siskind, J.; Meisel, S. J.; Wetmur, J. G., and Wolff, M. S. Prenatal organophosphate metabolite and organochlorine levels and performance on the Brazelton Neonatal Behavioral Assessment Scale in a multiethnic pregnancy cohort. 2007; 165, (12): 1397-1404.   
Rec #: 59729  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Prenatal exposures to organophosphate pesticides and polychlorinated biphenyls have been associated with abnormal neonatal behavior and/or primitive reflexes. In 1998-2002, the Mount Sinai Children's Environmental Health Center (New York City) investigated the effects of indoor pesticide use and exposure to polychlorinated biphenyls on pregnancy outcome and child neurodevelopment in an inner-city multiethnic cohort. The Brazelton Neonatal Behavioral Assessment Scale was administered before hospital discharge (n = 311). Maternal urine samples were analyzed for six dialkylphosphate metabolites and malathion dicarboxylic acid. A random subset of maternal peripheral blood samples from the entire cohort (n = 194) was analyzed for polychlorinated biphenyls and 1,1 '-dichloro-2,2 '-bis(4-chlorophenyl)ethylene. Malathion dicarboxylic acid levels above the limit of detection were associated with a 2.24-fold increase in the number of abnormal reflexes (95% confidence interval: 1.55, 3.24). Likewise, higher levels of total diethylphosphates and total dialkylphosphates were associated with an increase in abnormal reflexes, as was total dimethylphosphates after paraoxonase expression was considered. No adverse associations were found with polychlorinated biphenyl or 1, 1 '-dichloro-2,2 '-bis(4-chlorophenyl)ethylene levels and any behavior. The authors uncovered additional evidence that prenatal levels of organophosphate pesticide metabolites are associated with anomalies in primitive reflexes, which are a critical marker of neurologic integrity.  
Keywords: neonatal screening, pesticides, polychlorinated biphenyls, pregnancy,  
ISI Document Delivery No.: 178SP

382. Engel, Stephanie M; Wetmur, James; Chen, Jia; Zhu, Chenbo; Barr, Dana Boyd; Canfield, Richard L, and Wolff, Mary S. Prenatal Exposure to Organophosphates, Paraoxonase 1, and Cognitive Development in Childhood. 2011 Aug; 119, (8): 1182-1188.   
Rec #: 47169  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Prenatal exposure to organophosphate pesticides has been shown to negatively affect child neurobehavioral development. Paraoxonase 1 (PON1) is a key enzyme in the metabolism of organophosphates. We examined the relationship between biomarkers of organophosphate exposure, PON1, and cognitive development at ages 12 and 24 months and 6-9 years. The Mount Sinai Children's Environmental Health Study enrolled a multiethnic prenatal population in New York City between 1998 and 2002 (n = 404). Third-trimester maternal urine samples were collected and analyzed for organophosphate metabolites (n = 360). Prenatal maternal blood was analyzed for PON1 activity and genotype. Children returned for neurodevelopment assessments ages 12 months (n = 200), 24 months (n = 276), and 6-9 (n = 169) years of age. Prenatal total dialkylphosphate metabolite level was associated with a decrement in mental development at 12 months among blacks and Hispanics. These associations appeared to be enhanced among children of mothers who carried the PON1 Q192R QR/RR genotype. In later childhood, increasing prenatal total dialkyl- and dimethylphosphate metabolites were associated with decrements in perceptual reasoning in the maternal PON1 Q192R QQ genotype, which imparts slow catalytic activity for chlorpyrifos oxon, with a monotonic trend consistent with greater decrements with increasing prenatal exposure. Our findings suggest that prenatal exposure to organophosphates is negatively associated with cognitive development, particularly perceptual reasoning, with evidence of effects beginning at 12 months and continuing through early childhood. PON1 may be an important susceptibility factor for these deleterious effects.  
Keywords: Aryldialkylphosphatase -- genetics  
Keywords: Organophosphates  
Keywords: Humans  
Keywords: Aryldialkylphosphatase  
Keywords: Child  
Keywords: Pregnancy  
Keywords: Child, Preschool  
Keywords: EC 3.1.8.1  
Keywords: Infant  
Keywords: Genotype  
Keywords: 0  
Keywords: Cognition -- drug effects  
Keywords: Organophosphates -- toxicity  
Keywords: Perception -- drug effects  
Keywords: Female  
Keywords: Prenatal Exposure Delayed Effects  
Date completed - 2011-11-28  
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Date revised - 2012-12-20  
Language of summary - English  
Pages - 1182-1188  
ProQuest ID - 880996013  
Last updated - 2013-01-19  
British nursing index edition - Environmental health perspectives, August 2011, 119(8):1182-1188  
Corporate institution author - Engel, Stephanie M; Wetmur, James; Chen, Jia; Zhu, Chenbo; Barr, Dana Boyd; Canfield, Richard L; Wolff, Mary S  
DOI - MEDL-21507778; 21507778; PMC3237356; 1552-9924 eng

383. Engelman, Catherine a; Grant, William E; Mora, Miguel a; Woodin, Marc, and Engelman, Catherine A. Modelling Effects of Chemical Exposure on Birds Wintering in Agricultural Landscapes: the Western Burrowing Owl (Athene Cunicularia Hypugaea) as a Case Study. 2012 Jan 10; 224, (1): 90-102.   
Rec #: 46929  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We describe an ecotoxicological model that simulates the sublethal and lethal effects of chronic, low-level, chemical exposure on birds wintering in agricultural landscapes. Previous models estimating the impact on wildlife of chemicals used in agro-ecosystems typically have not included the variety of pathways, including both dermal and oral, by which individuals are exposed. The present model contains four submodels simulating (1) foraging behavior of individual birds, (2) chemical applications to crops, (3) transfers of chemicals among soil, insects, and small mammals, and (4) transfers of chemicals to birds via ingestion and dermal exposure. We demonstrate use of the model by simulating the impacts of a variety of commonly used herbicides, insecticides, growth regulators, and defoliants on western burrowing owls (Athene cunicularia hypugaea) that winter in agricultural landscapes in southern Texas, United States. The model generated reasonable movement patterns for each chemical through soil, water, insects, and rodents, as well as into the owl via consumption and dermal absorption. Sensitivity analysis suggested model predictions were sensitive to uncertainty associated with estimates of chemical half-lives in birds, soil, and prey, sensitive to parameters associated with estimating dermal exposure, and relatively insensitive to uncertainty associated with details of chemical application procedures (timing of application, amount of drift). Nonetheless, the general trends in chemical accumulations and the relative impacts of the various chemicals were robust to these parameter changes. Simulation results suggested that insecticides posed a greater potential risk to owls of both sublethal and lethal effects than do herbicides, defoliants, and growth regulators under crop scenarios typical of southern Texas, and that use of multiple indicators, or endpoints provided a more accurate assessment of risk due to agricultural chemical exposure. The model should prove useful in helping prioritize the chemicals and transfer pathways targeted in future studies and also, as these new data become available, in assessing the relative danger to other birds of exposure to different types of agricultural chemicals.  
Keywords: Risk assessment  
Keywords: Defoliants  
Keywords: Foraging behavior  
Keywords: Data processing  
Keywords: Skin  
Keywords: Mathematical models  
Keywords: Computers  
Keywords: Landscape  
Keywords: Wildlife  
Keywords: Herbicides  
Keywords: Crops  
Keywords: Models  
Keywords: Soil  
Keywords: Aves  
Keywords: Overwintering behavior  
Keywords: Insecticides  
Keywords: Growth regulators  
Keywords: Drift  
Keywords: Athene cunicularia  
Keywords: Ecology Abstracts  
Keywords: D 04030:Models, Methods, Remote Sensing  
Keywords: Prey  
Date revised - 2012-02-01  
Language of summary - English  
Pages - 90-102  
ProQuest ID - 914081771  
SubjectsTermNotLitGenreText - Defoliants; Risk assessment; Foraging behavior; Mathematical models; Skin; Data processing; Wildlife; Landscape; Herbicides; Crops; Models; Soil; Overwintering behavior; Insecticides; Growth regulators; Drift; Prey; Aves; Athene cunicularia  
Last updated - 2012-02-23  
Corporate institution author - Engelman, Catherine A; Grant, William E; Mora, Miguel A; Woodin, Marc  
DOI - OB-c005701d-5005-44aa-b4e3csamfg201; 16129923; 0304-3800 English

384. Ennin, S. A.; Banful, B.; Andoh-Mensah, E.; Issaka, R. N.; Lamptey, J. N.; Aduening-Manu, J.; Bolfrey-Arku, G., and Dery, S. K. Food Crop Intercropping Alternatives, for Replanting Coconut Farms Destroyed by Lethal Yellowing Disease. SOIL; 2009; 7, (3/4): 581-587.   
Rec #: 2870  
Keywords: BENEFICIAL EFFECT  
Call Number: NO BENEFICIAL EFFECT (CPY)  
Notes: EcoReference No.: 160343  
Chemical of Concern: CPY

385. Ensminger, Michael; Bergin, Rick; Spurlock, Frank, and Goh, Kean S. Pesticide Concentrations in Water and Sediment and Associated Invertebrate Toxicity in Del Puerto and Orestimba Creeks, California, 2007-2008. 2011 Apr; 175, (1-4): 573-87.   
Rec #: 43449  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The California's San Joaquin River and its tributaries including Orestimba (ORC) and Del Puerto (DPC) Creeks are listed on the 2006 US EPA Clean Water Act Â§303(d) list for pesticide impairment. From December 2007 through June 2008, water and sediment samples were collected from both creeks in Stanislaus County to determine concentrations of organophosphorus (OP) and pyrethroid insecticides and to identify toxicity to Ceriodaphnia dubia and Hyalella azteca. OPs were detected in almost half (10 of 21) of the water samples, at concentrations from 0.005 to 0.912 ÎĽg L^sup -1^. Diazinon was the most frequently detected OP, followed by chlorpyrifos and dimethoate. **Two water samples were toxic to C. dubia;** based on median lethal concentrations (LC^sub 50^), chlorpyrifos was likely the cause of this toxicity. Pyrethroids were detected more frequently in sediment samples (18 detections) than in water samples (three detections). Pyrethroid concentrations in water samples ranged from 0.005 to 0.021 ÎĽg L^sup -1^. These concentrations were well below reported C. dubia LC^sub 50^s, and toxicity was not observed in laboratory bioassays. Cyfluthrin, bifenthrin, esfenvalerate, and Î»-cyhalothrin were detected in sediment samples at concentrations ranging from 1.0 to 74.4 ng g^sup -1^, dry weight. At DPC, all but one sediment sample caused 100% toxicity to H. azteca. Based on estimated toxicity units (TU), bifenthrin was likely responsible for this toxicity and Î»-cyhalothrin also contributed. At ORC, survival of H. azteca was significantly reduced in four of the 11 sediment samples. However, pyrethroids were detected in only two of these samples. Based on TUs, bifenthrin and Î»-cyhalothrin likely contributed to the toxicity. [PUBLICATION ABSTRACT]  
Keywords: Animals  
Keywords: 8640:Chemical industry  
Keywords: Water Pollutants, Chemical -- analysis  
Keywords: Water Pollutants, Chemical -- toxicity  
Keywords: Invertebrates -- metabolism  
Keywords: United States--US  
Keywords: 9130:Experimental/theoretical  
Keywords: Environmental Studies  
Keywords: 1540:Pollution control  
Keywords: Environmental Monitoring  
Keywords: California  
Keywords: Invertebrates -- drug effects  
Keywords: 8400:Agriculture industry  
Keywords: Geologic Sediments -- analysis  
Keywords: Water Pollutants, Chemical  
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Keywords: Water Pollutants, Chemical -- metabolism  
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SubjectsTermNotLitGenreText - United States--US  
Last updated - 2012-03-07  
Place of publication - Dordrecht  
Corporate institution author - Ensminger, Michael; Bergin, Rick; Spurlock, Frank; Goh, Kean S  
DOI - 2282796541; 58844181; 108264; EVMT; 20563640; SPVLEVMT106611751-41552  
Amweg, E. L., Weston, D. P., & Ureda, N. M. (2005). Use and toxicity of pyrethroid pesticides in the Central Valley, California, U.S.A. Environmental Toxicology and Chemistry, 24, 966972;  
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Rec #: 2330  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

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Rec #: 760  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

388. Escher, Beate I; Cowan-Ellsberry?, Christina E; Dyer, Scott; Embry, Michelle R; Erhardt#, Susan; Halder, Marlies; Kwon, Jung-Hwan; Johanning, Karla; Oosterwijk, Mattheus T T; Rutishauser, Sibylle; Segner?, Helmut; Nichols+, John , and Rutishauser, Sibylle. Protein and Lipid Binding Parameters in Rainbow Trout (Oncorhynchus Mykiss) Blood and Liver Fractions to Extrapolate From an in Vitro Metabolic Degradation Assay to in Vivo Bioaccumulation Potential of Hydrophobic Organic Chemicals. 2011 May 23; 24, (7): 1134-1143.   
Rec #: 43319  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Binding of hydrophobic chemicals to colloids such as proteins or lipids is difficult to measure using classical microdialysis methods due to low aqueous concentrations, adsorption to dialysis membranes and test vessels, and slow kinetics of equilibration. Here, **we employed a three-phase partitioning system where silicone (polydimethylsiloxane, PDMS) serves as a third phase to determine partitioning between water and colloids and acts at the same time as a dosing device for hydrophobic chemicals.** The applicability of this method was demonstrated with bovine serum albumin (BSA). Measured binding constants (KBSAw) for chlorpyrifos, methoxychlor, nonylphenol, and pyrene were in good agreement with an established quantitative structure--activity relationship (QSAR). A fifth compound, fluoxypyr-methyl-heptyl ester, was excluded from the analysis because of apparent abiotic degradation. The PDMS depletion method was then used to determine partition coefficients for test chemicals in rainbow trout (Oncorhynchus mykiss) liver S9 fractions (KS9w) and blood plasma (Kbloodw). Measured KS9w and Kbloodw values were consistent with predictions obtained using a mass-balance model that employs the octanol--water partition coefficient (Kow) as a surrogate for lipid partitioning and KBSAw to represent protein binding. For each compound, Kbloodw was substantially greater than KS9w, primarily because blood contains more lipid than liver S9 fractions (1.84% of wet weight vs 0.051%). Measured liver S9 and blood plasma binding parameters were subsequently implemented in an in vitro to in vivo extrapolation model to link the in vitro liver S9 metabolic degradation assay to in vivo metabolism in fish. Apparent volumes of distribution (Vd) calculated from the experimental data were similar to literature estimates. However, the calculated binding ratios (fu) used to relate in vitro metabolic clearance to clearance by the intact liver were 10 to 100 times lower than values used in previous modeling efforts. Bioconcentration factors (BCF) predicted using the experimental binding data were substantially higher than the predicted values obtained in earlier studies and correlated poorly with measured BCF values in fish. One possible explanation for this finding is that chemicals bound to proteins can desorb rapidly and thus contribute to metabolic turnover of the chemicals. This hypothesis remains to be investigated in future studies, ideally with chemicals of higher hydrophobicity.  
Keywords: Dialysis  
Keywords: Data processing  
Keywords: Silicones  
Keywords: Colloids  
Keywords: Lipids  
Keywords: Oncorhynchus mykiss  
Keywords: Hydrophobicity  
Keywords: Pyrene  
Keywords: Esters  
Keywords: Models  
Keywords: Chlorpyrifos  
Keywords: Microdialysis  
Keywords: Blood  
Keywords: polydimethylsiloxane  
Keywords: Bioaccumulation  
Keywords: Bovine serum albumin  
Keywords: Kinetics  
Keywords: Nonylphenol  
Keywords: Liver  
Keywords: Methoxychlor  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 1134-1143  
ProQuest ID - 899167048  
SubjectsTermNotLitGenreText - Dialysis; Data processing; Colloids; Silicones; Lipids; Hydrophobicity; Pyrene; Esters; Models; Microdialysis; Chlorpyrifos; Blood; polydimethylsiloxane; Bioaccumulation; Bovine serum albumin; Kinetics; Nonylphenol; Liver; Methoxychlor; Oncorhynchus mykiss  
Last updated - 2012-12-03  
British nursing index edition - Chemical Research in Toxicology [Chem. Res. Toxicol.]. Vol. 24, no. 7, pp. 1134-1143. 23 May 2011.  
Corporate institution author - Escher, Beate I; Dyer, Scott; Embry, Michelle R; Halder, Marlies; Kwon, Jung-Hwan; Johanning, Karla; Oosterwijk, Mattheus T T; Rutishauser, Sibylle  
DOI - 08591a38-354c-4465-b50ecsaobj201; 15629114; 0893-228X English

389. Espinal, A. ; Quijano, J.; Hunt, C.; Lorenzo, R.; Mulligan, C.; Sampson, M.; Sauchelli, M., and Patnaik, P. K. A 10 Base-Pair Sequence Within Domain Iii of the Gpeet Procyclin Promoter Is Essential for the Autonomous Replication of a Plasmid in Procyclic Trypanosoma Brucei.   
Rec #: 51509  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: EMBO J. 1991 Nov;10(11):3379-86 (medline /1840521)  
COMMENTS: Cites: Cell Cycle. 2006 Jun;5(11):1223-33 (medline /16721058)  
COMMENTS: Cites: Mol Cell Biol. 1988 Nov;8(11):4927-35 (medline /3062373)  
COMMENTS: Cites: Mol Cell Biol. 1995 Oct;15(10):5598-606 (medline /7565711)  
COMMENTS: Cites: Gene. 1995 Oct 16;164(1):49-53 (medline /7590320)  
COMMENTS: Cites: Mol Cell Biol. 1994 Nov;14(11):7643-51 (medline /7935478)  
COMMENTS: Cites: Nucleic Acids Res. 1994 Oct 11;22(20):4111-8 (medline /7937135)  
COMMENTS: Cites: Mol Biochem Parasitol. 1994 Jul;66(1):153-6 (medline /7984179)  
COMMENTS: Cites: Mol Cell Biol. 1994 Sep;14(9):5804-11 (medline /8065315)  
COMMENTS: Cites: EMBO J. 1993 Apr;12(4):1475-85 (medline /8467799)  
COMMENTS: Cites: EMBO J. 1993 Jun;12(6):2529-38 (medline /8508776)  
COMMENTS: Cites: Nucleic Acids Res. 1996 Feb 15;24(4):668-75 (medline /8604308)  
COMMENTS: Cites: Mol Biochem Parasitol. 1996 Jan;75(2):241-54 (medline /8992322)  
COMMENTS: Cites: Mol Cell Biol. 1998 May;18(5):3021-33 (medline /9566921)  
COMMENTS: Cites: Mol Cell Biol. 1999 Aug;19(8):5466-73 (medline /10409736)  
COMMENTS: Cites: Front Biosci. 1999 Dec 1;4:D824-33 (medline /10577391)  
COMMENTS: Cites: Protein Eng. 1999 Dec;12(12):1113-20 (medline /10611405)  
COMMENTS: Cites: Mol Biochem Parasitol. 2001 Mar;113(1):55-65 (medline /11254954)  
COMMENTS: Cites: Science. 1992 Feb 14;255(5046):817-23 (medline /1536007)  
COMMENTS: Cites: Nucleic Acids Res. 1991 Oct 11;19(19):5153-8 (medline /1923801)  
MESH HEADINGS: Animals  
MESH HEADINGS: Base Sequence  
MESH HEADINGS: \*DNA Replication  
MESH HEADINGS: Life Cycle Stages  
MESH HEADINGS: Membrane Glycoproteins/\*genetics  
MESH HEADINGS: Mutagenesis, Insertional  
MESH HEADINGS: Plasmids/\*genetics  
MESH HEADINGS: \*Promoter Regions, Genetic  
MESH HEADINGS: Protozoan Proteins/\*genetics  
MESH HEADINGS: Trypanosoma brucei brucei/\*genetics/growth &amp  
MESH HEADINGS: development eng

390. Esralew, Rachel a; Andrews, William J; Smith, Sjerrod, and Esralew, Rachel A. Evaluation and Trends of Land Cover, Streamflow, and Water Quality in the North Canadian River Basin Near Oklahoma City, Oklahoma, 1968-2009. 2011.  
Rec #: 47529  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The U.S. Geological Survey, in cooperation with the city of Oklahoma City, collected water-quality samples from the North Canadian River at the streamflow-gaging station near Harrah, Oklahoma (Harrah station), since 1968, and at an upstream streamflow-gaging station at Britton Road at Oklahoma City, Oklahoma (Britton Road station), since 1988. Statistical summaries and frequencies of detection of water-quality constituent data from water samples, and summaries of water-quality constituent data from continuous water-quality monitors are described from the start of monitoring at those stations through 2009. Differences in concentrations between stations and time trends for selected constituents were evaluated to determine the effects of: (1) wastewater effluent discharges, (2) changes in land-cover, (3) changes in streamflow, (4) increases in urban development, and (5) other anthropogenic sources of contamination on water quality in the North Canadian River downstream from Oklahoma City. Land-cover changes between 1992 and 2001 in the basin between the Harrah station and Lake Overholser upstream included an increase in developed/barren land-cover and a decrease in pasture/hay land cover. There were no significant trends in median and greater streamflows at either streamflow-gaging station, but there were significant downward trends in lesser streamflows, especially after 1999, which may have been associated with decreases in precipitation between 1999 and 2009 or construction of low-water dams on the river upstream from Oklahoma City in 1999. Concentrations of dissolved chloride, lead, cadmium, and chlordane most frequently exceeded the Criterion Continuous Concentration (a water-quality standard for protection of aquatic life) in water-quality samples collected at both streamflow-gaging stations. Visual trends in annual frequencies of detection were investigated for selected pesticides with frequencies of detection greater than 10 percent in all water samples collected at both streamflow-gaging stations. Annual frequencies of detection of 2,4-dichlorophenoxyacetic acid and bromacil increased with time. Annual frequencies of detection of atrazine, chlorpyrifos, diazinon, dichlorprop, and lindane decreased with time. Dissolved nitrogen and phosphorus concentrations were significantly greater in water samples collected at the Harrah station than at the Britton Road station, whereas specific conductance was greater at the Britton Road station. Concentrations of dissolved oxygen, biochemical oxygen demand, and fecal coliform bacteria were not significantly different between stations.  
Start Page: 76  
End Page: 76  
Keywords: Chlorophylls  
Keywords: water quality  
Keywords: USA, New Mexico, Canadian R.  
Keywords: SW 3040:Wastewater treatment processes  
Keywords: AQ 00006:Sewage  
Keywords: Water sampling  
Keywords: Heavy metals  
Keywords: Water Analysis  
Keywords: Water Sampling  
Keywords: Q5 01502:Methods and instruments  
Keywords: Water quality  
Keywords: Freshwater  
Keywords: Streams  
Keywords: Dissolved oxygen  
Keywords: Flow rates  
Keywords: USA, Oklahoma, Oklahoma City  
Keywords: USA, Oklahoma  
Keywords: upstream  
Keywords: Roads  
Keywords: Urban areas  
Keywords: Rivers  
Keywords: Diurnal variations  
Keywords: Coliforms  
Keywords: Conductance  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Dissolved Oxygen  
Keywords: Water Quality  
Keywords: Streamflow  
Keywords: River basins  
Keywords: Fecal Coliforms  
Keywords: Land use  
Keywords: Stream flow  
Keywords: Pollution Abstracts; Aqualine Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Water Resources Abstracts  
Keywords: Pesticides  
Keywords: Biochemical oxygen demand  
Date revised - 2011-11-01  
Language of summary - English  
Location - USA, Oklahoma; USA, New Mexico, Canadian R.; USA, Oklahoma, Oklahoma City  
Pages - 76  
ProQuest ID - 907193741  
SubjectsTermNotLitGenreText - Chlorophylls; Heavy metals; Pesticides; River basins; Biochemical oxygen demand; Fecal Coliforms; Water quality; Dissolved oxygen; Stream flow; Diurnal variations; water quality; upstream; Water sampling; Streams; Land use; Flow rates; Urban areas; Rivers; Coliforms; Roads; Conductance; Water Analysis; Water Sampling; Water Quality; Dissolved Oxygen; Streamflow; USA, Oklahoma; USA, New Mexico, Canadian R.; USA, Oklahoma, Oklahoma City; Freshwater  
Last updated - 2012-12-14  
British nursing index edition - Scientific Investigations Report. U.S. Geological Survey. no. 2011-5117, 76 p. 2011.  
Corporate institution author - Esralew, Rachel A; Andrews, William J; Smith, SJerrod  
DOI - 470d7d45-38d7-45ec-8681csaobj201; 16041889; NO1103118 English

391. Essumang, D K; Dodoo, D K; Adokoh, C K; Fumador, E a, and Essumang, D K. Analysis of Some Pesticide Residues in Tomatoes in Ghana. 2008 Jul; 14, (4): 796-806.   
Rec #: 42079  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticide residues, both natural and synthetic, can be found in most of the things we eat, for example, fruits, vegetables, bread, meat, poultry, fish, and the processed foods made from them. Some of this pesticide contamination is legal, but does this mean it is safe? Much of it is illegal, with residues found in excess of regulatory safe levels. Identifying and determining the level of trace contaminants in our food and environment is critical in protecting and improving human health and the environment. This study evaluates the residue levels of select pesticides used on tomato crops in Ghana that are likely to have accumulated in the tomatoes during application. The results obtained confirm that pesticide residues were indeed present in the tomatoes and further analysis quantified the amount present. Analysis of some organochlorine and organophosphorus residue levels in the fruits indicated that chlorpyrifos, which is an active ingredient of pesticides registered in Ghana under the trade name dursban 4E or terminus 480 EC for use on vegetables, has the greatest residue level of 10.76 mg/kg. The lowest residue level observed was that of pirimiphos-methyl with 0.03 mg/kg. Human health risk assessment was performed on the results obtained from the analysis using Human Health Evaluation computerized software-RISC 4.02. The risk assessment showed cancer risk for adults and children due to the presence of endosulfan and chlopyrifos. Endosulfan is not registered in Ghana as a pesticide for use on vegetables, therefore the detection of endosulfan in several samples indicates misuse of agrochemicals among Ghanaian farmers.  
Keywords: Risk assessment  
Keywords: Fruits  
Keywords: Ghana  
Keywords: Poultry  
Keywords: Organochlorine compounds  
Keywords: tomato  
Keywords: poultry  
Keywords: Pesticide residues  
Keywords: fruits  
Keywords: Food contamination  
Keywords: Pollution Abstracts; Risk Abstracts; Health & Safety Science Abstracts  
Keywords: Children  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Cancer  
Keywords: Crops  
Keywords: Endosulfan  
Keywords: Chlorpyrifos  
Keywords: Lycopersicon esculentum  
Keywords: H 5000:Pesticides  
Keywords: Pesticides  
Keywords: R2 23060:Medical and environmental health  
Keywords: Fish  
Date revised - 2009-08-01  
Language of summary - English  
Location - Ghana  
Pages - 796-806  
ProQuest ID - 20793415  
SubjectsTermNotLitGenreText - Risk assessment; Fruits; Poultry; Organochlorine compounds; poultry; Pesticide residues; fruits; Food contamination; Children; Cancer; Crops; Endosulfan; Chlorpyrifos; Pesticides; Fish; Lycopersicon esculentum; Ghana  
Last updated - 2011-12-14  
British nursing index edition - Human and Ecological Risk Assessment [Hum. Ecol. Risk Assess.]. Vol. 14, no. 4, pp. 796-806. Jul 2008.  
Corporate institution author - Essumang, D K; Dodoo, D K; Adokoh, C K; Fumador, E A  
DOI - MD-0010232855; 10310275; 1080-7039 English

392. Est+\_vez, Esmeralda; Cabrera, Mar+ a del Carmen; Molina-D+ˇaz, Antonio; Robles-Molina, Jos+, and Palacios-D+ˇaz, Mar+ a del Pino. Screening of emerging contaminants and priority substances (2008/105/EC) in reclaimed water for irrigation and groundwater in a volcanic aquifer (Gran Canaria, Canary Islands, Spain). 2012 Sep 1-; 433, (0): 538-546.   
Rec #: 2920  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: In semiarid regions, reclaimed water can be an important source of emerging pollutants in groundwater. In Gran Canaria Island, reclaimed water irrigation has been practiced for over thirty years and currently represents 8% of water resources. The aim of this study was to monitor contaminants of emerging concern and priority substances (2008/105/EC) in a volcanic aquifer in the NE of Gran Canaria where the Bandama Golf Course has been sprinkled with reclaimed water since 1976. Reclaimed water and groundwater were monitoring quarterly from July 2009 to May 2010. Only 43% of the 183 pollutants analysed were detected: 42 pharmaceuticals, 20 pesticides, 12 polyaromatic hydrocarbons, 2 volatile organic compounds and 2 flame retardants. The most frequent compounds were caffeine, nicotine, chlorpyrifos ethyl, fluorene, phenanthrene and pyrene. Concentrations were always below 50 ng LęĆ 1, although some pharmaceuticals and one pesticide, cholrpyrifos ethyl, were occasionally detected at higher concentrations. This priority substance for surface water exceeded the maximum threshold (0.1 ++g LęĆ 1) for pesticide concentration in groundwater (2006/118/EC). Sorption and degradation processes in soil account for more compounds being detected in reclaimed water than in groundwater, and that some contaminants were always detected in reclaimed water, but never in groundwater (flufenamic acid, propyphenazone, terbutryn and diazinon). Furthermore, erythromycin was always detected in reclaimed water (exceeding occasionally 0.1 ++g LęĆ 1), and was detected only once in groundwater. In contrast, some compounds (phenylephrine, nifuroxazide and miconazole) never detected in reclaimed water, were always detected in groundwater. This fact and the same concentration range detected for the groups, regardless of the water origin, indicated alternative contaminant sources (septic tanks, agricultural practices and sewerage breaks). The widespread detection of high adsorption potential compounds, and the independence of concentration with origin and depths, indicates the existence of preferential flows phenomena as potential contamination route in volcanic fractured materials. Emerging contaminants/ Reclaimed water/ Groundwater/ Irrigation/ Volcanic zone/ Chlorpyrifos ethyl

393. Estevan, Carmen; Vilanova, Eugenio, and Sogorb, Miguel A. Chlorpyrifos and its metabolites alter gene expression at non-cytotoxic concentrations in D3 mouse embryonic stem cells under in vitro differentiation: Considerations for embryotoxic risk assessment. 2013 Feb 13-; 217, (1): 14-22.   
Rec #: 560  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: The effects of organophosphate insecticide chlorpyrifos (CPF) on development are currently under discussion. CPF and its metabolites, chlorpyrifos-oxon (CPO) and 3,5,6-trichloro-2-pyridinol (TClP), **were more cytotoxic for D3 mouse embryonic stem cells than for differentiated fibroblasts 3T3 cells.** Exposure to 10 ++M CPF and TClP and 100 ++M CPO for 12 h significantly altered the in vitro expression of biomarkers of differentiation in D3 cells. Similarly, exposure to 20 ++M CPF and 25 ++M CPO and TClP for 3 days also altered the expression of the biomarkers in the same model. These exposures caused no significant reduction in D3 viability with mild inhibition of acetylcholinesterase and neuropathy target esterase by CPF and severe inhibition by CPO. We conclude that certain in vivo exposure scenarios are possible, which cause inhibition of acetylcholinesterase but without clinical symptoms that reach high enough systemic CPF concentrations able to alter the expression of genes involved in cellular differentiation with potentially hazard effects on development. Conversely, the risk for embryotoxicity by CPO and TClP was very low because the required exposure would induce severe cholinergic syndrome. Chlorpyrifos/ Chlorpyrifos-oxon/ Embryonic stem cell/ Differentiation/ Risk assessment

394. Estevez, J. and Vilanova, E. Model equations for the kinetics of covalent irreversible enzyme inhibition and spontaneous reactivation: Esterases and organophosphorus compounds . 2009; 39, (5): 427-448.   
Rec #: 59859  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Type B carboxylesterases (acetylcholinesterases, neuropathy target esterase, serine peptidases), catalyse the hydrolysis of carboxyl-ester substrates by formation of a covalent acyl-enzyme intermediate and subsequent cleavage and release of the acyl group. Organophosphorus compounds, carbamates, and others exert their mechanism of neurotoxicity by permanent covalent organophosphorylation or carbamylation at the catalytic site of carboxylesterases. Classical kinetic studies converted the exponential kinetic equation to a logarithmic equation for graphic analysis. This process, however, does not allow analysing complex situations. In this paper, kinetic model equations are reviewed and strategies developed for the following cases: (a) single enzyme, with classical linear equation; (b) multi-enzymatic system-discriminating several inhibitor-sensitive and inhibitor-resistant components; (c) 'ongoing inhibition'-high sensitive enzymes can be significantly inhibited during the substrate reaction time, the model equations need a correction; (d) spontaneous reactivation (de-phosphorylation)-one or several components can be simultaneously inhibited and spontaneously reactivated; (e) spontaneous reactivation from starting time with the enzyme being partly or totally inhibited; (f) aging-single enzyme can be inhibited, spontaneously reactivated and dealkylating reaction ('aging') simultaneously occurs; and (g) aging and spontaneous reactivation from starting time with the enzyme being partly or totally inhibited. Analysis of data using the suggested equations allows the deduction of inhibition kinetic constants and the proportions of each of the enzymatic components. Strategies for practical application of the models and for obtaining consistent kinetic parameters, using multi-steps approaches or 3D fitting, are presented.  
Keywords: Acetylcholinesterase, aging reaction, carbamates, dephosphorylation,  
ISI Document Delivery No.: 541BH

395. European Commission DG Environment. Endocrine Disrupters: Study on Gathering Information on 435 Substances with Insufficient Data. 2002: 279 p.   
Rec #: 1830  
Keywords: REVIEW  
Call Number: NO REVIEW (ADC,AMZ,AZD,BFT,BMC,BMY,CBF,CBL,CPY,CTZ,Cu,DDVP,DFZ,DM,DMT,EFV,EFX,ETU,FNT,FPN,FRM,FTF,FVL,FYC,GFS,GYP,IODN,LCYT,MEM,MLT,MOM,MVP,MYC,MZB,NATL,OXD,OYZ,PAH,PCP,PCZ,PDM,PMR,PMT,PPB,PPCP,PPCP2011,QZFE,RSM,SMT,TCF,TFN,TVP)  
Notes: EcoReference No.: 110504  
Chemical of Concern: ABM,ADC,AMZ,AZD,Al,BAP,BFT,BMC,BMN,BMY,BTN,CBF,CBL,CPY,CPZ,CTZ,CZE,Cd,Cu,DDT,DDVP,DFC,DFZ,DM,DMBA,DMT,ECZ,EDB,EFV,EFX,ETU,FGSNH,FML,FNB,FNT,FPN,FRM,FRN,FTF,FVL,FYC,FZFB,GFS,GYP,Hg,ILL,IODN,LCYT,MBZ,MEM,MLT,MOM,MVP,MXC,MYC,MZB,NATL,Nabam,OXD,OXN,OYZ,PAH,PAHs,PCL,PCP,PCZ,PDM,PHTH,PL,PMR,PMT,PPB,PPCP,PPCP2011,PPHD,PYN,Pb,QZFE,RSM,SMT,TCF,TDM,TEZ,TFN,TPZ,TVP,TZA

396. Eyer, Florian; Roberts, Darren M.; Buckley, Nicholas A.; Eddleston, Michael; Thiermann, Horst; Worek, Franz, and Eyer, Peter. Extreme variability in the formation of chlorpyrifos oxon (CPO) in patients poisoned by chlorpyrifos (CPF). 2009 Sep 1-; 78, (5): 531-537.   
Rec #: 790  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Chlorpyrifos (CPF) is a pesticide that causes tens of thousands of deaths per year worldwide. Chlorpyrifos oxon (CPO) is the active metabolite of CPF that inhibits acetylcholinesterase. However, this presumed metabolite has escaped detection in human samples by conventional methods (HPLC, GC-MS, LC-MS) until now. A recently developed enzyme-based assay allowed the determination of CPO in the nanomolar range and was successfully employed to detect this metabolite. CPO and CPF were analysed in consecutive plasma samples of 74 patients with intentional CPF poisoning. A wide concentration range of CPO and CPF was observed and the ratio of CPO/CPF varied considerably between individuals and over time. The ratio increased during the course of poisoning from a mean of 0.005 in the first few hours after ingestion up to an apparent steady-state mean of 0.03 between 30 and 72 h. There was a hundred-fold variation in the ratio between samples and the interquartile range (between individuals) indicated over half the samples had a 5-fold or greater variation from the mean. The ratio was independent of the CPF concentration and the pralidoxime regimen. CPO was present in sufficient quantities to explain any observed acetylcholinesterase inhibitory activity. The effectiveness of pralidoxime in reactivating the inhibited acetylcholinesterase is strongly dependent on the CPO concentration. Differences in clinical outcomes and the response to antidotes in patients with acute poisoning may occur due to inter-individual variability in metabolism. Organophosphorus/ Chlorpyrifos/ Poisoning/ Toxicokinetics/ Pralidoxime

397. Eyer, P.; Worek, F.; Thiermann, H., and Eddleston, M. Paradox findings may challenge orthodox reasoning in acute organophosphate poisoning. 2010; 187, (1-3): 270-278.   
Rec #: 59879  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: It is generally accepted that inhibition of acetylcholinesterase (AChE) is the most important acute toxic action of organophosphorus compounds, leading to accumulation of acetylcholine followed by a dysfunction of cholinergic signaling. However, the degree of AChE inhibition is not uniformly correlated with cholinergic dysfunction, probably because the excess of essential AChE varies among tissues. Moreover, the cholinergic system shows remarkable plasticity, allowing modulations to compensate for dysfunctions of the canonical pathway. A prominent example is the living (-/-)AChE knockout mouse. Clinical experience indicates that precipitous inhibition of AChE leads to more severe poisoning than more protracted yet finally complete inhibition. The former situation is seen in **parathion**, the latter in **oxydemeton methyl** poisoning. At first glance, this dichotomy is surprising since parathion is a pro-poison and has to be activated to the oxon, while the latter is still the ultimate inhibitor. Also oxime therapy in organophosphorus poisoning apparently gives perplexing results: Oximes are usually able to reactivate diethylphosphorylated AChE, but the efficiency may be occasionally markedly smaller than expected from kinetic data. Dimethylphosphorylated AChE is in general less amenable to oxime therapy, which largely fails in some cases of dimethoate poisoning where aging was much faster than expected from a dimethylphosphorylated enzyme. Similarly, poisoning by profenofos, an O,S-dialkyl phosphate, leads to a rapidly aged enzyme. Most surprisingly, these patients were usually well on admission, yet their erythrocyte AChE was completely inhibited. Analysis of the kinetic constants of the most important reaction pathways, determination of the reactant concentrations in vivo and comparison with computer simulations may reveal unexpected toxic reactions. Pertinent examples will be presented and the potentially underlying phenomena discussed. (C) 2010 Elsevier Ireland Ltd. All rights reserved.  
Keywords: Organophosphorus insecticides, Oximes, Paraoxonase 1, Isomerides,  
ISI Document Delivery No.: 641EW

398. Eziah, V. Y.; Rose, H. A.; Wilkes, M., and Clift, A. D. Biochemical Mechanisms of Insecticide Resistance in the Diamondback Moth (DBM), Plutella xylostella L. (Lepidopterata: Yponomeutidae), in the Sydney Region, Australia. 2009; 48, (4): 321-327.   
Rec #: 2090  
Keywords: IN VITRO  
Call Number: NO IN VITRO (CPY,EFV,MTM,PMR)  
Notes: Chemical of Concern: CPY,EFV,MTM,PMR

399. Fabacher, D. L. Hepatic Microsomes from Freshwater Fish - I. In Vitro Cytochrome P-450 Chemical Interactions. 1982; 73, 277-283.   
Rec #: 770  
Keywords: IN VITRO  
Call Number: NO IN VITRO (24D,24DXY,AZ,CPY,ES,MLN,MP,PAQT,PCP,PPB,RTN,SZ,TVP)  
Notes: Chemical of Concern: 24D,24DXY,AND,AZ,BAP,CHO,CPY,CdCl,DDT,DLD,EN,ES,HPT,MLN,MP,MRX,MXC,NS,NaCO,NaLS,OLEA,PAQT,PCL,PCP,PPB,RTN,SZ,TVP,TXP

400. Fabro, L. and Varca, L. M. Pesticide usage by farmers in Pagsanjan-Lumban catchment of Laguna de Bay, Philippines. 2012; 106, 27-34.   
Rec #: 59909  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Pesticides have been of great benefit to agriculture in the Philippines by decreasing crop losses clue to insects, weeds, plant diseases, rodents, and other pests. However, they may build-up in the food chain and can cause contamination of the environment. We examined farmers' pesticide usage in southern sub-catchments of Laguna de Bay, which is a crucial water resource subject to intensive investigations to identify types and sources of pollution. Before the monitoring of pesticides in surface waters was commenced it was necessary to conduct a survey of the pesticides being used by the growers in the catchment in order to select the pesticides that should be monitored. Our survey found that nearly all growers in Lucban and Laguna, irrespective of crop grown, used the pyrethroid-based insecticides L-cyhalothrin and cypermethrin. In rice, pesticides were applied one to three times per season, while in vegetables, L-cyhalothrin and cypermethrin insecticides were applied five times and the other insecticides were applied two to four times throughout the cropping season. In Laguna other insecticides used were carbofuran, endosulfan and a formulated product of BPMC (fenobucarb) and chlorpyrifos. In Lucban other insecticides used were malathion, profenofos, chlorpyrifos, carharyl, niclosamide and metaldehyde. Butachlor and 2,4-D herbicides were used to control weeds and were applied once throughout the growing. Some fungicides were also applied. An estimation of the potential loads of chemicals moving into waterways has shown that L-cyhalothrin, pretilachlor, niclosamide, butalchlor, carbofuran and profenofos are most likely to be present in waterways in the Lucban and Pagsanjan regions in the largest quantities based on the quantities applied and/or use in a number of crops. (C) 2011 Published by Elsevier B.V.  
Keywords: Pesticide usage, Tropical agriculture  
ISI Document Delivery No.: 929PO

401. Fallico, B. ; D'Urso, M. G., and Chiappara, E. Exposure to pesticides residues from consumption of Italian blood oranges. 2009; 26, (7): 1024-1032.   
Rec #: 59919  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This paper reports the results of a 5-year study to evaluate pesticide levels, derived from orchard activities, on Italy's most common orange cultivar (Citrus sinensis, L. Osbeck, cv. Tarocco). Using a Bayesian approach, the study allowed both the qualitative (number) and quantitative distributions (amount) of pesticides to be determined with its own probability value. Multi-residue analyses of 460 samples highlighted the presence of ethyl and methyl chlorpyrifos, dicofol, etofenprox, fenazaquin, fenitrothion, imazalil, malathion and metalaxil-m. A total of 30.5% of samples contained just one pesticide, 2.16% two pesticides and 0.65% of samples had three pesticides present simultaneously. The most common residue was ethyl chlorpyrifos followed by methyl chlorpyrifos. Estimated daily intake (EDI) values for ethyl and methyl chlorpyrifos, as well as the distance from the safety level (non-observed adverse effect level, NOAEL), were calculated. The risk was differentiated (1) to take account of the period of actual citrus consumption (180 days) and (2) to discriminate the risk derived from eating oranges containing a certain level of chlorpyrifos from unspecified pesticides. The most likely EDI values for ethyl chlorpyrifos derived from Italian blood orange consumption are 0.01 and 0.006 mg/day calculated for 180 and 365 days, respectively. Considering the probability of the occurrence of ethyl chlorpyrifos, these EDI values are reduced to 2.6 x 10(-3) and 1.3 x 10(-3) mg/day, respectively. For methyl chlorpyrifos, the most likely EDI values are 0.09 and 0.04 mg/day, respectively; considering the probability of its occurrence, the EDI values decrease to 6.7 x 10(-3) and 3.4 x 10(-3) mg/day, respectively. The results confirmed that levels of pesticides in Italian Tarocco oranges derived from a known controlled chain of production are safe.  
Keywords: EDI, NOAEL, Tarocco oranges, risk assessment, safety, risk, Monte Carlo  
ISI Document Delivery No.: 457ZW

402. Fan, Siqi and Zhang, Minghua. Pesticides Used on Walnuts in California: Use Patterns and Potential Impacts on Surface Water. 2012: (UMI# 1529960 ).   
Rec #: 51599  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Walnuts are an important specialty crop in California. In 2010, they reached a production of 503,000 tons which accounted for 99% of national production, and created profits over one billion dollars statewide. The major regions growing walnuts in California include the Sacramento Basin, San Joaquin Basin and Tulare Lake Basin. To maximize crop production, a large amount of pesticides was applied to control pests: The amount of active ingredient (AI) used in pesticide products exceeded 1000 tons annually in 1995-2009, which could have posed potential pollution to surface water. This study looked into both pesticide use and its potential impact on surface water from 1995 to 2009 on California walnuts, focusing on the pesticide categories of fungicides, insecticides and herbicides. A pesticide risk evaluation model, Pesticide Use Risk Evaluation (PURE), was applied in this study to quantitatively analyze potential impact of pesticide use on surface water. Results showed that among the three main basins, the Sacramento Basin had the highest fungicide risk intensity on surface water (annual average value: 978.25 R/ha, 42% and 358% higher than San Joaquin and Tulare Lake), due to a heavy use of copper hydroxide and maneb. San Joaquin had the highest insecticide risk intensity (973.73 R/ha, 33% and 56% higher than the Sacramento Basin and Tulare Lake) resulting mainly from chlorpyrifos, azinphos-methyl, chloropicrin, and malathion use. Herbicide showed a consistent low risk intensity (<50 R/ha) in all basins. The Mann-Kendall test showed fungicide and insecticide risk intensity presented a consistently decreasing trend in all basins, while herbicide risk intensity presented an increasing trend in Tulare Lake. A finer spatial scale analysis was conducted at township level (6Ă—6 mile 2 ) to assess the use and risk patterns in more details, the results of which are presented as GIS maps. **Finally, based on some lab experiments observing pyrethroid use can cause mite outbreaks, a case study was carried out to examine the relationship between pyrethroid and miticide use on California walnuts and their potential impact on surface water.** **A developed model captured the relationship as the miticide use intensity is positively correlated with pyrethroid use intensity until it reaches a maximum value.**  Through a comprehensive pesticide use and risk analysis on California walnut, important conclusions are made. For example, pesticides such as copper hydroxide and chlorpyrifos have high toxicity in surface water. Our analysis indicates that if they were replaced by more environmentally benign pesticides - such as kaolin and petroleum oil - the overall risk scores and environmental impacts would decrease. These results can be useful to help local walnut growers make decisions on pesticide choices, and help regulators to make suggestions and integrated pesticide management on critical regions.  
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403. FANG, Hua; YU, Yunlong; CHU, Xiaoqiang; WANG, Xiuguo; YANG, Xiaoe, and YU, Jingquan. Degradation of chlorpyrifos in laboratory soil and its impact on soil microbial functional diversity. 2009; 21, (3): 380-386.   
Rec #: 1490  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Degradation of chlorpyrifos at different concentrations in soil and its impact on soil microbial functional diversity were investigated under laboratory condition. The degradation half-live of chlorpyrifos at levels of 4, 8, and 12 mg/kg in soil were calculated to be 14.3, 16.7, and 18.0 d, respectively. The Biolog study showed that the average well color development (AWCD) in soils was signifficantly (P &lt; 0.05) inhibited by chlorpyrifos within the ffirst two weeks and thereafter recovered to a similar level as the control. A similar variation in the diversity indices (Simpson index 1/D and McIntosh index U) was observed, but no signifficant difference among the values of the Shannon-Wiener index HÇ\_ was found in chlorpyrifos-treated soils. With an increasing chlorpyrifos concentration, the half-life of chlorpyrifos was signifficantly (P ëń 0.05) extended and its inhibitory effect on soil microorganisms was aggravated. It is concluded that chlorpyrifos residues in soil had a temporary or short-term inhibitory effect on soil microbial functional diversity. Biolog/ chlorpyrifos/ community-level physiological proffile/ microbial functional diversity

404. Farahat, Fayssal M; Ellison, Corie a; Bonner, Matthew R; Mcgarrigle, Barbara P; Crane, Alice L; Fenske, Richard a; Lasarev, Michael R; Rohlman, Diane S; Anger, W Kent; Lein, Pamela J, and Olson, James R. Biomarkers of Chlorpyrifos Exposure and Effect in Egyptian Cotton Field Workers. 2011 Jun; 119, (6): 801-6.   
Rec #: 39689  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos (CPF), a widely used organophosphorus pesticide (OP), is metabolized to CPF-oxon, a potent cholinesterase (ChE) inhibitor, and trichloro-2-pyridinol (TCPy). Urinary TCPy is often used as a biomarker for CPF exposure, whereas blood ChE activity is considered an indicator of CPF toxicity. However, whether these biomarkers are dose related has not been studied extensively in populations with repeated daily OP exposures. We sought to determine the relationship between blood ChE and urinary TCPy during repeated occupational exposures to CPF. Daily urine samples and weekly blood samples were collected from pesticide workers (n=38) in Menoufia Governorate, Egypt, before, during, and after 9-17 consecutive days of CPF application to cotton fields. We compared blood butyrylcholinesterase (BuChE) and acetylcholinesterase (AChE) activities with the respective urinary TCPy concentrations in each worker. Average TCPy levels during the middle of a 1- to 2-week CPF application period were significantly higher in pesticide applicators (6,437 Î¼g/g creatinine) than in technicians (184 Î¼g/g) and engineers (157 Î¼g/g), both of whom are involved in supervising the application process. We observed a statistically significant inverse correlation between urinary TCPy and blood BuChE and AChE activities. The no-effect level (or inflection point) of the exposure-effect relationships has an average urinary TCPy level of 114 Î¼g/g creatinine for BuChE and 3,161 Î¼g/g creatinine for AChE. Our findings demonstrate a dose-effect relationship between urinary TCPy and both plasma BuChE and red blood cell AChE in humans exposed occupationally to CPF. These findings will contribute to future risk assessment efforts for CPF exposure.  
Keywords: Agriculture  
Keywords: Pyridones -- urine  
Keywords: Occupational Exposure  
Keywords: Young Adult  
Keywords: Acetylcholinesterase  
Keywords: Humans  
Keywords: Butyrylcholinesterase  
Keywords: Environmental Studies  
Keywords: Risk Assessment  
Keywords: Biological Markers -- blood  
Keywords: 3,5,6-trichloro-2-pyridinol  
Keywords: Insecticides  
Keywords: Pyridones  
Keywords: Adult  
Keywords: Butyrylcholinesterase -- blood  
Keywords: Pyridones -- metabolism  
Keywords: Insecticides -- metabolism  
Keywords: Insecticides -- toxicity  
Keywords: Dose-Response Relationship, Drug  
Keywords: O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphate  
Keywords: Acetylcholinesterase -- blood  
Keywords: Gossypium  
Keywords: Chlorpyrifos  
Keywords: Egypt  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Chlorpyrifos -- analogs & derivatives  
Keywords: Biological Markers -- urine  
Keywords: Biological Markers  
Keywords: Chlorpyrifos -- metabolism  
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405. Farahat, Fayssal M; Fenske, Richard a; Olson, James R; Galvin, Kit; Bonner, Matthew R; Rohlman, Diane S; Farahat, Taghreed M; Lein, Pamela J; Anger, Wkent, and Farahat, Fayssal M. Chlorpyrifos Exposures in Egyptian Cotton Field Workers. 2010 Jun; 31, (3): 297-304.   
Rec #: 40559  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Neurobehavioral deficits have been reported in Egyptian pesticide application teams using organophosphorus (OP) pesticides, but whether these effects are related to OP pesticide exposures has yet to be established. In preparation for a comprehensive study of the relationship between OP pesticide dose and neurobehavioral deficits, we assessed exposure within this population. We conducted occupational surveys and workplace observations, and collected air, dermal patch and biological samples from applicators, technicians and engineers involved in chlorpyrifos applications during cotton production to test the hypotheses that: (1) dermal exposure was an important contributor to internal dose and varied across body regions; and (2) substantial differences would be seen across the three job categories. Applicators were substantially younger and had shorter exposure histories than did technicians and engineers. Applicators and technicians were observed to have relatively high levels of skin or clothing contact with pesticide-treated foliage as they walked through the fields. Both dermal patch loadings of chlorpyrifos and measurements of a chlorpyrifos-specific metabolite (TCPy) in urine confirmed substantial exposure to and skin absorption of chlorpyrifos that varied according to job category; and dermal patch loading was significantly higher on the thighs than on the forearms. These findings support our hypotheses and support the need for research to examine neurobehavioral performance and exposures in this population. More importantly, the exposures reported here are sufficiently high to recommend urgent changes in work practices amongst these workers.  
Keywords: CSA Neurosciences Abstracts; Toxicology Abstracts  
Keywords: Foliage  
Keywords: Skin  
Keywords: Cotton  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: Metabolites  
Keywords: Clothing  
Keywords: Pesticide applications  
Keywords: Chlorpyrifos  
Keywords: Workers  
Keywords: Urine  
Keywords: Pesticides  
Keywords: X 24330:Agrochemicals  
Keywords: Occupational exposure  
Keywords: Forearm  
Date revised - 2010-10-01  
Language of summary - English  
Pages - 297-304  
ProQuest ID - 877586775  
SubjectsTermNotLitGenreText - Chlorpyrifos; Foliage; Workers; Cotton; Skin; Urine; Pesticides; Metabolites; Clothing; Forearm; Occupational exposure; Pesticide applications  
Last updated - 2012-03-29  
British nursing index edition - Neurotoxicology [Neurotoxicology]. Vol. 31, no. 3, pp. 297-304. Jun 2010.  
Corporate institution author - Farahat, Fayssal M; Fenske, Richard A; Olson, James R; Galvin, Kit; Bonner, Matthew R; Rohlman, Diane S; Farahat, Taghreed M; Lein, Pamela J; Anger, WKent  
DOI - c238f792-d76e-4de7-afc0csaobj202; 13202675; 0161-813X English

406. Fazekas, B. ; Woynarovichne, L. M.; Deakne, P. P.; Csaba, G., and Orosz, E. Pesticide poisoning of honey bees between 2007 and 2011. 2012; 134, (4): 213-220.   
Rec #: 60029  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The authors confirmed pesticide toxicosis of honey bees in 151 cases during a five year period (2007-2011). A suddenly occurring mass bee death is always ground of suspicion for toxicosis. The suspicion is further confirmed by the presence of an exceptional number of shivering, unable to fly, proboscis stretching bees in hives and in their closer surroundings. The toxicosis becomes even more evident when huge bee losses with identical symptoms are observed in the near-by apiaries and also turns out that pesticides were used within the flight of the bees in the past days. 222 honey bee samples and 129 plant samples were sent for veterinary diagnostic laboratory examination. The presence of contagious diseases was excluded and 12 different pesticides were detected (by GC-MS, GC-NPD and HPLC) in 151 honey bee samples. In 64 cases the plant samples contained the same pesticide(s) as the honey bees from the given poisoning case, thus confirming the dependence of an effect upon a cause, namely the application of pesticides upon bee poisoning. Poisonings are most frequently caused by chloropyriphos and dimethoate (organophosphate chemical family), fipronil (phenylpyrazole chemical family) and six types of synthetic pyrethroids. The recited cases call attention to the fact that the application of pesticides in agriculture causes very often huge expenses linked to honey bee poisonings. The overall losses could be minimised by respecting the rules mentioned in licences and users guide.  
Keywords: APIS-MELLIFERA, NEONICOTINOID INSECTICIDES, TOXICITY  
ISI Document Delivery No.: 933OD

407. Feng, Y.; Li, M.; Zhang, H.; Zheng, B.; Han, H.; Wang, C.; Yan, J.; Tang, J., and Gao, G. F. Functional Definition and Global Regulation of Zur, a Zinc Uptake Regulator in a Streptococcus Suis Serotype 2 Strain Causing Streptococcal Toxic Shock Syndrome.   
Rec #: 51089  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Microbiology. 2004 May;150(Pt 5):1447-56 (medline /15133106)  
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COMMENTS: Cites: FEMS Microbiol Lett. 2007 Oct;275(1):80-8 (medline /17854470)  
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COMMENTS: Cites: Mol Microbiol. 2005 Sep;57(5):1196-209 (medline /16101995)  
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COMMENTS: Cites: Curr Opin Microbiol. 2005 Apr;8(2):188-95 (medline /15802251)  
COMMENTS: Cites: J Biomol NMR. 2005 Jan;31(1):73-4 (medline /15692745)  
COMMENTS: Cites: J Bacteriol. 1999 Oct;181(20):6223-9 (medline /10515908)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1999 Sep 14;96(19):10887-92 (medline /10485921)  
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COMMENTS: Cites: Vet Res Commun. 1997 Aug;21(6):381-407 (medline /9266659)  
COMMENTS: Cites: J Mol Biol. 1995 Nov 24;254(2):247-59 (medline /7490747)  
COMMENTS: Cites: Biochem Biophys Res Commun. 1997 Jul 18;236(2):510-6 (medline /9240471)  
COMMENTS: Cites: Adv Exp Med Biol. 1997;412:341-8 (medline /9192039)  
COMMENTS: Cites: Science. 1996 Feb 23;271(5252):1081-5 (medline /8599083)  
COMMENTS: Cites: Microbiology. 1995 Jan;141 ( Pt 1):181-8 (medline /7894710)  
ABSTRACT: Zinc is an essential trace element for all living organisms and plays pivotal roles in various cellular processes. However, an excess of zinc is extremely deleterious to cells. Bacteria have evolved complex machineries (such as efflux/influx systems) to control the concentration at levels appropriate for the maintenance of zinc homeostasis in cells and adaptation to the environment. The Zur (zinc uptake regulator) protein is one of these functional members involved in the precise control of zinc homeostasis. Here we identified a zur homologue designated 310 from Streptococcus suis serotype 2, strain 05ZYH33, a highly invasive isolate causing streptococcal toxic shock syndrome. Biochemical analysis revealed that the protein product of gene 310 exists as a dimer form and carries zinc ions. An isogenic gene replacement mutant of gene 310, the Delta310 mutant, was obtained by homologous recombination. Physiological tests demonstrated that the Delta310 mutant is specifically sensitive to Zn(2+), while functional complementation of the Delta310 mutant can restore its duration capability, suggesting that 310 is a functional member of the Zur family. Two-dimensional electrophoresis indicated that nine proteins in the Delta310 mutant are overexpressed in comparison with those in the wild type. DNA microarray analyses suggested that 121 genes in the Delta310 mutant are affected, of which 72 genes are upregulated and 49 are downregulated. The transcriptome of S. suis serotype 2 with high Zn(2+) concentrations also showed 117 differentially expressed genes, with 71 upregulated and 46 downregulated. Surprisingly, more than 70% of the genes differentially expressed in the Delta310 mutant were the same as those in S. suis serotype 2 that were differentially expressed in response to high Zn(2+) concentration, consistent with the notion that 310 is involved in zinc homeostasis. We thus report for the first time a novel zinc-responsive regulator, Zur, from Streptococcus suis serotype 2.  
MESH HEADINGS: Adult  
MESH HEADINGS: Amino Acid Sequence  
MESH HEADINGS: Animals  
MESH HEADINGS: Bacterial Proteins/chemistry/\*genetics/metabolism  
MESH HEADINGS: Blotting, Western  
MESH HEADINGS: Cations, Divalent/pharmacology  
MESH HEADINGS: Computational Biology  
MESH HEADINGS: Dimerization  
MESH HEADINGS: Gene Expression Regulation, Bacterial/drug effects  
MESH HEADINGS: Genetic Complementation Test  
MESH HEADINGS: Humans  
MESH HEADINGS: Mass Spectrometry  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Mutation  
MESH HEADINGS: Oligonucleotide Array Sequence Analysis  
MESH HEADINGS: Reverse Transcriptase Polymerase Chain Reaction  
MESH HEADINGS: Sequence Homology, Amino Acid  
MESH HEADINGS: Shock, Septic/\*microbiology  
MESH HEADINGS: Streptococcal Infections/\*microbiology  
MESH HEADINGS: Streptococcus suis/drug effects/\*genetics/metabolism  
MESH HEADINGS: Syndrome  
MESH HEADINGS: Transcription, Genetic/drug effects  
MESH HEADINGS: Zinc/pharmacokinetics/pharmacology eng

408. Fenoll, J.; Hellin, P.; Martinez, C. M.; Miguel, M., and Flores, P. Multiresidue Method for Analysis of Pesticides in Pepper and Tomato by Gas Chromatography with Nitrogen-Phosphorus Detection. Departamento de Calidad y Garantia Alimentaria, C/Mayor s/n,IMIDA, Murcia, Spain////: SOIL; 2007; 105, (2): 711-719.   
Rec #: 1920  
Keywords: NO DURATION  
Call Number: NO DURATION (AZX,CPY,CPYM,CYF,CYP,DM,DZ,GCYH,MLN,OXF,PDM,PIRM,PRB,PZM,TAUF,TDF)  
Notes: Chemical of Concern: AZX,BPZ,CPY,CPYM,CYD,CYF,CYP,CYPM,DF,DM,DZ,FDX,GCYH,KRSM,MLN,OXF,PDM,PHSL,PIM,PIRM,PRB,PYX,PZM,TAUF,TCM,TDF,TDM,TEZ,TYF

409. Fenoll, Jose; Ruiz, Encarnacion; Flores, Pilar; Hellin, Pilar; Navarro, Simon, and Fenoll, Jose. Reduction of the Movement and Persistence of Pesticides in Soil Through Common Agronomic Practices. 2011 Nov; 85, (8): 1375-1382.   
Rec #: 43039  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Laboratory and field studies were conducted in order to determine the leaching potential of eight pesticides commonly used during pepper cultivation by use of disturbed soil columns and field lysimeters, respectively. Two soils with different organic matter content (soils A and B) were used. Additionally, soil B was amended with compost (sheep manure). The tested compounds were cypermethrin, chlorpyrifos-methyl, bifenthrin, chlorpyrifos, cyfluthrin, endosulfan, malathion and tolclofos-methyl. In soil B (lower organic matter content), only endosulfan sulphate, malathion and tolclofos-methyl were found in leachates. For the soil A (higher organic matter content) and amended soil B, pesticide residues were not found in the leachates. In addition, this paper reports on the use of common agronomic practices (solarization and biosolarization) to enhance degradation of these pesticides from polluted soil A. The results showed that both solarization and biosolarization enhanced the degradation rates of endosulfan, bifenthrin and tolclofos-methyl compared with the control. Most of the studied pesticides showed similar behavior under solarization and biosolarization conditions. However, chlorpyrifos was degraded to a greater extent in the solarization than in biosolarization treatment. The results obtained point to the interest in the use of organic amendment in reducing the pollution of groundwater by pesticide drainage and in the use of solarization and biosolarization in reducing the persistence of pesticides in soil.  
Keywords: Sulfates  
Keywords: Degradation  
Keywords: ENA 09:Land Use & Planning  
Keywords: Organic matter  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Malathion  
Keywords: Environmental Studies  
Keywords: Endosulfan  
Keywords: Soil  
Keywords: Chlorpyrifos  
Keywords: Pesticides  
Keywords: Environment Abstracts; Pollution Abstracts  
Keywords: Leachates  
Date revised - 2012-01-01  
Language of summary - English  
Pages - 1375-1382  
ProQuest ID - 910058315  
SubjectsTermNotLitGenreText - Sulfates; Chlorpyrifos; Soil; Degradation; Organic matter; Pesticides; Leachates; Malathion; Endosulfan  
Last updated - 2012-01-26  
Corporate institution author - Fenoll, Jose; Ruiz, Encarnacion; Flores, Pilar; Hellin, Pilar; Navarro, Simon  
DOI - OB-0055fb49-d6c3-48f0-9698csamfg201; 16058870; 0045-6535 English

410. Fenske, Richard a; Farahat, Fayssal M; Galvin, Kit; Fenske, Ellis K, and Olson, James R. Contributions of Inhalation and Dermal Exposure to Chlorpyrifos Dose in Egyptian Cotton Field Workers. 2012 Sep; 18, (3): 198-209.   
Rec #: 38569  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos exposures were assessed in 12 Egyptian cotton field workers. 3,5,6-trichloro-2-pyridinol (TCPy) was measured in 24-hour urine samples to estimate absorbed dose. Workshift air samples were used to calculate chlorpyrifos inhalation dose. Patches on legs had the highest chlorpyrifos loading rates among body regions sampled. Geometric mean chlorpyrifos air concentrations were 5-1, 8-2, and 45...0 ...g/m3 for engineers, technicians, and applicators, respectively; peak TCPy urinary concentrations were 75-129, 78-261, and 487-1659 ...g/l, respectively; geometric mean doses were 5-2-5-4, 8-6-9-7, and 50-57 ...g/kg, respectively, considering TCPy excretion half-life values of 27 and 41 hours. All worker doses exceeded the acceptable operator exposure level of 1-5 ...g/kg/day. An estimated 94-96% of the dose was attributed to dermal exposure, calculated as the difference between total dose and inhalation dose. Interventions to reduce dermal exposure are warranted in this population, particularly for the hands, feet, and legs. (ProQuest: ... denotes formulae/symbols omitted.)  
Keywords: Agriculture  
Keywords: Occupational Exposure  
Keywords: Air Pollutants, Occupational  
Keywords: Skin Absorption  
Keywords: Humans  
Keywords: Insecticides -- urine  
Keywords: Insecticides -- analysis  
Keywords: Gossypium  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos -- analysis  
Keywords: Chlorpyrifos  
Keywords: Egypt  
Keywords: Insecticides  
Keywords: Half-Life  
Keywords: Air Pollutants, Occupational -- analysis  
Keywords: Inhalation Exposure  
Keywords: Insecticides -- pharmacokinetics  
Keywords: Air Pollutants, Occupational -- pharmacokinetics  
Keywords: Time Factors  
Keywords: Air Pollutants, Occupational -- urine  
Keywords: Chlorpyrifos -- pharmacokinetics  
Keywords: Chlorpyrifos -- urine  
Copyright - Copyright Hamilton Hardy Publishing Sep 2012  
Language of summary - English  
Pages - 198-209  
ProQuest ID - 1081330144  
Last updated - 2013-01-02  
Place of publication - Philadelphia  
Corporate institution author - Fenske, Richard A; Farahat, Fayssal M; Galvin, Kit; Fenske, Ellis K; Olson, James R  
DOI - 2774688651; 72254902; 49933; NJOH; 23026005; INODNJOH0000615714 English

411. Ferens, W. A. and Hovde, C. J. Escherichia Coli O157:H7: Animal Reservoir and Sources of Human Infection.   
Rec #: 50239  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract:   
ABSTRACT: This review surveys the literature on carriage and transmission of enterohemorrhagic Escherichia coli (EHEC) O157:H7 in the context of virulence factors and sampling/culture technique. EHEC of the O157:H7 serotype are worldwide zoonotic pathogens responsible for the majority of severe cases of human EHEC disease. EHEC O157:H7 strains are carried primarily by healthy cattle and other ruminants, but most of the bovine strains are not transmitted to people, and do not exhibit virulence factors associated with human disease. Prevalence of EHEC O157:H7 is probably underestimated. Carriage of EHEC O157:H7 by individual animals is typically short-lived, but pen and farm prevalence of specific isolates may extend for months or years and some carriers, designated as supershedders, may harbor high intestinal numbers of the pathogen for extended periods. The prevalence of EHEC O157:H7 in cattle peaks in the summer and is higher in postweaned calves and heifers than in younger and older animals. Virulent strains of EHEC O157:H7 are rarely harbored by pigs or chickens, but are found in turkeys. The bacteria rarely occur in wildlife with the exception of deer and are only sporadically carried by domestic animals and synanthropic rodents and birds. EHEC O157:H7 occur in amphibian, fish, and invertebrate carriers, and can colonize plant surfaces and tissues via attachment mechanisms different from those mediating intestinal attachment. Strains of EHEC O157:H7 exhibit high genetic variability but typically a small number of genetic types predominate in groups of cattle and a farm environment. Transmission to people occurs primarily via ingestion of inadequately processed contaminated food or water and less frequently through contact with manure, animals, or infected people.  
MESH HEADINGS: Animals  
MESH HEADINGS: \*Disease Reservoirs  
MESH HEADINGS: Escherichia coli Infections/\*transmission  
MESH HEADINGS: Escherichia coli O157/\*pathogenicity  
MESH HEADINGS: Foodborne Diseases/microbiology  
MESH HEADINGS: Hemolytic-Uremic Syndrome/\*microbiology  
MESH HEADINGS: Humans  
MESH HEADINGS: Seasons eng

412. Ferguson, A. C.; Bursac, Z.; Biddle, D.; Coleman, S., and Johnson, W. Soil-skin adherence from carpet: Use of a mechanical chamber to control contact parameters. 2008; 43, (12): 1451-1458.   
Rec #: 60059  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A computer-controlled mechanical chamber was used to control the contact between carpet samples laden with soil, and human cadaver skin and cotton sheet samples for the measurement of mass soil transfer. Mass soil transfers were converted to adherence factors (mg/cm(2)) for use in models that estimate dermal exposure to contaminants found in soil media. The contact parameters of pressure (10 to 50 kPa) and time (10 to 50 sec) were varied for 369 experiments of mass soil transfer, where two soil types (play sand and lawn soil) and two soil sizes (< 139.7 mu m and >= 139.7 < 381) were used. Chamber probes were used to record temperature and humidity. Log transformation of the sand/soil transfers was performed to normalize the distribution. Estimated adjusted means for experimental conditions were exponentiated in order to express them in the original units. Mean soil mass transfer to cadaver skin (0.74 mg/cm(2)) was higher than to cotton sheets (0.21 mg/cm(2)). Higher pressure (p < 0.0001), and larger particle size (p < 0.0001) were also all associated with larger amounts of soil transfer. The original model was simplified into two by adherence material type (i.e., cadaver skin and cotton sheets) in order to investigate the differential effects of pressure, time, soil size, and soil type on transfer. This research can be used to improve estimates of dermal exposure to contaminants found in home carpets.  
Keywords: soil transfer, adherence, soil exposure, mechanical chamber, play sand,  
ISI Document Delivery No.: 348QZ

413. Ferguson, D. E. Characteristics and Significance of Resistance to Insecticides in Fishes. 5003//: 1968: 531-536.   
Rec #: 1700  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (AMSV,CPY,DCF,DZ,MLN,MP), NO REVIEW (AMSV,CPY,DCF,DZ,MLN,MP)  
Notes: Chemical of Concern: AMSV,CHD,CPY,DCF,DDE,DDT,DZ,EN,MLN,MP,MXC,TXP

414. Ferreira, Enderson P. de B.; Dusi, Andr+ N.; Costa, Jana+ na R.; Xavier, Gustavo R., and Rumjanek, Norma G. Assessing insecticide and fungicide effects on the culturable soil bacterial community by analyses of variance of their DGGE fingerprinting data. 2009 Sep; 45, (5Çô6): 466-472.   
Rec #: 4620  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: To assess the effects of three insecticides (aldicarb, chlorpyrifos, deltamethrin) and two fungicides (tebuconazole and metalaxyl-á+-ámancozeb) on the PCR-DGGE fingerprints of culturable soil bacterial communities (CSBC), a greenhouse experiment was carried out with soil samples from an Integrated System for Agroecological Production (ISAP), a Conventional Potato Production Area (CPPA) and a Secondary Forest Area (SFA) close to the CPPA. Samples were obtained at 15 day intervals starting at 32 until 77 days after sowing (DAS) to perform the PCR-DGGE analysis of the CSBC cultured on media amended with soil suspension. Analysis of variance from PCR-DGGE data indicated significant differences among treatments. Regardless the type of pesticide applied, CSBC was disturbed and similarity values varied from 5% to 90% in comparison to the control. Significant shifts on CSBC were only detected among treatments in the first two harvests, while CSBC tended to be more akin to each other at the last two harvest dates. The most significant responses observed were due to different soil sample origins, where values of 5% of similarity to the control were observed on CPPA soil. The use of analysis of variance on PCR-DGGE data was useful to a better understanding of the changes on CSBC induced by pesticides applications. Solanum tuberosum/ 16S rDNA/ Culture-dependent/ Bacterial community structure

415. Ficklin, D. L.; Luo, Y. Z., and Zhang, M. H. Watershed modelling of hydrology and water quality in the Sacramento River watershed, California. 2013; 27, (2): 236-250.   
Rec #: 60099  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Agricultural pollutant runoff is a major source of water contamination in California's Sacramento River watershed where 8500 km2 of agricultural land influences water quality. The Soil and Water Assessment Tool (SWAT) hydrology, sediment, nitrate and pesticide transport components were assessed for the Sacramento River watershed. To represent flood conveyance in the area, the model was improved by implementing a flood routing algorithm. Sensitivity/uncertainty analyses and multi-objective calibration were incorporated into the model application for predicting streamflow, sediment, nitrate and pesticides (chlorpyrifos and diazinon) at multiple watershed sites from 1992 to 2008. Most of the observed data were within the 95% uncertainty interval, indicating that the SWAT simulations were capturing the uncertainties that existed, such as model simplification, observed data errors and lack of agricultural management data. The monthly NashSutcliffe coefficients at the watershed outlet ranged from 0.48 to 0.82, indicating that the model was able to successfully predict streamflow and agricultural pollutant transport after calibration. Predicted sediment loads were highly correlated to streamflow, whereas nitrate, chlorpyrifos and diazinon were moderately correlated to streamflow. This indicates that timing of agricultural management operations plays a role in agricultural pollutant runoff. Best management practices, such as pesticide use limits during wet seasons, could improve water quality in the Sacramento River watershed. The calibrated model establishes a modelling framework for further studies of hydrology, water quality and ecosystem protection in the study area. Copyright (C) 2012 John Wiley & Sons, Ltd.  
Keywords: California, SWAT, agricultural runoff, water quality, calibration,  
ISI Document Delivery No.: 071LF

416. Ficklin, Darren L.; Luo, Yuzhou; Luedeling, Eike; Gatzke, Sarah E., and Zhang, Minghua. Sensitivity of agricultural runoff loads to rising levels of CO2 and climate change in the San Joaquin Valley watershed of California. 2010 Jan; 158, (1): 223-234.   
Rec #: 4000  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: The Soil and Water Assessment Tool (SWAT) was used to assess the impact of climate change on sediment, nitrate, phosphorus and pesticide (diazinon and chlorpyrifos) runoff in the San Joaquin watershed in California. This study used modeling techniques that include variations of CO2, temperature, and precipitation to quantify these responses. Precipitation had a greater impact on agricultural runoff compared to changes in either CO2 concentration or temperature. Increase of precipitation by -\_10% and -\_20% generally changed agricultural runoff proportionally. Solely increasing CO2 concentration resulted in an increase in nitrate, phosphorus, and chlorpyrifos yield by 4.2, 7.8, and 6.4%, respectively, and a decrease in sediment and diazinon yield by 6.3 and 5.3%, respectively, in comparison to the present-day reference scenario. Only increasing temperature reduced yields of all agricultural runoff components. The results suggest that agricultural runoff in the San Joaquin watershed is sensitive to precipitation, temperature, and CO2 concentration changes. Watershed modeling/ Climate change/ Agricultural pollution/ Pesticides/ California/ SWAT

417. Ficklin, Darren L. and Zhang, Minghua. Modeling the Impacts of Climate Change on Hydrology and Agricultural Pollutant Runoff in California's Central Valley. 2010: (UMI# 3444013 ).   
Rec #: 51729  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Quantifying the hydrologic and agricultural pollutant runoff response to an increased atmospheric CO2 concentration and climate change is critical for proper management of water resources within agricultural systems. This research takes this challenge by simulating the effects of climate change on the hydrologic cycle and agricultural pollutant transport in the Central Valley of California using the Soil and Water Assessment Tool (SWAT) water quality model and the HYDRUS soil water transport model. Specifically, changes in hydrology (streamflow, surface runoff, groundwater recharge, evapotranspiration, and irrigation water use) and agricultural pollutant runoff (sediment, nitrate, phosphorus, chlorpyrifos, and diazinon) were assessed. For the first three studies, hydrological responses were modeled in the San Joaquin River watershed using variations of atmospheric CO 2 (550 and 970 ppm), temperature (+1.1 and +6.4Â°C), and precipitation (0%, Â±10%, and Â±20%) based on Intergovernmental Panel on Climate Change projections. The fourth study used a calibration and an uncertainty analysis technique for the calibration of the Sacramento River watershed. This study confirmed that SWAT was able to capture the large amount of uncertainty within the Sacramento River watershed and successfully simulate streamflow, sediment, nitrate, chlorpyrifos and diazinon loads. The final study uses a novel stochastic climate change analysis technique to bracket the 95% confidence interval of potential climate changes. For all studies, increases in precipitation generally changed the hydrological cycle and agricultural runoff proportionally, where increases in precipitation resulted in increases in surface runoff and thus agricultural runoff and vice-versa. Also, for all studies, increasing temperature caused a temporal shift in plant growth patterns and redistributed evapotranspiration and irrigation water demand earlier in the year. This lead to an increase in streamflow during the summer months compared to the present-day climate due to decreased irrigation demand. Increasing CO 2 concentration to 970 ppm and temperature by 6.4Â°C in the San Joaquin River watershed caused watershed-wide average evapotranspiration, averaged over 50 simulated years, to decrease by 37.5%, resulting in increases of water yield by 36.5% and stream flow by 23.5% compared to the present-day climate. Solely increasing CO 2 concentration in the San Joaquin River watershed resulted in an increase in nitrate, phosphorus, and chlorpyrifos yield by 4.2, 7.8, and 6.4%, respectively, and a decrease in sediment and diazinon yield by 6.3 and 5.3%, respectively, in comparison to the presentday reference scenario. Only increasing temperature reduced yields of all agricultural runoff components. Elevating atmospheric CO 2 concentrations generally decreased groundwater recharge under almonds, alfalfa, and tomatoes in the San Joaquin Valley due to decreased evapotranspiration resulting in decreased irrigation water use. Increasing average daily temperature by 1.1 and 6.4Â°C and atmospheric CO 2 concentration to 550 and 970 ppm led to a decrease in cumulative groundwater recharge for most scenarios. For the final study, 95% confidence interval (CI) results from stochastic climate change simulations indicate that streamflow (3% for the upper CI limit, 9.5% for the lower CI limit) and sediment runoff (20% for the upper CI limit, 26% for the lower CI limit) in the Sacramento River watershed is more likely to decrease under climate changes compared to present-day, while the increase and decrease for nitrate runoff was found to be equal (13% for the upper CI limit, 13% for the lower CI limit). For the San Joaquin River watershed, streamflow slightly decreased under climate change (27% for the upper CI limit, 28% for the lower CI limit), while sediment (73% for the upper CI limit, 49% for the lower CI limit) and nitrate (28% for the upper CI limit, 26% for the lower CI limit) increased compared to present-day climate. Comparisons of watershed sensitivities indicate that San Joaquin River watershed is more sensitive to climate changes than the Sacramento River watershed largely due to differences in land use and soil properties. This research improves the understanding between climate change and hydrology and agricultural pollutant runoff within the Central Valley of California. Theses climate change analyses may be used by water resource managers to evaluate the potential effects of climate change.  
Start Page: 233  
ISSN/ISBN: 9781124508566  
Keywords: California  
Keywords: 0388:Hydrologic sciences  
Keywords: Climate change  
Keywords: 0404:Climate Change  
Keywords: 0595:Water Resource Management  
Keywords: Watersheds  
Keywords: Agricultural runoff  
Keywords: Earth sciences  
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0388: Hydrologic sciences  
Climate change  
0595: Water Resource Management  
66569  
Watersheds  
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Ficklin, Darren L.  
857919212  
2011-03-24  
California  
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2010  
0404: Climate Change  
Earth sciences  
Agricultural runoff English

418. Fiedler, H.; Herrmann, G.; Schramm, K. W., and Hutzinger, O. Application of QSARs to Predict Potential Aquatic Toxicities of Organochlorine Pesticides. 1990; 26, (1-4): 157-160.   
Rec #: 780  
Keywords: MODELING,NO SPECIES,REFS CHECKED  
Call Number: NO MODELING (24D,24DXY,ATZ,CAP,CLP,CPY,CTN,Captan,DCF,DDVP,DU,ES,FNV,FRM,IPD,MCPB,MTL,PCP,PMR,PPN,TBC,TBZ), NO REFS CHECKED (24D,24DXY,ATZ,CAP,CLP,CPY,CTN,Captan,DCF,DDVP,DU,ES,FNV,FRM,IPD,MCPB,MTL,PCP,PMR,PPN,TBC,TBZ), NO SPECIES (24D,24DXY,ATZ,CAP,CLP,CPY,CTN,Captan,DCF,DDVP,DU,ES,FNV,FRM,IPD,MCPB,MTL,PCP,PMR,PPN,TBC,TBZ)  
Notes: Chemical of Concern: 24D,24DB,24DXY,AND,ATZ,CAP,CHD,CLP,CPY,CTN,Captan,Cl,DCF,DDT,DDVP,DLD,DU,EN,ES,FNV,FRM,HCCH,HPT,IPD,MCPA,MCPB,MTL,MTZ,MXC,PCH,PCP,PMR,PPCP,PPN,TBC,TBZ

419. Fieten, K. B.; Kromhout, H.; Heederik, D., and de Joode, B. V. Pesticide Exposure and Respiratory Health of Indigenous Women in Costa Rica. 2009; 169, (12): 1500-1506.   
Rec #: 60109  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A cross-sectional study was conducted in 2007 to evaluate the relation between pesticide exposure and respiratory health in a population of indigenous women in Costa Rica. Exposed women (n = 69) all worked at plantain plantations. Unexposed women (n = 58) worked at organic banana plantations or other locations without pesticide exposure. Study participants were interviewed using questionnaires to estimate exposure and presence of respiratory symptoms. Spirometry tests were conducted to obtain forced vital capacity and forced expiratory volume in 1 second. Among the exposed, prevalence of wheeze was 20% and of shortness of breath was 36% versus 9% and 26%, respectively, for the unexposed. Prevalence of chronic cough, asthma, and atopic symptoms was similar for exposed and unexposed women. Among nonsmokers (n = 105), reported exposures to the organophosphate insecticides chlorpyrifos (n = 25) and terbufos (n = 38) were strongly associated with wheeze (odd ratio = 6.7, 95% confidence interval: 1.6, 28.0; odds ratio = 5.9, 95% confidence interval: 1.4, 25.6, respectively). For both insecticides, a statistically significant exposure-effect association was found. Multiple organophosphate exposure was common; 81% of exposed women were exposed to both chlorpyrifos and terbufos. Consequently, their effects could not be separated. All findings were based on questionnaire data. No relation between pesticide exposure and ventilatory lung function was found.  
Keywords: Costa Rica, occupational exposure, pesticides, respiratory function  
ISI Document Delivery No.: 457SN

420. Filbert, E. L.; Nguyen, A.; Markiewicz, M. A.; Fowlkes, B. J.; Huang, Y. H., and Shaw, A. S. Kinase Suppressor of Ras 1 Is Required for Full Erk Activation in Thymocytes but Not for Thymocyte Selection.   
Rec #: 50419  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Immunol. 2006 Nov 1;177(9):6152-8 (medline /17056543)  
COMMENTS: Cites: Mol Cell Biol. 2007 Apr;27(7):2732-45 (medline /17283063)  
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COMMENTS: Cites: J Immunol. 2009 Oct 15;183(8):4838-42 (medline /19801509)  
COMMENTS: Cites: J Exp Med. 1989 Mar 1;169(3):795-806 (medline /2494291)  
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COMMENTS: Cites: Immunity. 1996 Apr;4(4):337-47 (medline /8612128)  
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ABSTRACT: The scaffold protein kinase suppressor of Ras 1 (KSR1) is critical for efficient activation of ERK in a number of cell types. Consistent with this, we observed a defect in ERK activation in thymocytes that lack KSR1. Interestingly, we found that the defect was much greater after PMA stimulation than by CD3 activation. Since ERK activation is believed to be important for thymocyte development, we analyzed thymocyte selection in KSR1-deficient (KSR1(-/-) ) mice. We found that positive selection in two different TCR transgenic models, HY and AND, was normal. On the other hand, negative selection in the HY model was slightly impaired in KSR1(-/-) mice. However, a defect in negative selection was not apparent in the AND TCR model system or in an endogenous superantigen-mediated model of negative selection. These results suggest that, despite a requirement for KSR1 for full ERK activation in thymocytes, full and efficient ERK activation is not essential for the majority of thymocyte selection events.  
MESH HEADINGS: Animals  
MESH HEADINGS: Antigens, CD3/genetics/immunology/metabolism  
MESH HEADINGS: Carcinogens/pharmacology  
MESH HEADINGS: Enzyme Activation/drug effects/genetics/immunology  
MESH HEADINGS: Extracellular Signal-Regulated MAP Kinases/genetics/\*immunology/metabolism  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Knockout  
MESH HEADINGS: \*Models, Immunological  
MESH HEADINGS: Protein Kinases/genetics/\*immunology/metabolism  
MESH HEADINGS: Tetradecanoylphorbol Acetate/pharmacology  
MESH HEADINGS: Thymus Gland/cytology/\*immunology/metabolism eng

421. Fimmel, S. and Zouboulis, C. C. Comorbidities of Hidradenitis Suppurativa (Acne Inversa).   
Rec #: 50389  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY   
Abstract: ABSTRACT: Comorbidities of hidradenitis suppurativa (acne inversa) were reviewed by extracting original and review publications included in MEDLINE, EMBASE and COCHRANE libraries using the terms &quot;hidradenitis,&quot; &quot;Verneuil&quot; and &quot;acne inversa.&quot; Follicular occlusion disorders, inflammatory bowel diseases, especially Crohn disease, spondylarthropathy, other hyperergic diseases, genetic keratin disorders associated with follicular occlusion and squamous cell carcinoma were the most common hidradenitis suppurativa comorbid diseases. A first classification of these major comorbidities and their possible genetic background reveals a list of chromosome loci and genes, which could be hidradenitis suppurativa candidates. Most of these diseases belong to the group of autoinflammatory disorders, where th17 cell cytokines seem to play a central role. eng

422. Fink, R.; Beavers, J. B., and Brown, R. Final Report: Eleven-Day Toxicant 1 X LC50, with Five-day Half-life, Decreasing Concentrations- Mallard Ducks: Chlorpyrifos. 1978.  
Rec #: 810  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

423. ---. Final Report: Eleven-Day Toxicant 2 X LC50, with Five-Day Half-life, Decreasing Concentrations- Mallard Duck: Chlorpyrifos. 1978.  
Rec #: 820  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

424. ---. Final Report: Eleven-day Toxicant Dietary 2 X LC50 Option with Untreated Feed--Mallard Duck: Chlorpyrifos. 1978.  
Rec #: 790  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

425. ---. Final Report: Elevenday Toxicant Dietary LC50-Mallard Duck: Chlorpyrifos. 1978.  
Rec #: 800  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

426. Finlay-Schultz, J.; Canastar, A.; Short, M.; El Gazzar, M.; Coughlan, C., and Leonard, S. Transcriptional Repression of the &Alpha;7 Nicotinic Acetylcholine Receptor Subunit Gene (Chrna7) by Activating Protein-2&Alpha; (Ap-2&Alpha;).   
Rec #: 49909  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Chem Neuroanat. 2001 Jul;22(1-2):115-26 (medline /11470559)  
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COMMENTS: Cites: J Biol Chem. 2000 Sep 22;275(38):29701-8 (medline /10899156)  
COMMENTS: Cites: J Mol Biol. 2000 Aug 25;301(4):807-16 (medline /10966787)  
COMMENTS: Cites: Am J Hum Genet. 2000 Nov;67(5):1201-7 (medline /11001582)  
COMMENTS: Cites: J Biol Chem. 2001 May 18;276(20):16749-57 (medline /11278551)  
ABSTRACT: The CHRNA7 gene, which encodes the &alpha;7 nicotinic acetylcholine receptor (&alpha;7\*nAChR), has been implicated as a candidate gene in schizophrenia. Expression of the &alpha;7\*nAChR mRNA and protein are reduced in multiple regions of post-mortem brain from patients diagnosed with schizophrenia. Transcriptional regulation may therefore be an important mechanism for the regulation of this gene. A 230-bp proximal promoter fragment, necessary for transcription in cultured neuroblastoma cells, was used to study a putative AP-2&alpha; binding site. Mutation of the site indicates that AP-2&alpha; plays a negative role in regulating CHRNA7 transcription. This was confirmed through knockdown and overexpression of AP-2&alpha;. Electrophoretic mobility shift assays (EMSAs) identified positive DNA-protein interaction at this same site, and supershift assays indicate that the complex includes AP-2&alpha;. The interaction was confirmed in cells using chromatin immunoprecipitation (ChIP). DNA methylation was discovered as an anomalous mechanism for CHRNA7 regulation in one cell line. These studies suggest a role for AP-2&alpha; regulation of CHRNA7 mRNA expression in multiple tissues during development.  
MESH HEADINGS: Cell Line, Tumor  
MESH HEADINGS: DNA Methylation  
MESH HEADINGS: \*Gene Expression Regulation  
MESH HEADINGS: Genetic Vectors  
MESH HEADINGS: HeLa Cells  
MESH HEADINGS: Humans  
MESH HEADINGS: Mutagenesis, Site-Directed  
MESH HEADINGS: Mutation  
MESH HEADINGS: Promoter Regions, Genetic  
MESH HEADINGS: RNA, Messenger/metabolism  
MESH HEADINGS: RNA, Small Interfering/metabolism  
MESH HEADINGS: Receptors, Nicotinic/\*biosynthesis/metabolism  
MESH HEADINGS: Schizophrenia/\*genetics  
MESH HEADINGS: Transcription Factor AP-2/\*metabolism  
MESH HEADINGS: Transcription, Genetic eng

427. Fishman, M. J. and Erdmann, D. E. Water Analysis. Analytical Chemisty Review//: 1975; 47, (5): 334-361.   
Rec #: 2080  
Keywords: CHEM METHODS  
Call Number: NO CHEM METHODS (ATZ,Ag,As,CBNDO,CN,CPY,Cr,Cr element,Cu,ES,LQN,NH3,SLCD,TCF,Zn,Zn element)  
Notes: Chemical of Concern: AMTR,ATZ,Ag,Al,As,BORON,CBNDO,CN,CPY,Cl2,Cr,Cu,DDE,DDT,ES,LQN,NH3,NO3,SLCD,SULF,TCF,Zn

428. Flaskos, J; Nikolaidis, E; Harris, W; Sachana, M; Hargreaves, a J, and Flaskos, J. Effects of Sub-Lethal Neurite Outgrowth Inhibitory Concentrations of Chlorpyrifos Oxon on Cytoskeletal Proteins and Acetylcholinesterase in Differentiating N2a Cells. 2011 Nov 1; 256, (3): 330-336.   
Rec #: 39329  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Previous work in our laboratory has shown that sub-lethal concentrations (1-10 mu M) of chlorpyrifos (CPF), diazinon (DZ) and diazinon oxon (DZO) inhibit the outgrowth of axon-like neurites in differentiating mouse N2a neuroblastoma cells concomitant with altered levels and/or phosphorylation state of axonal cytoskeleton and growth-associated proteins. The aim of the present work was to determine whether chlorpyrifos oxon (CPO) was capable of inhibiting N2a cell differentiation in a similar manner. Using experimental conditions similar to our previous work, sub-lethal concentrations (1-10 mu M) of CPO were found to inhibit N2a cell differentiation. However, unlike previous studies with DZ and DZO, there was a high level of sustained inhibition of acetylcholinesterase (AChE) in CPO treated cells. Impairment of neurite outgrowth was also associated with reduced levels of growth associated protein-43 and neurofilament heavy chain (NFH), and the distribution of NFH in cells stained by indirect immunofluorescence was disrupted. However, in contrast to previous findings for DZO, the absolute level of phosphorylated NFH was unaffected by CPO exposure. Taken together, the findings suggest that sub-lethal concentrations of CPO inhibit axon outgrowth in differentiating N2a cells and that this effect involves reduced levels of two proteins that play key roles in axon outgrowth and maintenance. Although the inhibition of neurite outgrowth is unlikely to involve AChE inhibition directly, further work will help to determine whether the persistent inhibition of AChE by CPO can account for the different effects induced by CPO and DZO on the levels of total and phosphorylated NFH.  
Keywords: Neurofilaments  
Keywords: Cytoskeleton  
Keywords: Chlorpyrifos  
Keywords: Differentiation  
Keywords: Phosphorylation  
Keywords: Acetylcholinesterase  
Keywords: Neuroblastoma cells  
Keywords: Axonogenesis  
Keywords: Immunofluorescence  
Keywords: X 24330:Agrochemicals  
Keywords: Diazinon  
Keywords: Toxicology Abstracts  
Date revised - 2011-12-01  
Language of summary - English  
Pages - 330-336  
ProQuest ID - 911153076  
SubjectsTermNotLitGenreText - Neurofilaments; Cytoskeleton; Chlorpyrifos; Differentiation; Phosphorylation; Acetylcholinesterase; Neuroblastoma cells; Axonogenesis; Immunofluorescence; Diazinon  
Last updated - 2012-03-29  
British nursing index edition - Toxicology and Applied Pharmacology [Toxicol. Appl. Pharmacol.]. Vol. 256, no. 3, pp. 330-336. 1 Nov 2011.  
Corporate institution author - Flaskos, J; Nikolaidis, E; Harris, W; Sachana, M; Hargreaves, A J  
DOI - 2ff6dd08-d60c-477d-b530csamfg201; 15964957; 0041-008X English

429. Flaskos, John and Flaskos, John. The Developmental Neurotoxicity of Organophosphorus Insecticides: a Direct Role for the Oxon Metabolites. 2012 Feb 25; 209, (1): 86-93.   
Rec #: 42869  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Several extensively used organophosphorus ester (OP) insecticides are phosphorothionates. The oxon metabolites of phosphorothionates have long been known to be responsible for the acute cholinergic neurotoxicity associated with OP poisoning. In addition, there is now sufficient evidence to suggest that the oxon metabolites may also be directly responsible for the particular neurotoxicity that phosphorothionate insecticides, and especially chlorpyrifos (CP) and diazinon (DZ), are known to inflict on the developing organism. In vitro data reveal that the oxons, which are present at increased levels in the developing brain, have the ability to directly disrupt, at toxicologically relevant doses, separately a number of neurodevelopmental processes, including those of neuronal proliferation, neuronal differentiation, gliogenesis and apoptosis. In most cases, the effects of the oxons are very potent. Inhibition of neuronal and glial cell differentiation by the oxons in particular is up to 1000-times stronger than that caused by their parent phosphorothionates. The neurodevelopmental toxicity of the oxons is not related to the inhibition of the enzymatic activity of acetylcholinesterase (AChE), but may be due to direct oxon interference with the morphogenic activity that AChE normally shows during neurodevelopment. Other possible direct targets of the oxons include neurodevelopmentally important cell signaling molecules and cytoskeletal proteins which have been found to be affected by the oxons and to which covalent binding of the oxons has been recently shown. Future studies should aim at confirming the developmental neurotoxic capacity of the oxons under in vivo conditions and they must also be extended to include OP parent insecticides with a PO moiety.  
Keywords: Environment Abstracts; Toxicology Abstracts  
Keywords: Pharmacy And Pharmacology  
Keywords: Apoptosis  
Keywords: Data processing  
Keywords: Acetylcholinesterase  
Keywords: Glial cells  
Keywords: Brain  
Keywords: Poisoning  
Keywords: Metabolites  
Keywords: Toxicity  
Keywords: Esters  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Cytoskeleton  
Keywords: Differentiation  
Keywords: Insecticides  
Keywords: Neurotoxicity  
Keywords: Proteins  
Keywords: Enzymatic activity  
Keywords: X 24330:Agrochemicals  
Keywords: Diazinon  
Keywords: Gliogenesis  
Date revised - 2012-03-01  
Language of summary - English  
Pages - 86-93  
ProQuest ID - 919296020  
SubjectsTermNotLitGenreText - Apoptosis; Data processing; Acetylcholinesterase; Glial cells; Brain; Poisoning; Metabolites; Esters; Chlorpyrifos; Cytoskeleton; Differentiation; Insecticides; Neurotoxicity; Enzymatic activity; Diazinon; Gliogenesis; Proteins; Toxicity  
Last updated - 2012-03-22  
Corporate institution author - Flaskos, John  
DOI - OB-0b9ae86d-829e-4210-bbc6csamfg201; 16208962; 0378-4274 English

430. Fortenberry, Gamola Z.; Hu, Howard; Turyk, Mary; Barr, Dana Boyd, and Meeker, John D. Association between urinary 3, 5, 6-trichloro-2-pyridinol, a metabolite of chlorpyrifos and chlorpyrifos-methyl, and serum T4 and TSH in NHANES 1999Çô2002. 2012 May 1-; 424, (0): 351-355.   
Rec #: 1950  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Thyroid hormones are vital to a host of human physiological functions in both children and adults. Exposures to chemicals, including chlorpyrifos, have been found to modify thyroid signaling at environmentally relevant levels in animal studies. The aim of this study was to examine circulating T4 and TSH levels in relation to urinary concentrations of 3, 5, 6-trichloro-2-pyridinol (TCPY), a metabolite of the organophosphorus insecticides chlorpyrifos and chlorpyrifos-methyl, using data from individuals 12 years and older from the U.S. National Health and Nutrition Examination Surveys (NHANES). NHANES datasets from 1999 to 2000 and 2001Çô2002 were combined, and individuals with thyroid disease, those taking thyroid medications, and pregnant women were excluded (N = 3249). Multivariable linear regression models for relationships between log-transformed urinary TCPY and serum total T4 or log (TSH) were constructed adjusting for important covariates. Models were stratified by sex and a categorical age variable (12Çô18, 18Çô40, 40Çô60, and &gt; 60 years). In male participants, an interquartile range (IQR) increase in urinary TCPY was associated with statistically significant increases in serum T4 of 3.8% (95th CI 0.75 to 7.0) among those 12Çô18 years of age and 3.5% (95th CI 0.13 to 7.0) in the 18Çô40 year age group, relative to median T4 levels using unweighted models. An IQR increase in TCPY was also associated with decreases in TSH of 10.7% (êÆ 18.7Çô2.05) among men 18Çô40 years old and 20.0% (95th CI êÆ 28.9 to êÆ 9.86) among men &gt; 60 years old. Conversely, urinary TCPY was positively associated with TSH in females &gt; 60 years of age. Further research to confirm these findings, elucidate mechanisms of action, and explore the clinical and public health significance of such alterations in thyroid hormones is needed. Biomarker/ Endocrine disruption/ Exposure/ Pesticides/ Human

431. Fortenberry, Gamola Z; Hu, Howard; Turyk, Mary; Barr, Dana Boyd; Meeker, John D, and Fortenberry, Gamola Z. Association Between Urinary 3, 5, 6-Trichloro-2-Pyridinol, a Metabolite of Chlorpyrifos and Chlorpyrifos-Methyl, and Serum T4 and Tsh in Nhanes 1999-2002. 2012 May 1; 424, 351-355.   
Rec #: 38839  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Thyroid hormones are vital to a host of human physiological functions in both children and adults. Exposures to chemicals, including chlorpyrifos, have been found to modify thyroid signaling at environmentally relevant levels in animal studies. The aim of this study was to examine circulating T4 and TSH levels in relation to urinary concentrations of 3, 5, 6-trichloro-2-pyridinol (TCPY), a metabolite of the organophosphorus insecticides chlorpyrifos and chlorpyrifos-methyl, using data from individuals 12years and older from the U.S. National Health and Nutrition Examination Surveys (NHANES). NHANES datasets from 1999 to 2000 and 2001-2002 were combined, and individuals with thyroid disease, those taking thyroid medications, and pregnant women were excluded (N=3249). Multivariable linear regression models for relationships between log-transformed urinary TCPY and serum total T4 or log (TSH) were constructed adjusting for important covariates. Models were stratified by sex and a categorical age variable (12-18, 18-40, 40-60, and >60years). In male participants, an interquartile range (IQR) increase in urinary TCPY was associated with statistically significant increases in serum T4 of 3.8% (95th CI 0.75 to 7.0) among those 12-18years of age and 3.5% (95th CI 0.13 to 7.0) in the 18-40year age group, relative to median T4 levels using unweighted models. An IQR increase in TCPY was also associated with decreases in TSH of 10.7% (-18.7-2.05) among men 18-40years old and 20.0% (95th CI -28.9 to -9.86) among men >60years old. Conversely, urinary TCPY was positively associated with TSH in females >60years of age. Further research to confirm these findings, elucidate mechanisms of action, and explore the clinical and public health significance of such alterations in thyroid hormones is needed.  
Keywords: Environmental Engineering Abstracts (EN); CSA / ASCE Civil Engineering Abstracts (CE)  
Date revised - 2012-08-01  
Language of summary - English  
Pages - 351-355  
ProQuest ID - 1017976296  
Last updated - 2012-08-07  
British nursing index edition - Science of the Total Environment [Sci. Total Environ.]. Vol. 424, pp. 351-355. 1 May 2012.  
Corporate institution author - Fortenberry, Gamola Z; Hu, Howard; Turyk, Mary; Barr, Dana Boyd; Meeker, John D  
DOI - 2270cb05-b75f-446f-b397csamfg201; 16724760; 0048-9697 English

432. Fortes, C. Lupus erythematosus. Are residential insecticides exposure the missing link? 2010; 75, (6): 590-593.   
Rec #: 60159  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Although the etiology of systemic lupus erythematosus (SLE) remains to be fully elucidated, it is now apparent that multiple genetic and environmental factors are at play. Because lupus has a strong female preponderance, several studies have examined the role of female hormones in disease etiology. Yet this knowledge has not helped to explain lupus etiology or to prevent it. Estrogens exist not only as natural or drug compounds, but also as environmental chemical contaminant and women are highly exposed to all of them. Estrogenic activity has been found in a number of pesticides including pyrethroids that are largely used in the household. Although there is only a small amount of published data examining a possible causal relationship between lupus and pesticides it can be hypothesized that pesticides, in particular insecticides, through their estrogenic activity and capacity to induce oxidative stress provoke autoimmune reaction influencing lupus development. (C) 2010 Elsevier Ltd. All rights reserved.  
Keywords: RISK-FACTORS, CYTOKINE PRODUCTION, IN-VITRO, IMMUNOLOGICAL  
ISI Document Delivery No.: 715VO

433. Fountain, Michelle T.; Harris, Adrian L.; Xu, Xiangming, and Cross, Jerry V. Timing and efficacy of insecticides for control of mussel scale, Lepidosaphes ulmi, on apple using predictive models. 2012 Jan; 31, (1): 58-66.   
Rec #: 3610  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: The timing and pattern of mussel scale (Lepidosaphes ulmi (L.)) crawler emergence was monitored in relation to air and bark-surface temperatures using sticky band traps around branches in apple orchards in Kent, UK in three successive years, 2007Çô2009. The emergence and migration of the crawlers lasted for over 4 weeks at a high level, much longer than had been previously reported. In all three years, there were clearly two peaks of emergence of the crawlers, possibly because there is a diapausing and non-diapausing form of the insect. A temperature sum model developed in the 1990s in The Netherlands using air temperatures predicted the peak emergence of crawlers to within 5Çô16 days; however, the model was less accurate when tree bark temperatures for the north or south of the tree were used. We have developed two models to predict the emergence of the crawlers by revising the original Dutch model. The observed emergence period (5Çô95%) was longer than the predicted in all three years but the two revised models performed better than the original Dutch model. Apple/ Mussel scale/ Lepidosaphes ulmi/ Winter oil/ Insecticide

434. Fox, Garey A.; Mu+\_oz-Carpena, Rafael, and Sabbagh, George J. Influence of flow concentration on parameter importance and prediction uncertainty of pesticide trapping by vegetative filter strips. 2010 Apr 15-; 384, (1Çô2): 164-173.   
Rec #: 5300  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Summary Concentrated flow/ Pesticides/ Sensitivity analysis/ Uncertainty analysis/ Uniform flow/ Vegetative filter strips

435. Fox, J. H.; Connor, T.; Stiles, M.; Kama, J.; Lu, Z.; Dorsey, K.; Lieberman, G.; Liebermann, G.; Sapp, E.; Cherny, R. A.; Banks, M.; Volitakis, I.; Difiglia, M.; Berezovska, O.; Bush, A. I., and Hersch, S. M. Cysteine Oxidation Within N-Terminal Mutant Huntingtin Promotes Oligomerization and Delays Clearance of Soluble Protein.   
Rec #: 50209  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY   
Abstract: COMMENTS: Cites: Brain. 1991 Aug;114 ( Pt 4):1953-75 (medline /1832073)  
COMMENTS: Cites: J Neurochem. 2010 Jun;113(6):1416-25 (medline /20236387)  
COMMENTS: Cites: J Biol Chem. 1989 Apr 5;264(10):5598-605 (medline /2564391)  
COMMENTS: Cites: Cell. 1993 Mar 26;72(6):971-83 (medline /8458085)  
COMMENTS: Cites: Hum Mol Genet. 1996 Aug;5(8):1093-9 (medline /8842726)  
COMMENTS: Cites: Ann Neurol. 1997 May;41(5):646-53 (medline /9153527)  
COMMENTS: Cites: Science. 1999 Apr 30;284(5415):805-8 (medline /10221913)  
COMMENTS: Cites: Methods Enzymol. 1999;309:375-86 (medline /10507036)  
COMMENTS: Cites: J Biol Chem. 2002 Oct 11;277(41):38029-36 (medline /12161445)  
COMMENTS: Cites: J Comp Neurol. 2003 Oct 6;465(1):11-26 (medline /12926013)  
COMMENTS: Cites: J Biol Chem. 2004 May 21;279(21):21749-58 (medline /15031298)  
COMMENTS: Cites: EMBO J. 2004 Jul 21;23(14):2872-81 (medline /15215895)  
COMMENTS: Cites: J Neurochem. 2004 Oct;91(2):413-22 (medline /15447674)  
COMMENTS: Cites: Nature. 2004 Oct 14;431(7010):805-10 (medline /15483602)  
COMMENTS: Cites: J Biol Chem. 2005 Feb 4;280(5):3125-8 (medline /15590625)  
COMMENTS: Cites: J Neurosci. 2005 Mar 16;25(11):3009-17 (medline /15772361)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2005 Aug 9;102(32):11402-7 (medline /16076956)  
COMMENTS: Cites: J Biol Chem. 2005 Oct 28;280(43):36464-73 (medline /16085648)  
COMMENTS: Cites: J Biol Chem. 2005 Oct 7;280(40):34113-22 (medline /16091356)  
COMMENTS: Cites: Nat Neurosci. 2006 Jun;9(6):824-31 (medline /16699508)  
COMMENTS: Cites: Cell. 2006 Jun 16;125(6):1179-91 (medline /16777606)  
COMMENTS: Cites: Mol Cell Biol. 2007 Feb;27(3):1027-43 (medline /17101776)  
COMMENTS: Cites: J Biol Chem. 2007 Mar 2;282(9):6300-7 (medline /17210575)  
COMMENTS: Cites: Nat Med. 2008 Aug;14(8):837-42 (medline /18568035)  
COMMENTS: Cites: Cell. 2009 Apr 3;137(1):60-72 (medline /19345187)  
COMMENTS: Cites: J Cell Biol. 2009 Dec 28;187(7):1083-99 (medline /20026656)  
COMMENTS: Cites: J Biol Chem. 2010 Mar 19;285(12):8808-23 (medline /20086007)  
COMMENTS: Cites: J Neurosci. 2010 Mar 3;30(9):3409-18 (medline /20203200)  
COMMENTS: Cites: J Biol Chem. 2010 May 7;285(19):14777-90 (medline /20220138)  
COMMENTS: Cites: Nat Neurosci. 2010 Nov;13(11):1396-403 (medline /20953194)  
COMMENTS: Cites: Free Radic Biol Med. 2010 Aug 15;49(4):612-21 (medline /20639122)  
COMMENTS: Cites: Brain Pathol. 1999 Jan;9(1):147-63 (medline /9989457)  
COMMENTS: Cites: J Neurochem. 2001 Dec;79(6):1246-9 (medline /11752065)  
COMMENTS: Cites: J Neuropathol Exp Neurol. 2003 Jan;62(1):14-24 (medline /12528814)  
COMMENTS: Cites: Nature. 2003 Jan 23;421(6921):373-9 (medline /12540902)  
COMMENTS: Cites: J Biol Chem. 2007 May 11;282(19):14428-36 (medline /17355958)  
COMMENTS: Cites: PLoS One. 2007;2(3):e334 (medline /17396163)  
COMMENTS: Cites: Eur J Neurosci. 2007 May;25(10):3020-9 (medline /17561815)  
COMMENTS: Cites: J Biol Chem. 2007 Dec 7;282(49):35933-44 (medline /17913710)  
COMMENTS: Cites: J Cell Biol. 2008 Mar 24;180(6):1177-89 (medline /18362179)  
COMMENTS: Cites: Biochem Biophys Res Commun. 2010 Jan 1;391(1):461-6 (medline /19914207)  
COMMENTS: Cites: Biochem J. 2010 Feb 15;426(1):13-7 (medline /19954423)  
COMMENTS: Erratum in: J Biol Chem. 2011 Jul 29;286(30):27068: Liebermann, Gregory [corrected to Lieberman, Gregory]  
ABSTRACT: Huntington disease (HD) is a progressive neurodegenerative disorder caused by expression of polyglutamine-expanded mutant huntingtin protein (mhtt). Most evidence indicates that soluble mhtt species, rather than insoluble aggregates, are the important mediators of HD pathogenesis. However, the differential roles of soluble monomeric and oligomeric mhtt species in HD and the mechanisms of oligomer formation are not yet understood. We have shown previously that copper interacts with and oxidizes the polyglutamine-containing N171 fragment of huntingtin. In this study we report that oxidation-dependent oligomers of huntingtin form spontaneously in cell and mouse HD models. Levels of these species are modulated by copper, hydrogen peroxide, and glutathione. Mutagenesis of all cysteine residues within N171 blocks the formation of these oligomers. In cells, levels of oligomerization-blocked mutant N171 were decreased compared with native N171. We further show that a subset of the oligomerization-blocked form of glutamine-expanded N171 huntingtin is rapidly depleted from the soluble pool compared with &quot;native &quot; mutant N171. Taken together, our data indicate that huntingtin is subject to specific oxidations that are involved in the formation of stable oligomers and that also delay removal from the soluble pool. These findings show that inhibiting formation of oxidation-dependent huntingtin oligomers, or promoting their dissolution, may have protective effects in HD by decreasing the burden of soluble mutant huntingtin.  
MESH HEADINGS: Animals  
MESH HEADINGS: COS Cells  
MESH HEADINGS: Cercopithecus aethiops  
MESH HEADINGS: Cysteine/genetics/\*metabolism  
MESH HEADINGS: Disease Models, Animal  
MESH HEADINGS: Humans  
MESH HEADINGS: Huntington Disease/genetics/\*metabolism/pathology  
MESH HEADINGS: Mice  
MESH HEADINGS: \*Mutation, Missense  
MESH HEADINGS: Nerve Tissue Proteins/genetics/\*metabolism  
MESH HEADINGS: Nuclear Proteins/genetics/\*metabolism  
MESH HEADINGS: Oxidation-Reduction  
MESH HEADINGS: \*Protein Multimerization  
MESH HEADINGS: Protein Structure, Tertiary  
MESH HEADINGS: Solubility eng

436. Foxenberg, Robert J; Ellison, Corie a; Knaak, James B; Ma, Changxing; Olson, James R, and Foxenberg, Robert J. Cytochrome P450-Specific Human Pbpk/Pd Models for the Organophosphorus Pesticides: Chlorpyrifos and Parathion. 2011 Jul 11; 285, (1-2): 57-66.   
Rec #: 39609  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Organophosphorus pesticides (OPs) remain a potential concern to human health because of their continuing use worldwide. Phosphororthioate OPs like chlorpyrifos and parathion are directly activated and detoxified by various cytochrome P450s (CYPs), with the primary CYPs involved being CYP2B6 and CYP2C19. The goal of the current study was to convert a previously reported human pharmacokinetic and pharmacodynamic (PBPK/PD) model for chlorpyrifos, that used chlorpyrifos metabolism parameters from rat liver, into a human CYP based/age-specific model using recombinant human CYP kinetic parameters (Vmax, Km), hepatic CYP content and plasma binding measurements to estimate new values for acetylcholinesterase (AChE) and butyrylcholinesterase (BuChE) inhibition and to use the model as a template for the development of a comparable parathion PBPK/PD model. The human CYP based/age-specific PBPK/PD models were used to simulate single oral exposures of adults (19 year old) and infants (1 year) to chlorpyrifos (10,000, 1000 and 100 mu g/kg) or parathion (100, 25 and 5 mu g/kg). Model simulations showed that there is an age dependency in the amount of blood cholinesterase inhibition observed, however additional age-dependent data are needed to further optimize age-specific human PBPK/PD modeling for these OP compounds. PBPK/PD model simulations estimated that a 4-fold increase or decrease in relative CYP2B6 and CYP2C19 content would produce a 9-22% inhibition in blood AChE activity following exposure of an adult to chlorpyrifos (1000 mu g/kg). Similar model simulation produced an 18-22% inhibition in blood AChE activity following exposure of an adult to parathion (25 mu g/kg). Individuals with greater CYP2B6 content and lower CYP2C19 content were predicted to be most sensitive to both OPs. Changes in hepatic CYP2B6 and CYP2C19 content had more of an influence on cholinesterase inhibition for exposures to chlorpyrifos than parathion, which agrees with previously reported literature that these CYPs are more reaction biased for desulfurization (activation) and dearylation (detoxification) of chlorpyrifos compared to parathion. The data presented here illustrate how PBPK/PD models with human enzyme-specific parameters can assist ongoing risk assessment efforts and aid in the identification of sensitive individuals and populations.  
Keywords: Detoxification  
Keywords: Risk assessment  
Keywords: Age  
Keywords: Acetylcholinesterase  
Keywords: Cholinesterase  
Keywords: Models  
Keywords: X 24330:Agrochemicals  
Keywords: Pharmacodynamics  
Keywords: Pesticides (organophosphorus)  
Keywords: Environment Abstracts; Toxicology Abstracts  
Keywords: Data processing  
Keywords: Pharmacy And Pharmacology  
Keywords: desulfurization  
Keywords: Simulation  
Keywords: Pharmacokinetics  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Blood levels  
Keywords: Chlorpyrifos  
Keywords: Blood  
Keywords: Cytochrome  
Keywords: Kinetics  
Keywords: Pesticides  
Keywords: Liver  
Keywords: Cytochrome P450  
Keywords: Metabolism  
Keywords: Infants  
Keywords: Parathion  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 57-66  
ProQuest ID - 886209592  
SubjectsTermNotLitGenreText - Detoxification; Risk assessment; Pesticides (organophosphorus); Age; Data processing; Acetylcholinesterase; desulfurization; Cholinesterase; Pharmacokinetics; Models; Chlorpyrifos; Blood; Kinetics; Liver; Cytochrome P450; Metabolism; Pharmacodynamics; Parathion; Infants; Cytochrome; Pesticides; Simulation; Blood levels  
Last updated - 2011-12-15  
Corporate institution author - Foxenberg, Robert J; Ellison, Corie A; Knaak, James B; Ma, Changxing; Olson, James R  
DOI - OB-ab54c480-adac-4618-816ecsaobj201; 14991206; 0300-483X English

437. Fragkiadaki, Persefoni; Germanakis, Ioannis; Zafeiropoulos, Alexandros; Kalogeraki, Aleka; Tsarouchas, Konstantinos; Tsitsimpikou, Christina ; Dolapsakis, George; Tsatsakis, Aristidis, and Kouretas, Demetrios. Histopathological findings, oxidative stress and ultrasound measurements in heart tissues after long term rabbits exposure to chlorpyrifos. 2012 Jun 17-; 211, Supplement, (0): S164-S165.   
Rec #: 2650  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

438. Frank, R.; Braun, H. E.; Suda, P.; Ripley, B. D.; Clegg, B. S.; Beyaert, R. P., and Zilkey, B. F. Pesticide Residues and Metal Contents in Flue-Cured Tobacco and Tobacco Soils of Southern Ontario, Canada 1980-85. SOIL; 1987; 31, 40-45.   
Rec #: 830  
Keywords: NO DURATION,SURVEY  
Call Number: NO DURATION (ACP,CPY,CYP,DM,DZ,ES,MLN,MLX,MOM,OXD,PMR,TCF), NO SURVEY (ACP,CPY,CYP,DM,DZ,ES,MLN,MLX,MOM,OXD,PMR,TCF)  
Notes: Chemical of Concern: ACP,CPY,CYP,DM,DZ,ES,MLN,MLX,MOM,OXD,PIM,PMR,TCF

439. Freire, Carmen and Koifman, Sergio. Pesticide exposure and Parkinson's disease: Epidemiological evidence of association. 2012 Oct; 33, (5): 947-971.   
Rec #: 4090  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: It has been suggested that exposure to pesticides might be involved in the etiology of Parkinson's disease (PD). We conducted an updated systematic review of the epidemiologic literature over the past decade on the relationship between pesticide exposure and PD, using the MEDLINE database. Despite methodological differences, a significantly increased PD risk was observed in 13 out of 23 caseÇôcontrol studies that considered overall exposure to pesticides (risk estimates of 1.1Çô2.4) and in 10 out of 12 studies using other research designs (risk estimates of 2 or higher). Various studies found stronger associations in genetically susceptible individuals. Among a growing number of studies on the effects of exposure to specific pesticides (n = 20), an increased PD risk has been associated with insecticides, especially chlorpyrifos and organochlorines, in six studies (odds ratios of 1.8Çô4.4), and with the herbicide paraquat, the fungicide maneb or the combination of both. Findings considerably strengthen the evidence that exposure to pesticides in well water may contribute to PD, whereas studies of farming and rural residence found inconsistent or little association with the disease. Taken together, this comprehensive set of results suggests that the hypothesis of an association between pesticide exposure and PD cannot be ruled out. However, inadequate data on consistent responses to exposure hinder the establishment of a causal relationship with PD. Given the extensive worldwide use of many pesticides, further studies are warranted in larger populations that include detailed quantitative data on exposure and determination of genetic polymorphisms. Pesticides/ Parkinson's disease/ Organochlorines/ Organophosphates/ CaseÇôcontrol/ Cohort studies/ Incidence

440. Freire, Carmen and Koifman, Sergio. Pesticides, depression and suicide: A systematic review of the epidemiological evidence. (0).  
Rec #: 3780  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: It has been suggested that high exposure to pesticides, including poisoning, experienced by agriculture workers and rural residents may result in an elevated risk of psychiatric disorders and suicidal behavior. Epidemiological data supporting this hypothesis are very limited. An updated systematic review was conducted in epidemiologic literature on the relationship of pesticide exposure with depression and suicide published over the last 15 years by using MEDLINE database. A total of 11 studies on depression and 14 studies on suicide met inclusion criteria. Depression or other psychiatric disorders have shown increased risks associated with previous pesticide poisoning in 5 studies, with statistically significant odds ratios (OR) ranging from 2.08 to 5.95. Lower risk estimates have been found for chronic pesticide exposure. Among studies on suicide, 4 reports found increased suicide rates in areas with intensive pesticide use (OR between 1.60 and 2.61) compared to areas with lower pesticide use. Occupation in agriculture has shown a significant association with higher suicide risk than other occupational groups in 4 studies (OR between 1.30 and 4.13), but not in one recent report. Regarding specific pesticides, lifetime use of chlorpyrifos was related with increased suicide mortality (OR = 2.37) in one study. Scientific evidence of association between pesticide exposure and either depression or suicide has been shown in some populations, in studies using varying epidemiological approaches, but is still very limited and inconclusive. Review of the literature warrants further research to explore such relationships, in particular prospective studies among large samples of high- and low-dose-exposed workers, using detailed exposure assessments, and evaluating other potential sources of psychological stress. Pesticides/ Organophosphates/ Psychiatric disorders/ Depression/ Suicide

441. Frenich, A. G.; Vidal, J. L. M.; Moreno, J. L. F., and Romero-Gonzalez, R. Compensation for matrix effects in gas chromatography-tandem mass spectrometry using a single point standard addition. 2009; 1216, (23): 4798-4808.   
Rec #: 60259  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: One of the major problems in quantitative analysis of pesticide residues in food samples by gas chromatography-tandem mass spectrometry (GC-MS/MS) is the enhancement or the suppression, of the target analyte signals in matrix extracts. Potentially positive samples, which had previously been identified by a rapid screening method, were quantified using standard addition to compensate matrix effects. As example we performed a systematic study on the application of the standard addition calibration (SAC) method for the determination of 12 pesticides (acephate, bromopropylate, chlorpyrifos, cypermethrin, diazinon, etrimfos, heptenophos, iprodione, methamidophos, procymidone, tetradifon, and triadimefon) in two matrices (cucumber and orange) in the range of initial concentrations of 10-200 mu g kg(-1). The influence of some factors, such as the minimum number of standard additions used (single, two, three or four points calibration), as well as the known amount of analyte added to the sample, is evaluated in order to obtain reliable results. Accurate quantification is achieved when a single point SAC at 200 mu g kg(-1) was used. obtaining for all the cases recoveries between 70 and 120%. The proposed analytical approach only needs two injections per sample (blank and spiked extracted sample) to determine the final concentration of pesticide in positive samples. (C) 2009 Elsevier B.V. All rights reserved.  
Keywords: Standard addition calibration, Matrix effect, Pesticide, Gas  
ISI Document Delivery No.: 451DB

442. Frishman, Austin M. A Chemical Historical Review of German Cockroach Management. 2010 Jun; 78, (6): 35.   
Rec #: 44109  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Frishman identifies several pesticides used to control cockroaches. He argues that prior to World War Il, pest management professionals (PMPs) relied heavily on sodium fluoride powder or a combing with pyrethrin. After World War II, however, chlordane and spraying took the industry by storm. Within five years of chlordane's introduction, some cockroaches were documented as being resistant to such treatments. By the 1950s, diazinon became the preferred material of many PMPs. Prior to the steep increase of petroleum, some oil-based materials also were used. When cockroaches developed resistance to diazinon in the 1960s, another organophosphate, chlorpyrifos (Dursban), took its place. About the same time, carbamates in the form of Baygon and Ficam became favorites. In each instance, the chemical was mixed in a compressed sprayer and applied to surfaces.  
Keywords: Agriculture--Crop Production And Soil  
Copyright - Copyright Questex Media Group Jun 2010  
Language of summary - English  
ProQuest ID - 609240658  
Last updated - 2010-07-18  
Place of publication - Cleveland  
Corporate institution author - Frishman, Austin M  
DOI - 2079897381; 53327421; 36056; PECL; INODPECL0000396670 English

443. Fu, Z. F.; Shao, G. C.; Wang, J.; Lu, D. L.; Wang, W. J., and Lin, Y. H. Microfabricated Renewable Beads-Trapping/Releasing Flow Cell for Rapid Antigen-Antibody Reaction in Chemiluminescent Immunoassay. 2011; 83, (7): 2685-2690.   
Rec #: 60269  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A renewable flow cell integrating a microstructured pillar-array filter and a pneumatic microvalve was microfabricated to trap and release beads. A bead-based immunoassay using this device was also developed. This microfabricated device consists of a microfluidic channel connecting to a beads chamber in which the pillar-array filter is built. Underneath the filter, there is a pneumatic microvalve built across the chamber. Such a device can trap and release beads in the chamber by "closing" or "opening" the microvalve. On the basis of the pneumatic microvalve, the device can trap beads in the chamber before performing an assay and release the used beads after the assay. Therefore, this microfabricated device is suitable for "renewable surface analysis". A model analyte, 3,5,6-trichloropyridinol (TCP), was chosen to demonstrate the analytical performance of the device. The entire fluidic assay process, including beads trapping, immuno binding, beads washing, beads releasing, and chemiluminesence signal collection, could be completed in 10 min. The immunoassay of TCP using this microfabricated device showed a linear range of 0.20-70 ng/mL with a limit of detection of 0.080 ng/mL. The device was successfully used to detect TCP spiked in human plasma at the concentration range of 1.0-50 ng/mL, with an analytical recovery of 81-110%. The results demonstrated that this device can provide a rapid, sensitive, reusable, low-cost, and automatic tool for detecting various biomarkers in biological fluids.  
Keywords: MICROFLUIDIC IMMUNOSENSOR, INJECTION-ANALYSIS, ASSAY, CHIP,  
ISI Document Delivery No.: 741TM

444. Fuentes, E. ; Baez, M. E., and Diaz, J. Survey of organophosphorus pesticide residues in virgin olive oils produced in Chile. 2010; 3, (2): 101-107.   
Rec #: 60279  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Dimethoate, diazinon, parathion methyl, pirimiphos methyl, malathion, fenthion, chlorpyriphos, methidathion and azinphos methyl were determined in 71 olive oil samples produced in Chile from different varieties of olives (arbequina, frantoio, picual, lechino and blend) at three different harvest periods (2007, 2008 and 2009). The target pesticides were determined using a validated analytical method based on microwave-assisted liquid-liquid and solid-phase extraction with subsequent GC-FPD detection and GC-MS/MS for confirmation purposes. In 79% of the samples, five of the nine pesticides tested were detected with a frequency of one pesticide per sample. The highest detection rates were observed for the residues of chlorpyriphos and diazinon. The average concentration of chlorpyriphos, diazinon, azinphos methyl and methidathion were 0.084, 0.057, 0.024 and 0.010 mu g g-1, respectively. Higher contents of organophosphorus pesticides (OPPs) were found in regions where intensive agriculture is practiced. However, the levels of OPPs were reassuringly low and indicate that olive oil produced and exported from Chile does not currently represent any risk for consumers.  
Keywords: organophosphorus pesticides, olive oil, monitoring, microwave-assisted  
ISI Document Delivery No.: 610ID

445. Fuentes, E. ; Baez, M. E., and Quinones, A. Suitability of microwave-assisted extraction coupled with solid-phase extraction for organophosphorus pesticide determination in olive oil. 2008; 1207, (1-2): 38-45.   
Rec #: 60289  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A systematic study of the microwave-assisted extraction coupled to solid-phase extraction of nine organophosphorus pesticides (dimethoate, diazinon, pirimiphos methyl, parathion methyl, malathion, fenthion, chlorpyriphos, methidathion and azinphos methyl) from olive oil is described. The method is based on microwave-assisted liquid-liquid extraction with partition of organophosphorus pesticides between an acetonitrile-dichloromethane mixture and oil. Cleanup of extracts was performed with ENVI-Carb solid-phase extraction cartridge using dichloromethane as the elution solvent. The determination of pesticides in the final extracts was carried out by gas chromatography-flame photometric detection and gas chromatography-tandem mass spectrometry, using a triple quadrupole mass analyzer, for confirmative purposes. The study and optimization of the method was achieved through experimental design where recovery of compounds using acetonitrile for partition ranged from 62 to 99%. By adding dichloromethane to the extracting solution, the recoveries of more hydrophobic compounds were significantly increased. Under optimized conditions recoveries of pesticides from oil were equal to or higher than 73%, except for fenthion and chlorpyriphos at concentrations higher than 0.06 mu g g(-1) and diazinon at 0.03 mu g g-1, with RSDs equal to or lower than 11% and quantification limits ranging from 0.007 to 0.020 mu g g(-1). The proposed method was applied to residue determination of the selected pesticides in commercial olive and avocado oil produced in Chile. (C) 2008 Elsevier B.V. All rights reserved.  
Keywords: Organophosphorus pesticides, Olive oil, Microwave-assisted extraction,  
ISI Document Delivery No.: 365HX

446. Fujikawa, M.; Nakao, K.; Shimizu, R., and Akamatsu, M. QSAR study on permeability of hydrophobic compounds with artificial membranes. 2007; 15, (11): 3756-3767.   
Rec #: 60299  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We previously reported a classical quantitative structure-activity relationship (QSAR) equation for permeability coefficients (P(app-pampa)) by parallel artificial membrane permeation assay (PAMPA) of structurally diverse compounds with simple physicochemical parameters, hydrophobicity at a particular pH (log P(oct) and vertical bar pK(a) - pH vertical bar), hydrogen-accepting ability (SA(HA)), and hydrogen-donating ability (SA(HD)); however, desipramine, imipramine, and testosterone, which have high log P(oct) values, were excluded from the derived QSAR equation because their measured P(app-pampa) values were lower than calculated. In this study, for further investigation of PAMPA permeability of hydrophobic compounds, we experimentally measured the P(app-pampa) of more compounds with high hydrophobicity, including several pesticides, and compared the measured P(app-pampa) values with those calculated from the QSAR equation. As a result, compounds having a calculated log P(app-pampa) > -4.5 showed lower measured log P(app-pampa) than calculated because of the barrier of the unstirred water layer and the membrane retention of hydrophobic compounds. The bilinear QSAR model explained the PAMPA permeability of the whole dataset of compounds, whether hydrophilic or hydrophobic, with the same parameters as the equation in the previous study. In addition, PAMPA permeability coefficients correlated well with Caco-2 cell permeability coefficients. Since Caco-2 cell permeability is effective for the evaluation of human oral absorption of compounds, the proposed bilinear model for PAMPA permeability could be useful for not only effective screening for several drug candidates but also the risk assessment of chemicals and agrochemicals absorbed by humans. (c) 2007 Elsevier Ltd. All rights reserved.  
Keywords: PAMPA, unstirred water layer, membrane retention, structure-property  
ISI Document Delivery No.: 170FV

447. Fulton, M. H. and Key, P. B. Acetylcholinesterase Inhibition in Estuarine Fish and Invertebrates as an Indicator of Organophosphorus Insecticide Exposure and Effects. 2001; 20, (1): 37-45.   
Rec #: 80  
Keywords: REVIEW  
Call Number: NO REVIEW (AZ,CBF,CBL,CPY,DDVP,DMT,DZ,FNT,MLN,MP,Naled,PRT,TBF)  
Notes: EcoReference No.: 152621  
Chemical of Concern: AZ,CBF,CBL,CPY,DDVP,DMT,DZ,EPRN,FNT,MLN,MP,Naled,PHSL,PPHD,PRN,PRT,TBF

448. Furlong, C. E.; Suzuki, S. M.; Stevens, R. C.; Marsillach, J.; Richter, R. J.; Jarvik, G. P.; Checkoway, H.; Samii, A.; Costa, L. G.; Griffith, A.; Roberts, J. W.; Yearout, D., and Zabetian, C. P. Human PON1, a biomarker of risk of disease and exposure. 2010; 187, (1-3): 355-361.   
Rec #: 60339  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Human paraoxonase 1 (PON1) is a high-density lipoprotein (HDL)-associated serum enzyme that exhibits a broad substrate specificity. In addition to protecting against exposure to some organophosphorus (OP) pesticides by hydrolyzing their toxic oxon metabolites. PON1 is important in protecting against vascular disease by metabolizing oxidized lipids. Recently, PON1 has also been shown to play a role in inactivating the quorum sensing factor N-(3-oxododecanoyl)-L-homoserine lactone (3OC12-HSL) of Pseudomonas aeruginosa. Native, untagged engineered recombinant human PON1 (rHuPON1) expressed in Escherichia coli and purified by conventional column chromatographic purification is stable, active, and capable of protecting PON1 knockout mice (PON1(-/-)) from exposure to high levels of the OP compound diazoxon. The bacterially derived rHuPON1 can be produced in large quantities and lacks the glycosylation of eukaryotic systems that can produce immunogenic complications when inappropriately glycosylated recombinant proteins are used as therapeutics. Previous studies have shown that the determination of PON1 status, which reveals both PON1(192) functional genotype and serum enzyme activity level, is required for a meaningful evaluation of PON1's role in risk of disease or exposure. We have developed a new two-substrate assay/analysis protocol that provides PON1 status without use of toxic OP substrates, allowing for use of this protocol in non-specialized laboratories. Factors were also determined for inter-converting rates of hydrolysis of different substrates. PON1 status also plays an important role in revealing changes in HDL-associated PON1 activities in male patients with Parkinson disease (PD). Immunolocalization studies of PONs 1, 2 and 3 in nearly all mouse tissues suggest that the functions of PONs 1 and 3 extend beyond the plasma and the HDL particle. (C) 2010 Published by Elsevier Ireland Ltd.  
Keywords: Paraoxonase 1, Parkinson disease, Organophosphate, Therapy for OP  
ISI Document Delivery No.: 641EW

449. Gaidukov, Leonid; Bar, Dganit; Yacobson, Shiri; Naftali, Esmira; Kaufman, Olga; Tabakman, Rinat; Tawfik, Dan S, and Levy-Nissenbaum, Etgar. In Vivo Administration of Bl-3050: Highly Stable Engineered Pon1-Hdl Complexes. 2009; 9, 18.   
Rec #: 45149  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Serum paraoxonase (PON1) is a high density lipoprotein (HDL)-associated enzyme involved in organophosphate (OP) degradation and prevention of atherosclerosis. PON1 comprises a potential candidate for in vivo therapeutics, as an anti-atherogenic agent, and for detoxification of pesticides and nerve agents. Because human PON1 exhibits limited stability, engineered, recombinant PON1 (rePON1) variants that were designed for higher reactivity, solubility, stability, and bacterial expression, are candidates for treatment. **This work addresses the feasibility of in vivo administration of rePON1, and its HDL complex, as a potentially therapeutic agent dubbed BL-3050.** For stability studies we applied different challenges related to the in vivo disfunctionalization of HDL and PON1 and tested for inactivation of PON1's activity. We applied acute, repetitive administrations of BL-3050 in mice to assess its toxicity and adverse immune responses. The in vivo efficacy of recombinant PON1 and BL-3050 were tested with an animal model of chlorpyrifos-oxon poisoning. Inactivation studies show significantly improved in vitro lifespan of the engineered rePON1 relative to human PON1. Significant sequence changes relative to human PON1 might hamper the in vivo applicability of BL-3050 due to adverse immune responses. However, we observed no toxic effects in mice subjected to repetitive administration of BL-3050, suggesting that BL-3050 could be safely used. To further evaluate the activity of BL-3050 in vivo, we applied an animal model that mimics human organophosphate poisoning. In these studies, a significant advantages of rePON1 and BL-3050 (>87.5% survival versus <37.5% in the control groups) was observed. Furthermore, BL-3050 and rePON1 were superior to the conventional treatment of atropine-2-PAM as a prophylactic treatment for OP poisoning. In vitro and in vivo data described here demonstrate the potential advantages of rePON1 and BL-3050 for treatment of OP toxicity and chronic cardiovascular diseases like atherosclerosis. The in vivo data also suggest that rePON1 and BL-3050 are stable and safe, and could be used for acute, and possibly repeated treatments, with no adverse effects.  
Keywords: 70-18-8  
Keywords: 2921-88-2  
Keywords: Animals  
Keywords: Enzyme Stability -- genetics  
Keywords: Glutathione  
Keywords: Organophosphates  
Keywords: 1-palmitoyl-2-oleoylphosphatidylcholine  
Keywords: Humans  
Keywords: Protein Engineering -- methods  
Keywords: Aryldialkylphosphatase  
Keywords: Disease Models, Animal  
Keywords: Lipoproteins, HDL -- chemistry  
Keywords: Organophosphates -- antagonists & inhibitors  
Keywords: Aryldialkylphosphatase -- administration & dosage  
Keywords: Aryldialkylphosphatase -- antagonists & inhibitors  
Keywords: Lipoproteins, HDL -- administration & dosage  
Keywords: TE895536Y5  
Keywords: Phosphatidylcholines -- administration & dosage  
Keywords: Recombinant Proteins -- chemistry  
Keywords: Recombinant Proteins -- antagonists & inhibitors  
Keywords: Lipoproteins, HDL -- antagonists & inhibitors  
Keywords: Male  
Keywords: Recombinant Proteins -- administration & dosage  
Keywords: Chlorpyrifos -- administration & dosage  
Keywords: Aryldialkylphosphatase -- genetics  
Keywords: Injections, Intravenous  
Keywords: Recombinant Proteins  
Keywords: Lipoproteins, HDL -- physiology  
Keywords: Lipoproteins, HDL  
Keywords: O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphate  
Keywords: PON1 protein, human  
Keywords: Mice  
Keywords: Aryldialkylphosphatase -- chemistry  
Keywords: Glutathione -- administration & dosage  
Keywords: EC 3.1.8.1  
Keywords: Chlorpyrifos  
Keywords: 0  
Keywords: Organophosphates -- toxicity  
Keywords: 5598-15-2  
Keywords: Chlorpyrifos -- analogs & derivatives  
Keywords: Mice, Inbred C57BL  
Keywords: Enzyme Stability -- drug effects  
Keywords: Phosphatidylcholines  
Keywords: Female  
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SuppNotes - Cites: Crit Rev Clin Lab Sci. 2009;46(2):83-106[19255916]; Cites: Atherosclerosis. 2001 Mar;155(1):229-35[11223446]; Cites: Chem Res Toxicol. 2008 Aug;21(8):1524-9[18597495]; Cites: Curr Opin Immunol. 2008 Aug;20(4):460-70[18656541]; Cites: Biochemistry. 2008 Mar 25;47(12):3875-82[18302337]; Cites: J Lipid Res. 2008 Jun;49(6):1246-53[18314464]; Cites: JAMA. 2008 Mar 19;299(11):1265-76[18349088]; Cites: Biochim Biophys Acta. 2007 Jul;1774(7):874-83[17556053]; Cites: Biochem Biophys Res Commun. 2006 Dec 15;351(2):492-8[17070779]; Cites: J Lipid Res. 2006 Nov;47(11):2492-502[16914770]; Cites: Pharmacol Rev. 2006 Sep;58(3):342-74[16968945]; Cites: Curr Opin Mol Ther. 2006 Jun;8(3):198-205[16774039]; Cites: Atherosclerosis. 2006 Jul;187(1):74-81[16229851]; Cites: FEBS J. 2006 May;273(9):1906-19[16640555]; Cites: J Biol Chem. 2006 Mar 17;281(11):7657-65[16407304]; Cites: Curr Atheroscler Rep. 2006 Mar;8(2):163-7[16510051]; Cites: Biochemistry. 2005 Sep 6;44(35):11843-54[16128586]; Cites: Arterioscler Thromb Vasc Biol. 2005 Jul;25(7):1325-31[15831812]; Cites: Arterioscler Thromb Vasc Biol. 2005 Jun;25(6):1102-11[15790935]; Cites: J Lipid Res. 2005 Jun;46(6):1239-47[15772423]; Cites: Biochemistry. 2005 Apr 26;44(16):6371-82[15835926]; Cites: J Clin Endocrinol Metab. 2005 Apr;90(4):2264-9[15687341]; Cites: Atherosclerosis. 2005 Mar;179(1):69-77[15721011]; Cites: Curr Opin Struct Biol. 2005 Feb;15(1):50-6[15718133]; Cites: Free Radic Biol Med. 2005 Jan 15;38(2):153-63[15607899]; Cites: Nat Genet. 2005 Jan;37(1):73-6[15568024]; Cites: Br J Pharmacol Chemother. 1957 Dec;12(4):438-46[13489171]; Cites: Drug Metab Dispos. 1995 Sep;23(9):935-44[8565784]; Cites: J Clin Invest. 1998 Apr 15;101(8):1581-90[9541487]; Cites: Nature. 1998 Jul 16;394(6690):284-7[9685159]; Cites: Arterioscler Thromb Vasc Biol. 1999 Sep;19(9):2214-25[10479665]; Cites: J Physiol Paris. 1998 Oct-Dec;92(5-6):357-62[9789837]; Cites: Drug Metab Dispos. 1998 Jul;26(7):653-60[9660847]; Cites: J Clin Invest. 1997 Apr 15;99(8):2005-19[9109446]; Cites: J Biol Chem. 1997 Nov 21;272(47):29711-20[9368040]; Cites: Biochem Pharmacol. 1996 Aug 9;52(3):401-6[8687493]; Cites: Nat Genet. 1996 Nov;14(3):334-6[8896566]; Cites: J Clin Invest. 1995 Dec;96(6):2882-91[8675659]; Cites: Proc Natl Acad Sci U S A. 1995 Aug 1;92(16):7187-91[7638166]; Cites: Methods Enzymol. 1995;251:8-28[7651233]; Cites: Toxicol Lett. 1995 Apr;76(3):219-26[7539166]; Cites: Drug Metab Dispos. 1991 Jan-Feb;19(1):100-6[1673382]; Cites: J Biol Chem. 1986 Jan 5;261(1):495-503[3941085]; Cites: Biochim Biophys Acta. 1983 Feb 7;750(2):353-64[6407531]; Cites: J Biol Chem. 1982 Apr 25;257(8):4535-40[6802835]; Cites: Methods Enzymol. 1979;63:294-336[41156]; Cites: Curr Opin Lipidol. 2004 Aug;15(4):399-404[15243212]; Cites: Nat Struct Mol Biol. 2004 May;11(5):412-9[15098021]; Cites: Free Radic Biol Med. 2004 Feb 15;36(4):464-70[14975449]; Cites: Proc Natl Acad Sci U S A. 2004 Jan 13;101(2):482-7[14695884]; Cites: Circulation. 2003 Dec 2;108(22):2751-6[14638544]; Cites: JAMA. 2003 Nov 5;290(17):2292-300[14600188]; Cites: Curr Opin Biotechnol. 2003 Aug;14(4):444-50[12943856]; Cites: Drug Metab Dispos. 2000 Nov;28(11):1335-42[11038162]; Cites: Pharmacogenetics. 2000 Dec;10(9):767-79[11191881]; Cites: Biochim Biophys Acta. 2000 Jan 17;1483(2):217-35[10634938]; Cites: Diabetologia. 2000 Mar;43(3):312-20[10768092]; Cites: Biochem J. 2000 Mar 1;346 Pt 2:345-54[10677352]; Cites: Free Radic Res. 2003 Jan;37(1):77-83[12653220]; Cites: Protein Expr Purif. 2003 Jan;27(1):98-103[12509990]; Cites: J Biol Chem. 2002 Sep 6;277(36):33386-97[12080042]; Cites: Acta Diabetol. 2001 Dec;38(4):163-9[11855794]; Cites: J Biol Chem. 2002 Feb 8;277(6):4301-8[11726658]; Cites: Nat Methods. 2008 Nov;5(11):939-42[18931667]  
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British nursing index edition - BMC clinical pharmacology, 2009, 9:18  
Corporate institution author - Gaidukov, Leonid; Bar, Dganit; Yacobson, Shiri; Naftali, Esmira; Kaufman, Olga; Tabakman, Rinat; Tawfik, Dan S; Levy-Nissenbaum, Etgar  
DOI - MEDL-19922610; 19922610; PMC2785756; 1472-6904 eng

450. Gaisler-Salomon, I.; Miller, G. M.; Chuhma, N.; Lee, S.; Zhang, H.; Ghoddoussi, F.; Lewandowski, N.; Fairhurst, S.; Wang, Y.; Conjard-Duplany, A.; Masson, J.; Balsam, P.; Hen, R.; Arancio, O.; Galloway, M. P.; Moore, H. M.; Small, S. A., and Rayport, S. Glutaminase-Deficient Mice Display Hippocampal Hypoactivity, Insensitivity to Pro-Psychotic Drugs and Potentiated Latent Inhibition: Relevance to Schizophrenia .   
Rec #: 50039  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Neuropsychopharmacology. 2005 Dec;30(12):2275-82 (medline /16034443)  
COMMENTS: Cites: Nat Neurosci. 2005 Nov;8(11):1586-94 (medline /16234811)  
COMMENTS: Cites: Neuron. 2006 Feb 16;49(4):603-15 (medline /16476668)  
COMMENTS: Cites: Neuropsychopharmacology. 2007 Mar;32(3):719-27 (medline /16525415)  
COMMENTS: Cites: Schizophr Res. 2006 Apr;83(2-3):247-56 (medline /16540291)  
COMMENTS: Cites: Psychopharmacology (Berl). 2006 May;186(1):64-81 (medline /16550385)  
COMMENTS: Cites: J Neurosci. 2006 Mar 22;26(12):3169-81 (medline /16554468)  
COMMENTS: Cites: Biol Psychiatry. 2006 Aug 1;60(3):253-64 (medline /16581031)  
COMMENTS: Cites: J Neurosci. 2006 Apr 26;26(17):4660-71 (medline /16641247)  
COMMENTS: Cites: Nat Neurosci. 2006 Aug;9(8):1009-18 (medline /16819522)  
COMMENTS: Cites: Neuron. 2006 Oct 5;52(1):179-96 (medline /17015235)  
COMMENTS: Cites: Nature. 2007 Jan 11;445(7124):168-76 (medline /17151600)  
COMMENTS: Cites: Eur J Neurosci. 2007 Jan;25(1):281-90 (medline /17241289)  
COMMENTS: Cites: Int Rev Neurobiol. 2007;78:69-108 (medline /17349858)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2007 Mar 13;104(11):4642-6 (medline /17360577)  
COMMENTS: Cites: Psychopharmacology (Berl). 2007 Jul;193(1):121-36 (medline /17384937)  
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COMMENTS: Cites: Neurosci Biobehav Rev. 2005;29(6):977-88 (medline /15964074)  
COMMENTS: Cites: Psychopharmacology (Berl). 2005 Sep;181(3):415-36 (medline /16001126)  
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ABSTRACT: Dysregulated glutamatergic neurotransmission has been strongly implicated in the pathophysiology of schizophrenia (SCZ). Recently, presynaptic modulation of glutamate transmission has been shown to have therapeutic promise. We asked whether genetic knockdown of glutaminase (gene GLS1) to reduce glutamatergic transmission presynaptically by slowing the recycling of glutamine to glutamate, would produce a phenotype relevant to SCZ and its treatment. GLS1 heterozygous (GLS1 het) mice showed about a 50% global reduction in glutaminase activity, and a modest reduction in glutamate levels in brain regions relevant to SCZ pathophysiology, but displayed neither general behavioral abnormalities nor SCZ-associated phenotypes. Functional imaging, measuring regional cerebral blood volume, showed hippocampal hypometabolism mainly in the CA1 subregion and subiculum, the inverse of recent clinical imaging findings in prodromal and SCZ patients. GLS1 het mice were less sensitive to the behavioral stimulating effects of amphetamine, showed a reduction in amphetamine-induced striatal dopamine release and in ketamine-induced frontal cortical activation, suggesting that GLS1 het mice are resistant to the effects of these pro-psychotic challenges. Moreover, GLS1 het mice showed clozapine-like potentiation of latent inhibition, suggesting that reduction in glutaminase has antipsychotic-like properties. These observations provide further support for the pivotal role of altered glutamatergic synaptic transmission in the pathophysiology of SCZ, and suggest that presynaptic modulation of the glutamine-glutamate pathway through glutaminase inhibition may provide a new direction for the pharmacotherapy of SCZ.  
MESH HEADINGS: Acoustic Stimulation/adverse effects  
MESH HEADINGS: Amphetamine/pharmacology  
MESH HEADINGS: Analysis of Variance  
MESH HEADINGS: Animals  
MESH HEADINGS: Antipsychotic Agents/\*pharmacology  
MESH HEADINGS: Behavior, Animal/physiology  
MESH HEADINGS: Central Nervous System Stimulants/pharmacology  
MESH HEADINGS: Clozapine/pharmacology  
MESH HEADINGS: Excitatory Amino Acid Antagonists/pharmacology  
MESH HEADINGS: Excitatory Postsynaptic Potentials/drug effects/genetics  
MESH HEADINGS: Exploratory Behavior/drug effects/physiology  
MESH HEADINGS: Freezing Reaction, Cataleptic/drug effects/physiology  
MESH HEADINGS: Glutamic Acid/metabolism  
MESH HEADINGS: Glutaminase/\*deficiency/metabolism  
MESH HEADINGS: Hippocampus/blood supply/\*drug effects/\*metabolism  
MESH HEADINGS: Image Processing, Computer-Assisted/methods  
MESH HEADINGS: \*Inhibition (Psychology)  
MESH HEADINGS: Ketamine/pharmacology  
MESH HEADINGS: Magnetic Resonance Imaging/methods  
MESH HEADINGS: Magnetic Resonance Spectroscopy/methods  
MESH HEADINGS: Maze Learning/drug effects/physiology  
MESH HEADINGS: Memory, Short-Term/drug effects/physiology  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred C57BL  
MESH HEADINGS: Mice, Knockout  
MESH HEADINGS: Microdialysis/methods  
MESH HEADINGS: Motor Activity/drug effects  
MESH HEADINGS: Oxygen/blood  
MESH HEADINGS: Protons/diagnostic use  
MESH HEADINGS: Startle Reaction/drug effects/genetics  
MESH HEADINGS: Synaptic Transmission/\*drug effects/genetics eng

451. Galea, K. S.; Maccalman, L.; Jones, K.; Cocker, J.; Teedon, P.; Sleeuwenhoek, A. J.; Cherrie, J. W., and Van Tongeren, M. Biological Monitoring of Pesticide Exposures in Residents Living Near Agricultural Land.   
Rec #: 74859  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: BACKGROUND: There is currently a lack of reliable information on the exposures of residents and bystanders to pesticides in the UK. Previous research has shown that the methods currently used for assessing pesticide exposure for regulatory purposes are appropriate for farm workers 1. However, there were indications that the exposures of bystanders may sometimes be underestimated. The previous study did not collect data for residents. Therefore, this study aims to collect measurements to determine if the current methods and tools are appropriate for assessing pesticide exposure for residents living near agricultural fields.  
ABSTRACT: METHODS/DESIGN: The study will recruit owners of farms and orchards (hereafter both will be referred to as farms) that spray their agricultural crops with certain specified pesticides, and which have residential areas in close proximity to these fields. Recruited farms will be asked to provide details of their pesticide usage throughout the spray season. Informed consenting residents (adults (18 years and over) and children (aged 4-12 years)) will be asked to provide urine samples and accompanying activity diaries during the spraying season and in addition for a limited number of weeks before/after the spray season to allow background pesticide metabolite levels to be determined. Selected urine samples will be analysed for the pesticide metabolites of interest. Statistical analysis and mathematical modelling will use the laboratory results, along with the additional data collected from the farmers and residents, to determine systemic exposure levels amongst residents. Surveys will be carried out in selected areas of the United Kingdom over two years (2011 and 2012), covering two spraying seasons and the time between the spraying seasons.  
ABSTRACT: DISCUSSION: The described study protocol was implemented for the sample and data collection procedures carried out in 2011. Based on experience to date, no major changes to the protocol are anticipated for the 2012 spray season although the pesticides and regional areas for inclusion in 2012 are still to be confirmed.  
MESH HEADINGS: Adolescent  
MESH HEADINGS: Adult  
MESH HEADINGS: Agriculture/\*methods  
MESH HEADINGS: Aminoimidazole Carboxamide/analogs &amp  
MESH HEADINGS: derivatives/urine  
MESH HEADINGS: Captan/urine  
MESH HEADINGS: Child  
MESH HEADINGS: Child, Preschool  
MESH HEADINGS: Chlormequat/urine  
MESH HEADINGS: Chlorpyrifos/urine  
MESH HEADINGS: Diquat/urine  
MESH HEADINGS: Environmental Exposure/\*analysis  
MESH HEADINGS: Environmental Monitoring/methods  
MESH HEADINGS: Humans  
MESH HEADINGS: Hydantoins/urine  
MESH HEADINGS: Nitriles/urine  
MESH HEADINGS: Pesticides/\*urine  
MESH HEADINGS: Pyrethrins/urine  
MESH HEADINGS: Risk Assessment  
MESH HEADINGS: Seasons  
MESH HEADINGS: Thiophanate/urine  
MESH HEADINGS: Triazoles/urine eng

452. Gao, L.; Mcbeath, R., and Chen, C. S. Stem Cell Shape Regulates a Chondrogenic Versus Myogenic Fate Through Rac1 and N-Cadherin.   
Rec #: 50599  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Mol Cell Biol. 2009 Feb;29(4):953-64 (medline /19075000)  
COMMENTS: Cites: Invest Ophthalmol Vis Sci. 2000 Jan;41(1):89-95 (medline /10634606)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 1994 Dec 20;91(26):12378-82 (medline /7528920)  
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ABSTRACT: Human mesenchymal stem cells (hMSCs) are multipotent cells that can differentiate into many cell types. Chondrogenesis is induced in hMSCs cultured as a micromass pellet to mimic cellular condensation during cartilage development, and exposed to transforming growth factor beta (TGFbeta). Interestingly, TGFbeta can also induce hMSC differentiation to smooth-muscle-like cell types, but it remains unclear what directs commitment between these two lineages. Our previous work revealed that cell shape regulates hMSC commitment between osteoblasts and adipocytes through RhoA signaling. Here we show that cell shape also confers a switch between chondrogenic and smooth muscle cell (SMC) fates. Adherent and well-spread hMSCs stimulated with TGF beta 3 upregulated SMC genes, whereas cells allowed to attach onto micropatterned substrates, but prevented from spreading and flattening, upregulated chondrogenic genes. Interestingly, cells undergoing SMC differentiation exhibited little change in RhoA, but significantly higher Rac1 activity than chondrogenic cells. Rac1 activation inhibited chondrogenesis and was necessary and sufficient for inducing SMC differentiation. Furthermore, TGF beta 3 and Rac1 signaling upregulated N-cadherin, which was required for SMC differentiation. These results demonstrate a chondrogenic-SMC fate decision mediated by cell shape, Rac1, and N-cadherin, and highlight the tight coupling between lineage commitment and the many changes in cell shape, cell-matrix adhesion, and cell-cell adhesion that occur during morphogenesis.  
MESH HEADINGS: Antigens, CD/drug effects/genetics/\*metabolism  
MESH HEADINGS: Cadherins/drug effects/genetics/\*metabolism  
MESH HEADINGS: Cell Adhesion/drug effects/genetics  
MESH HEADINGS: Cell Differentiation/drug effects/genetics  
MESH HEADINGS: Cell Lineage/drug effects/\*physiology  
MESH HEADINGS: Cell Shape/drug effects/\*physiology  
MESH HEADINGS: Cells, Cultured  
MESH HEADINGS: Chondrocytes/cytology/drug effects/\*metabolism  
MESH HEADINGS: Chondrogenesis/drug effects/physiology  
MESH HEADINGS: Extracellular Matrix/metabolism  
MESH HEADINGS: Gene Expression Regulation/drug effects/physiology  
MESH HEADINGS: Humans  
MESH HEADINGS: Mesenchymal Stromal Cells/cytology/drug effects/\*metabolism  
MESH HEADINGS: Muscle Development/drug effects/physiology  
MESH HEADINGS: Myocytes, Smooth Muscle/cytology/drug effects/\*metabolism  
MESH HEADINGS: Transforming Growth Factor beta3/metabolism/pharmacology  
MESH HEADINGS: Up-Regulation/drug effects/genetics  
MESH HEADINGS: rac1 GTP-Binding Protein/drug effects/genetics/\*metabolism eng

453. Gao, Y.; Chen, S.; Hu, M.; Hu, Q.; Luo, J., and Li, Y. Purification and Characterization of a Novel Chlorpyrifos Hydrolase From Cladosporium Cladosporioides Hu-01.   
Rec #: 73279  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Chlorpyrifos is of great environmental concern due to its widespread use in the past several decades and its potential toxic effects on human health. Thus, the degradation study of chlorpyrifos has become increasing important in recent years. A fungus capable of using chlorpyrifos as the sole carbon source was isolated from organophosphate-contaminated soil and characterized as Cladosporium cladosporioides Hu-01 (collection number: CCTCC M 20711). A novel chlorpyrifos hydrolase from cell extract was purified 35.6-fold to apparent homogeneity with 38.5% overall recovery by ammoniumsulfate precipitation, gel filtration chromatography and anion-exchange chromatography. It is a monomeric structure with a molecular mass of 38.3 kDa. The pI value was estimated to be 5.2. The optimal pH and temperature of the purified enzyme were 6.5 and 40&deg;C, respectively. No cofactors were required for the chlorpyrifos-hydrolysis activity. The enzyme was strongly inhibited by Hg&sup2;&#8314;, Fe&sup3;&#8314;, DTT, &beta;-mercaptoethanol and SDS, whereas slight inhibitory effects (5-10% inhibition) were observed in the presence of Mn&sup2;&#8314;, Zn&sup2;&#8314;, Cu&sup2;&#8314;, Mg&sup2;&#8314;, and EDTA. The purified enzyme hydrolyzed various organophosphorus insecticides with P-O and P-S bond. Chlorpyrifos was the preferred substrate. The Km and Vmax values of the enzyme for chlorpyrifos were 6.7974 &mu;M and 2.6473 &mu;mol&middot;min&#8315;&sup1;, respectively. Both NH2-terminal sequencing and matrix-assisted laser desorption/ionization time-of-flight/time-of-flight mass spectrometer (MALDI-TOF-MS) identified an amino acid sequence MEPDGELSALTQGANS, which shared no similarity with any reported organophosphate-hydrolyzing enzymes. These results suggested that the purified enzyme was a novel hydrolase and might conceivably be developed to fulfill the practical requirements to enable its use in situ for detoxification of chlorpyrifos. Finally, this is the first described chlorpyrifos hydrolase from fungus.  
MESH HEADINGS: Chlorpyrifos/\*metabolism  
MESH HEADINGS: Cladosporium/\*enzymology  
MESH HEADINGS: Fungal Proteins/\*isolation &amp  
MESH HEADINGS: purification/\*metabolism  
MESH HEADINGS: Hydrolases/\*isolation &amp  
MESH HEADINGS: purification/\*metabolism eng

454. Garabrant, David H; Aylward, Lesa L; Berent, Stanley; Chen, Qixuan; Timchalk, Charles; Burns, Carol J; Hays, Sean M, and Albers, James W. Cholinesterase Inhibition in Chlorpyrifos Workers: Characterization of Biomarkers of Exposure and Response in Relation to Urinary Tcpy. 2009 Nov; 19, (7): 634-42.   
Rec #: 40919  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The objective of this study was to evaluate the quantitative relation between measured red blood cell acetylcholinesterase (RBC AChE) and plasma butyrylcholinesterase (BuChE) activities with exposure to chlorpyrifos (CPF) as assessed by measurement of urinary 3,5,6-trichloro-2-pyridinol (TCPy) in a study group of workers occupationally exposed in the manufacture of CPF and a referent group of chemical manufacturing workers. Measures of plasma BuChE and RBC AChE activity and urinary TCPy concentration collected over a year-long study (1999-2000) in CPF-exposed workers (n=53) and referents (n=60) were analyzed using linear mixed models to characterize exposure-response relationships. Intraindividual variability in cholinesterase measures was compared between CPF-exposed workers and referents. Urinary TCPy concentrations in CPF workers were substantially elevated compared to referents, with median and 95th percentile concentrations during typical employment conditions 10-fold and more than 30-fold higher, respectively, than corresponding measures in the referents. Intraindividual variability in cholinesterase activities was substantial, with 17% of unexposed referents experiencing one or more plasma BuChE measures more than 20% below baseline over a year of repeated, periodic measurements. RBC AChE activity, an early biomarker of effect, was unrelated to urinary TCPy concentration over the entire range of exposure, up to 1000 microg TCPy/g creatinine (Cr). Plasma BuChE activity, a non-adverse biomarker of exposure, was negatively related to urinary TCPy concentrations above approximately 110 microg TCPy/g Cr. No-effect levels for inhibition of plasma BuChE and RBC AChE corresponding to absorbed doses of CPF of approximately 5 and greater than 50 microg/kg/day, respectively, were identified. These findings are consistent with previous no-effect level determinations for ChE inhibition in humans and suggest that general population CPF exposure levels are substantially below the identified no-effect levels. The dose-response relationships observed in this study are consistent with predictions from the previously published physiologically based pharmacokinetic/pharmacodynamic model for CPF. Intraindividual variability in measured cholinesterase activities in referents was substantial, suggesting that ongoing monitoring programs may have a substantial rate of false positives.  
Keywords: Pyridones -- urine  
Keywords: Cholinesterases  
Keywords: Humans  
Keywords: Butyrylcholinesterase  
Keywords: Workplace  
Keywords: Insecticides -- urine  
Keywords: Environmental Studies  
Keywords: Risk Assessment  
Keywords: 3,5,6-trichloro-2-pyridinol  
Keywords: Cholinesterase Inhibitors -- toxicity  
Keywords: Insecticides  
Keywords: Pyridones  
Keywords: Adult  
Keywords: Cholinesterase Inhibitors -- pharmacokinetics  
Keywords: Chemical Industry  
Keywords: Male  
Keywords: Chlorpyrifos -- pharmacokinetics  
Keywords: Butyrylcholinesterase -- blood  
Keywords: Chlorpyrifos -- urine  
Keywords: Insecticides -- toxicity  
Keywords: Cholinesterases -- blood  
Keywords: Dose-Response Relationship, Drug  
Keywords: Cholinesterase Inhibitors -- urine  
Keywords: Cholinesterase Inhibitors -- blood  
Keywords: Chlorpyrifos  
Keywords: Cholinesterase Inhibitors  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Insecticides -- pharmacokinetics  
Keywords: Occupational Exposure -- adverse effects  
Keywords: Middle Aged  
Keywords: Occupational Exposure -- analysis  
Keywords: Biological Markers  
Keywords: Biological Markers -- urine  
Keywords: Female  
Copyright - Copyright Nature Publishing Group Nov 2009  
Language of summary - English  
Pages - 634-42  
ProQuest ID - 219569578  
Last updated - 2012-11-20  
Place of publication - Tuxedo  
Corporate institution author - Garabrant, David H; Aylward, Lesa L; Berent, Stanley; Chen, Qixuan; Timchalk, Charles; Burns, Carol J; Hays, Sean M; Albers, James W  
DOI - 1882471191; 49050531; 68909; ENNP; 18716607; NTPGENNPjes200851 English

455. Garc+ˇa de Llasera, Martha P. and Reyes-Reyes, Mar+ a L. A validated matrix solid-phase dispersion method for the extraction of organophosphorus pesticides from bovine samples. 2009 Jun 15-; 114, (4): 1510-1516.   
Rec #: 4420  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: A method based on matrix solid-phase dispersion (MSPD) was developed for the quantitative extraction of five organophosphorus (OPPs) pesticides from bovine samples. The determination was carried out by high performance liquid chromatography (HPLC) with diode array spectrophotometric UV detection. The MSPD extraction with octadecylsilyl (C18) sorbent combined with a silica gel clean-up and acetonitrile elution was optimised for chlorpyrifos, chlorfenvinphos, diazinon, fenitrothion, and parathion-methyl. The method was validated, yielding recovery values higher than 94%, except for chlorfenvinphos in liver (55%), and precision values, expressed as relative standard deviations (RSDs), which were less than or equal to 15% in liver and 11.5% in muscle at spiking levels of 0.25, 2.5 and 5 ++g gęĆ1. Linearity was studied from 0.5 to 15 ++g gęĆ1, and the limits of detection (LODs) were found to be lower than 0.1 ++g gęĆ1. This method was applied to the analysis of real samples with confirmative analyses performed using gas chromatographyÇômass spectrometry (GCÇôMS) in selected ion monitoring mode (SIM). Matrix solid-phase dispersion/ Extraction/ HPLC analysis/ Organophosphorus pesticides/ Bovine samples

456. GarcÃƒÂ­a-RodrÃƒÂ­guez, D.; Carro-DÃƒÂ­az, A. M.; Lorenzo-Ferreira, R. A., and Cela-Torrijos, R. Determination of pesticides in seaweeds by pressurized liquid extraction and programmed temperature vaporization-based large volume injection-gas chromatography-tandem mass spectrometry. 2010; 1217, (17): 2940-2949.   
Rec #: 52899  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A rapid method for the simultaneous identification and quantification of pesticide residues in edible seaweed has been developed. Target analytes were three pyrethroid, a carbamate and two organophosphorus pesticides. The procedure consists of a pressurized liquid extraction (PLE) with integrated clean-up, followed by gas chromatography coupled to tandem mass spectrometry. Five PLE parameters were investigated using a screening design: temperature, static extraction time, number of cycles, percent of flush volume and quantitative composition of the n-hexane/ethyl acetate extraction solvent. The effect of the in-cell clean-up with FlorisilÃ‚Â® and graphitized carbon black adsorbents was investigated using a Doehlert response surface design. Large volumes of sample extracts were injected using a programmed-temperature vaporizer (PTV-LVI) to improve both sensitivity and selectivity of measurements. Quantification was carried by the internal standard method with surrogate deuterated standards. The method showed excellent linearity (R Ã‚Â² >0.999) and precision (relative standard deviation, RSDÃ¢â€°Â¤8%) for all compounds, with detection limits ranging from 0.3pggÃ¢ÂÂ»Ã‚Â¹ for chlorpyrifos-ethyl, to 3.0pggÃ¢ÂÂ»Ã‚Â¹ for carbaryl (23.1pggÃ¢ÂÂ»Ã‚Â¹ for deltamethrin). Recoveries in real seaweed samples were within the range 82-108%. The method was satisfactory validated for the analysis of wild and cultivated edible seaweeds. The presence of pyrethroid and organophosphorus pesticides in some of the samples was evidenced.  
Keywords: pressurized liquid extraction  
Amsterdam; New York: Elsevier

457. Garcia-Cambero, J. P.; Catala, M., and Valcarcel, Y. River waters induced neurotoxicity in an embryo-larval zebrafish model. 2012; 84, 84-91.   
Rec #: 60419  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Some investigations have revealed an increased release of psychoactive drugs into the aquatic environments near big cities. However, despite the alert generated by the presence of such neurotoxic compounds, there is a lack of studies evaluating the impact on living organisms. One solution consists in the development of bioassays able to address specific risks, such as neurotoxicity, but on the other hand suitable to assess complex matrices like river samples. **The objective of this work was to assess surface water toxicity by means of a zebrafish embryo-larval combined toxicity assay,** which is based on a variety of toxicological endpoints, especially those related to neurodevelopment. For such a purpose, we selected the Tagus River in which a previous monitoring study revealed the presence of psychoactive drugs. Results showed that most of the toxicological endpoints evaluated remained unaltered in the exposed embryos, except for the tail length that was larger in the exposed larvae, and the locomotor activity in the 6-day larvae, which was decreased in four groups of exposure (n = 5 sampling points). In the absence of systemic toxicity, changes in larval locomotion are indicative of neurotoxicity. This result suggests that the Tagus River can convey neurotoxic compounds at levels that may represent an early and specific threat over the aquatic species of vertebrates, what can have dramatic consequences under the ecological point of view. (C) 2012 Elsevier Inc. All rights reserved.  
Keywords: Surface water, Tagus River, Neurotoxicity, Zebrafish embryo, Zebrafish  
ISI Document Delivery No.: 005TB

458. Garcia, M. L.; Byfield, R., and Robek, M. D. Hepatitis B Virus Replication and Release Are Independent of Core Lysine Ubiquitination.   
Rec #: 50879  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Ubiquitin conjugation to lysine residues regulates a variety of protein functions, including endosomal trafficking and degradation. While ubiquitin plays an important role in the release of many viruses, the requirement for direct ubiquitin conjugation to viral structural proteins is less well understood. Some viral structural proteins require ubiquitin ligase activity, but not ubiquitin conjugation, for efficient release. Recent evidence has shown that, like other viruses, hepatitis B virus (HBV) requires a ubiquitin ligase for release from the infected cell. The HBV core protein contains two lysine residues (K7 and K96), and K96 has been suggested to function as a potential ubiquitin acceptor site based on the fact that previous studies have shown that mutation of this amino acid to alanine blocks HBV release. We therefore reexamined the potential connection between core lysine ubiquitination and HBV replication, protein trafficking, and virion release. In contrast to alanine substitution, we found that mutation of K96 to arginine, which compared to alanine is more conserved but also cannot mediate ubiquitin conjugation, does not affect either virus replication or virion release. We also found that the core lysine mutants display wild-type sensitivity to the antiviral activity of interferon, which demonstrates that ubiquitination of core lysines does not mediate the interferon-induced disruption of HBV capsids. However, mutation of K96 to arginine alters the nuclear-cytoplasmic distribution of core, leading to an accumulation in the nucleolus. In summary, these studies demonstrate that although ubiquitin may regulate the HBV replication cycle, these mechanisms function independently of direct lysine ubiquitination of core protein.  
MESH HEADINGS: Acetylcysteine/analogs &amp  
MESH HEADINGS: derivatives/pharmacology  
MESH HEADINGS: Animals  
MESH HEADINGS: Cell Line, Tumor  
MESH HEADINGS: Cell Nucleolus/virology  
MESH HEADINGS: DNA, Viral/genetics  
MESH HEADINGS: Gene Expression Regulation, Viral  
MESH HEADINGS: Hepatitis B virus/genetics/metabolism/\*physiology  
MESH HEADINGS: Humans  
MESH HEADINGS: Interferon-alpha/pharmacology  
MESH HEADINGS: Lysine/\*metabolism  
MESH HEADINGS: Mice  
MESH HEADINGS: Mutagenesis, Site-Directed  
MESH HEADINGS: Mutation  
MESH HEADINGS: Proteasome Endopeptidase Complex/drug effects  
MESH HEADINGS: Protein Transport  
MESH HEADINGS: Ubiquitin/metabolism  
MESH HEADINGS: \*Ubiquitination  
MESH HEADINGS: Viral Core Proteins/\*metabolism  
MESH HEADINGS: Virion/genetics/metabolism/physiology  
MESH HEADINGS: \*Virus Replication eng

459. Garcia-Valcarcel, Ana Isabel; Tadeo, Jose Luis, and Garcia-Valcarcel, Ana Isabel. A Combination of Ultrasonic Assisted Extraction With Lc-Ms/Ms for the Determination of Organophosphorus Pesticides in Sludge. 2009 May; 641, (1-2): 117-123.   
Rec #: 44769  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A method has been developed for the analysis of a wide polarity range of the currently used organophosphorus pesticides (OPs) and their metabolites in sewage sludge samples. Extraction was carried out using ultrasonic assisted extraction (UAE) with different solvents. The levels of OPs in sludge were determined by liquid chromatography-tandem mass spectrometry (LC-MS/MS) using electrospray ionization (ESI) in positive or negative ion mode. Extraction with acetonitrile containing 1% acetic acid gave the best results with recoveries between 83.2% and 106.4% and RSD <= 8.7%. Evaluation of matrix effect showed high ion suppression for OPs of intermediate polarity, which decreased to approximately 50% by matrix dilution to an equivalent of 0.5 g of sludge per millilitre; however, for polar OPs, the matrix effect was negligible at the same concentration. Therefore, matrix-matched standards were used for OPs quantification. The limits of quantification were in the range of 1-14 ng g[super]-1. This method was successfully applied to real sludge samples collected from Madrid Province and chlorpyrifos along with its metabolite TCPY were the OPs found in sludge at the highest levels, 113-344 ng g[super]-1 and 33-307 ng g[super]-1, respectively.  
Keywords: P 3000:SEWAGE & WASTEWATER TREATMENT  
Keywords: Spain, Castilla, Madrid  
Keywords: Pesticides (organophosphorus)  
Keywords: ENA 09:Land Use & Planning  
Keywords: Sludges  
Keywords: Sewage sludge  
Keywords: Solvents  
Keywords: Mass spectrometry  
Keywords: Metabolites  
Keywords: Q5 01502:Methods and instruments  
Keywords: Sludge  
Keywords: Acetic acid  
Keywords: Mass spectroscopy  
Keywords: Chlorpyrifos  
Keywords: Sewage  
Keywords: Ultrasonics  
Keywords: ASFA 3: Aquatic Pollution & Environmental Quality; Toxicology Abstracts; Pollution Abstracts; Environment Abstracts  
Keywords: Pesticides  
Keywords: Polarity  
Keywords: Acetonitrile  
Keywords: X 24330:Agrochemicals  
Keywords: Ionization  
Date revised - 2009-06-01  
Language of summary - English  
Location - Spain, Castilla, Madrid  
Pages - 117-123  
ProQuest ID - 20645472  
SubjectsTermNotLitGenreText - Sewage; Ultrasonics; Pesticides; Solvents; Sludge; Chlorpyrifos; Pesticides (organophosphorus); Sewage sludge; Sludges; Metabolites; Polarity; Acetonitrile; Ionization; Acetic acid; Mass spectroscopy; Mass spectrometry; Spain, Castilla, Madrid  
Last updated - 2012-04-23  
British nursing index edition - Analytica Chimica Acta [Anal. Chim. Acta]. Vol. 641, no. 1-2, pp. 117-123. May 2009.  
Corporate institution author - Garcia-Valcarcel, Ana Isabel; Tadeo, Jose Luis  
DOI - MD-0009739449; 9380492; CS0940091; 0003-2670 English

460. Garrett, N. E.; Stack, H. F., and Waters, M. D. Evaluation of the Genetic Activity Profiles of 65 Pesticides. N.E.Garrett, Environ. Health Res. Test., Inc., Research Triangle Park, NC, 27709//: 1986; 168, (3): 301-325.   
Rec #: 840  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (CPY), NO REVIEW (CPY)  
Notes: Chemical of Concern: CPY

461. Gasperi, Johnny; Rocher, Vincent; Gilbert, Solene; Azimi, Sam; Chebbo, Ghassan, and Gasperi, Johnny. Occurrence and Removal of Priority Pollutants by Lamella Clarification and Biofiltration. 2010 May; 44, (10): 3065-3076.   
Rec #: 47929  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study investigates the occurrence of all priority substances (naa=aa41) listed in the Water Framework Directive and additional substances (naa=aa47) in raw sewage, as well as the removal performance of lamella clarification and biofiltration techniques. Once the efficiency of both types of techniques has been assessed for typical wastewater parameters, the differences in each technique's ability to remove pollutants becomes obvious; nevertheless, pollutant removal in quantitative terms still depends on the physico-chemical properties of the compounds used and operating conditions within the selected facility. For lamella clarification, the removal of organic chemicals was found to be primarily correlated with their sorption potential and, hence, strongly dependent upon log Kow of the compound under study. Compounds with a strong hydrophobic character (logaaKowaa>aa4.5) are removed to a significant extent (approx. 85%), while hydrophilic compounds (log Kowaa<aa3.5) are poorly removed (<20%). For biofiltration, the removal of chemicals appears to be compound-dependent, although this outcome involves several mechanisms, namely: i) physical filtration of total suspended solids, ii) volatilisation, iii) sorption, and iv) biotransformation of substances. Even if the complex processes within a biofilter system do not yield an accurate prediction of pollutant removal, two groups of chemicals can still be clearly identified: i) hydrophobic or volatile compounds, for which moderate to high removal rates are observed (from 50% to over 80%); and ii) hydrophilic, non-volatile and refractory compounds for which a low removal rate would be expected (<20%).  
Keywords: Chemicals  
Keywords: Prediction  
Keywords: P 3000:SEWAGE & WASTEWATER TREATMENT  
Keywords: AQ 00006:Sewage  
Keywords: SW 3040:Wastewater treatment processes  
Keywords: Q5 01502:Methods and instruments  
Keywords: Environmental Studies  
Keywords: ASFA 3: Aquatic Pollution & Environmental Quality; Environment Abstracts; Pollution Abstracts; Aqualine Abstracts; Water Resources Abstracts  
Keywords: Pollutants  
Keywords: Biotransformation  
Keywords: Suspended Solids  
Keywords: Volatile compounds  
Keywords: Clarification  
Keywords: ENA 19:Water Pollution  
Keywords: Sorption  
Keywords: Suspended solids  
Keywords: Pollutant removal  
Keywords: Biofilters  
Keywords: Physicochemical properties  
Keywords: Suspended particulate matter  
Keywords: Biofiltration  
Keywords: Filtration  
Keywords: Sewage  
Keywords: Priorities  
Keywords: Water wells  
Keywords: Wastewater  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 3065-3076  
ProQuest ID - 810894664  
SubjectsTermNotLitGenreText - Sorption; Filtration; Biofilters; Sewage; Pollutants; Volatile compounds; Suspended particulate matter; Chemicals; Biofiltration; Suspended solids; Pollutant removal; Physicochemical properties; Water wells; Wastewater; Prediction; Biotransformation; Suspended Solids; Priorities; Clarification  
Last updated - 2011-12-17  
Corporate institution author - Gasperi, Johnny; Rocher, Vincent; Gilbert, Solene; Azimi, Sam; Chebbo, Ghassan  
DOI - OB-5c0faebc-76e0-4ff8-891ccsaobj202; 13071531; CS1143223; 0043-1354 English

462. Gawish, A. M. The Protective Role of alpha Lipoic Acid Against Pesticides Induced Testicular Toxicity - Histopathological and Histochemical Studies. Department of Zoology, Faculty of Science, Cairo University, Giza, Egypt,//: 2010; 1, (1): 7 p.   
Rec #: 2550  
Keywords: MIXTURE  
Call Number: NO MIXTURE (CPY,FNT)  
Notes: Chemical of Concern: CPY,FNT

463. Gazzotti, T.; Sticca, P.; Zironi, E.; Lugoboni, B.; Serraino, A., and Pagliuca, G. Determination of 15 Organophosphorus Pesticides in Italian Raw Milk. 2009; 82, (2): 251-254.   
Rec #: 60469  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A study was conducted on raw cow's milk to measure the residues of 15 organophosphorus pesticides used as dairy cattle ectoparasiticides or as insecticides in crops used for animal feed. For this purpose a previously devised method was improved and validated. The samples were collected directly from tank trucks during delivery of 3,974 tonnes of raw milk at nine Italian dairy plants. Approximately 4.4% of the 298 samples analyzed contained residues only in traces. The main pollutant was chlorpyriphos.  
Keywords: Organophosphorus pesticides, Milk, Gas chromatography  
ISI Document Delivery No.: 394GB

464. Gebara, Ab; Ciscato, Chp; Monteiro, Sh; Souza, G S, and Ciscato, CHP. Pesticide Residues in Some Commodities: Dietary Risk for Children. 2011 May; 86, (5): 506-510.   
Rec #: 43359  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The objective of this study was to identify pesticides found in infantsa and childrenas diets. Fruits and vegetables were collected from 2004 to 2007 and analyzed using a multiresidue method. The most frequently detected residues were procymidone, captan, chlorpyrifos and chlorothalonil. Twenty-eight percent of the samples contained pesticide residues. Strawberry, pear, apple, peach and tomato contained pesticide levels of concern. Twenty-one pesticides were found with the estimated total mean daily intake greater than the acceptable daily intake for four of the pesticides. Residues of carbaryl, diazinon and methidathion exceeded regulatory levels in (apple, strawberry, and orange).  
Keywords: Diets  
Keywords: Fruits  
Keywords: Vegetables  
Keywords: Pesticide residues  
Keywords: fruits  
Keywords: methidathion  
Keywords: Environment Abstracts; Pollution Abstracts; Toxicology Abstracts  
Keywords: Carbaryl  
Keywords: Fragaria  
Keywords: Children  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Prunus  
Keywords: Chlorpyrifos  
Keywords: Lycopersicon esculentum  
Keywords: Chlorothalonil  
Keywords: procymidone  
Keywords: Pesticides  
Keywords: Malus  
Keywords: X 24330:Agrochemicals  
Keywords: Diazinon  
Keywords: Captan  
Date revised - 2011-06-01  
Language of summary - English  
Pages - 506-510  
ProQuest ID - 874189128  
SubjectsTermNotLitGenreText - Diets; Fruits; Vegetables; Pesticide residues; methidathion; Carbaryl; Children; Chlorpyrifos; Chlorothalonil; procymidone; Pesticides; Diazinon; Captan; fruits; Lycopersicon esculentum; Malus; Fragaria; Prunus  
Last updated - 2012-03-29  
British nursing index edition - Bulletin of Environmental Contamination and Toxicology [Bull. Environ. Contam. Toxicol.]. Vol. 86, no. 5, pp. 506-510. May 2011.  
Corporate institution author - Gebara, AB; Ciscato, CHP; Monteiro, SH; Souza, G S  
DOI - 45c56b3d-dc9d-400b-b5e1mfgefd101; 14763878; 0007-4861; 1432-0800 English

465. Gebremariam, S. Y. and Beutel, M. W. Effects of drain-fill cycling on chlorpyrifos mineralization in wetland sediment-water microcosms. 2010; 78, (11): 1337-1341.   
Rec #: 60499  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Constructed treatment wetlands are efficient at retaining a range of pesticides, however the ultimate fate of many of these compound is not well understood. This study evaluated the effect of drain-fill cycling on the mineralization of chlorpyrifos, a commonly used organophosphate insecticide, in wetland sediment-water microcosms. Monitoring of the fate of (14)C ring-labeled chlorpyrifos showed that drain-fill cycling resulted in significantly lower mineralization rates relative to permanently flooded conditions. The reduction in mineralization was linked to enhanced partitioning of the pesticide to the sediment phase, which could potentially inhibit chlorpyrifos hydrolysis and mineralization. Over the nearly two-month experiment, less than 2.5% of the added compound was mineralized, While rates of mineralization in this experiment were higher than those reported for other soils and sediments, their low magnitude underscores how persistent chlorpyrifos and its metabolites are in aquatic environments, and suggests that management strategies and ecological risk assessment should focus more on ultimate mineralization rather than the simple disappearance of the parent compound. (C) 2010 Elsevier Ltd. All rights reserved.  
Keywords: Chlorpyrifos, Mineralization, Constructed treatment wetlands, Sediment,  
ISI Document Delivery No.: 571RP

466. Gebremariam, S. Y.; Beutel, M. W.; Flury, M.; Harsh, J. B., and Yonge, D. R. Nonsingular Adsorption/Desorption of Chlorpyrifos in Soils and Sediments: Experimental Results and Modeling. 2012; 46, (2): 869-875.   
Rec #: 60509  
Keywords: FATE  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: At environmentally relevant concentrations in soils and sediments, chlorpyrifos, a hydrophobic organic insecticide, showed strong adsorption that correlated significantly with organic matter content. Chlorpyrifos desorption followed a nonsingular falling desorption isotherm that was estimated using a memory-dependent mathematical model. Desorption of chlorpyrifos was biphasic in nature, with a labile and nonlabile component. The labile component comprised 18-28% of the original solid-phase concentration, and the residue was predicted to slowly partition to the aqueous phase, implying long-term desorption from contaminated soils or sediments. The newly proposed mechanism to explain sorption/desorption hysteresis and biphasic desorption is the unfavorable thermodynamic energy landscape arising from limitation of diffusivity of water molecules through the strongly hydrophobic domain of soils and sediments. Modeling results suggest that contaminated, soils and sediments could be secondary long-term sources of pollution. Long-term desorption may explain the detection of chlorpyrifos and other hydrophobic organic compounds in aquatic systems far from application sites, an observation that contradicts conventional transport predictions.  
Keywords: POLYCYCLIC AROMATIC-HYDROCARBONS, SORPTION HYSTERESIS,  
ISI Document Delivery No.: 876VQ

467. Gebremariam, S. Y.; Beutel, M. W.; Yonge, D. R.; Flury, M., and Harsh, J. B. Adsorption and Desorption of Chlorpyrifos to Soils and Sediments.   
Rec #: 74779  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Chlorpyrifos, one of the most widely used insecticides, has been detected in air, rain, marine sediments, surface waters, drinking water wells, and solid and liquid dietary samples collected from urban and rural areas. Its metabolite, TCP, has also been widely detected in urinary samples collected from people of various age groups. With a goal of elucidating the factors that control the environmental contamination, impact, persistence, and ecotoxicity of chlorpyrifos, we examine, in this review, the peer-reviewed literature relating to chlorpyrifos adsorption and desorption behavior in various solid-phase matrices. Adsorption tends to reduce chlorpyrifos mobility, but adsorption to erodible particulates, dissolved organic matter, or mobile inorganic colloids enhances its mobility. Adsorption to suspended sediments and particulates constitutes a major off-site migration route for chlorpyrifos to surface waters, wherein it poses a potential danger to aquatic organisms. Adsorption increases the persistence of chlorpyrifos in the environment by reducing its avail- ability to a wide range of dissipative and degradative forces, whereas the effect of adsorption on its ecotoxicity is dependent upon the route of exposure. Chlorpyrifos adsorbs to soils, aquatic sediments, organic matter, and clay minerals to differing degrees. Its adsorption strongly correlates with organic carbon con- tent of the soils and sediments. A comprehensive review of studies that relied on the batch equilibrium technique yields mean and median Kd values for chlorpyrifos of 271 and 116 L/kg for soils, and 385 and 403 L/kg for aquatic sediments. Chlorpyrifos adsorption coefficients spanned two orders of magnitude in soils. Normalizing the partition coefficient to organic content failed to substantially reduce variability to commonly acceptable level of variation. Mean and median values for chlorpyrifos partition coefficients normalized to organic carbon, K, were 8,163 and 7,227 L/kg for soils and 13,439 and 15,500 L/kg for sediipents. This variation may result from several factors, including various experimental artifacts, variation in quality of soil organic matter, and inconsistencies in experimental methodologies. Based on this review, there appears to be no definitive quantification of chlorpyrifos adsorption or desorption characteristics. Thus, it is difficult to predict its adsorptive behavior with certainty, without resorting to experimental methods specific to the soil or sediment of interest. This limitation should be recognized in the context of current efforts to predict the risk, fate, and transport of chlorpyrifos based upon published partition coefficients. Based on a comprehensive review of the peer-reviewed literature related to adsorption and desorption of chlorpyrifos, we propose the following key areas for future research. From this review, it becomes increasingly evident that pesticide partitioning cannot be fully accounted for by the fraction of soil or solid-matrix organic matter or carbon content. Therefore, research that probes the variation in the nature and quality of soil organic matter on pesticide adsorption is highly desirable. Pesticide persistence and bioavailability depend on insights into desorption capacity. Therefore, understanding the fate and environmental impact of hydrophobic pesticides is incomplete without new research being performed to improve insights into pesticide desorption from soils and sediments. There is also a need for greater attention and consistency in developing experimental methods aimed at estimating partition coefficients. Moreover, in such testing, choosing initial concentrations and liquid-solid ratios that are more representative of environmental conditions could improve usefulness and interpretation of data that are obtained. Future monitoring efforts should include the sampling and analysis of suspended particulates to account for suspended solid-phase CPF, a commonly underestimated fraction in surface water quality monitoring programs. Finally, management practices related to the reduction of off-site migration of CPF should be further evaluated, including alternative agricultural practices leading to reduction in soil erosion and structural best management practices, such as sedimentation ponds, treatment wetlands, and vegetated edge-of-field strips.  
MESH HEADINGS: Adsorption  
MESH HEADINGS: Agriculture  
MESH HEADINGS: Aluminum Silicates/analysis  
MESH HEADINGS: Chlorpyrifos/adverse effects/analysis/\*chemistry  
MESH HEADINGS: Chromatography, Reverse-Phase  
MESH HEADINGS: Chromatography, Thin Layer  
MESH HEADINGS: Environmental Monitoring  
MESH HEADINGS: Environmental Pollutants/adverse effects  
MESH HEADINGS: Geologic Sediments/\*analysis  
MESH HEADINGS: Humans  
MESH HEADINGS: Insecticides/adverse effects/analysis/\*chemistry  
MESH HEADINGS: Soil/\*analysis  
MESH HEADINGS: Soil Pollutants/adverse effects/analysis  
MESH HEADINGS: Solubility  
MESH HEADINGS: Water Quality eng

468. Gebremariam, Seyoum Yami and Beutel, Marc W. Mineralization, Sorption and Desorption of Chlorpyrifos in Aquatic Sediments and Soils. 2011: (UMI# 3460385 ).   
Rec #: 51659  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Increased utilization of agrochemicals poses a substantial public health and ecological concern should they be transported to aquatic ecosystems. This dissertation presents a comprehensive literature review and results of a series of laboratory experiments investigating the mineralization, sorption and desorption of chlorpyrifos, a widely used organophosphorus insecticide. An extensive review of literature found that published sorption coefficients for chlorpyrifos in soils and sediments spanned up to two orders of magnitude. Normalizing the partition coefficient to organic content failed to substantially reduce variability, indicating the difficulty in predicting the sorptive behavior of chlorpyrifos without resorting to experimental methods specific to the soil or sediment of interest. Mineralization was studied using laboratory microcosms operated under drain-fill and permanently flooded conditions. Drain-fill cycling resulted in significantly lower mineralization rates relative to the permanently flooded condition due to enhanced partitioning of the pesticide to the sediment phase. Mineralization half-lives were 5-6 years and confirmed that chlorpyrifos and its metabolites can persist in aquatic environments for decades before they completely dissipate, particularly if sorbed to sediment. Sorption and desorption was studied using eight different aquatic soils and sediments using the batch equilibrium method. Sorption significantly correlated with organic content. The K d values varied from 35.2 L/kg in low organic reservoir sediment to 123.3 L/kg in moderately organic cranberry soils. The Koc values varied from 3,606 to 5,983 L/kg. Desorption of chlorpyrifos exhibited hysteresis that increased with organic content and occurred in a dual mode with a labile and non-labile fraction. A mathematical model was used to determine the fraction of the labile component and the long-term fate of the non-labile component. The model quantified the long-term desorption of chlorpyrifos under repeated desorption events and predicted that contaminated aquatic soils and sediments can serve as a secondary and long-term source for chlorpyrifos pollution. Results also suggested that unfavorable energy changes during desorption, along with limitation on diffusivity of water molecules through the hydrophobic region of the organic fraction, may explain the observed hysteresis and biphasic nature of chlorpyrifos desorption.  
Start Page: 216  
ISSN/ISBN: 9781124721712  
Keywords: Sorption  
Keywords: 0543:Civil engineering  
Keywords: Applied sciences  
Keywords: Hysteresis  
Keywords: Mineralization  
Keywords: Soil pollution  
Keywords: Chlorpyrifos  
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Keywords: 0481:Soil sciences  
Keywords: Wetlands  
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876964533  
Sorption  
Applied sciences  
Hysteresis  
66569  
n/a  
62972061  
English  
Soil pollution  
0775: Environmental engineering  
Chlorpyrifos  
0470: Environmental Health  
2012-06-29  
0481: Soil sciences  
Biological sciences English

469. Gencer, N; Arslan, O, and Gencer, N. In Vitro Effects of Some Pesticides on Pon1q192 and Pon1r192 Isoenzymes From Human Serum. 2011 Feb; 20, (3): 590-596.   
Rec #: 43559  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Human serum paraoxonase 1 (PON1) contains two polymorphic forms, Q (glutamine) or R (arginine) located at codon 192. The Q isoform has a higher activity for hydrolysis of diazoxon, sarin, and soman; whereas the R isoform has a higher activity for hydrolysis of paraoxon and chlorpyrifos oxon. In this study, the in vitro effects of commonly used pesticides (Purtapyr, Roundup, Agrofarm and Practicur) on purified human serum Q and R isoen-zymes were investigated. Q and R isoforms were separately purified with ammonium sulphate precipitation and hy-drophobic interaction chromatography, and the in vitro effects of the pesticides on purifying Q and R were determined using paraoxon as a substrate. IC sub(50) values of these pesticides ex-hibiting inhibition effects were found from graphs of paraoxonase activity percentage by plotting their concentrations. The inhibition kinetics (Ki) interaction of these pesticides with the human serum Q and R isoen-zymes were also determined.  
Keywords: Chlorpyrifos  
Keywords: Sulfates  
Keywords: Ammonium  
Keywords: ENA 09:Land Use & Planning  
Keywords: Chromatography  
Keywords: Kinetics  
Keywords: Pesticides  
Keywords: Environment Abstracts  
Keywords: Hydrolysis  
Date revised - 2012-01-01  
Language of summary - English  
Pages - 590-596  
ProQuest ID - 918041167  
SubjectsTermNotLitGenreText - Chlorpyrifos; Sulfates; Ammonium; Chromatography; Kinetics; Pesticides; Hydrolysis  
Last updated - 2012-03-29  
British nursing index edition - Fresenius Environmental Bulletin [Fresenius Environ. Bull.]. Vol. 20, no. 3, pp. 590-596. Feb 2011.  
Corporate institution author - Gencer, N; Arslan, O  
DOI - MD-0015856187; 14690807; 1018-4619 English

470. Gennari, M. ; Messina, C.; Abbate, C.; Baglieri, A., and Negre, M. Adsorption of chlorpyrifos-methyl on some soil components. Influence of pH, ionic strength and organic acids. 2007; 16, (7): 764-769.   
Rec #: 60539  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Research was carried out on the adsorption of chlorpyrifos- methyl (CLP-m) by some soil colloids in both pure and associated forms. A preliminary screening shows a good affinity of CLP-m for humic acid and smectite (93% and 75%, respectively), but little affinity for ferrihydrite (25%). Among the binary associations tested, smectite with addition of 4% humic acid produced the best results (85% adsorption). Pure smectite and the smectite-4% humic acid binary system were used for a more detailed examination of the effects of pH, ionic strength and organic acids in the solution on adsorption capacity of CLP-m. Adsorption appeared to be inversely correlated to pH, with mean values of 52% and 65% under alkaline pH on smectite and the binary association, respectively. When ionic strength increased, so did adsorption, which was hypothesised as being of the cooperative type. The organic acids, added to the liquid phase, reduced the adsorption of CLP-m on both colloids with a more marked effect on the smectite.  
Keywords: chlorpyrifos-methyl, adsorption, soil colloids, pH, ionic strength,  
ISI Document Delivery No.: 197QW

471. Gennari, Mara; Messina, Cristina; Abbate, Cristina; Baglieri, Andrea; Boursier, Carlotta, and Gennari, Mara. Solubility and Adsorption Behaviors of Chlorpyriphos-Methyl in the Presence of Surfactants. 2009 Mar; 44, (3): 235-240.   
Rec #: 41419  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the present work changes in the adsorption of the pesticide chlorpyrifos-methyl (CLP-m) on soil colloids induced by application of surfactants were determined using a batch equilibrium method. The surfactants used were sodium dodecyl sulphate (SDS), Tween 20, and dihexadecyldimethylammonium bromide (DHAB). The adsorption isotherms of CLP-m in aqueous medium and in surfactant solutions at concentration equal to the critical micelle concentration (CMC) fitted the Freunlich adsorption equation generally with R2 values greater than 0.96. While the addition of SDS and DHAB decreased the pesticide adsorption, the addition of Tween 20 increased the pesticide adsorption. The increases or decreases in the adsorption in the experiment revealed that the behavior of CLP-m in soil water-systems mainly depends on the type of surfactant. Moreover water solubility of CLP-m changes by the three surfactants below and above their CMC were studied. While the solubility of CLP-m was enhanced by SDS both below and above the CMC, the solubility of the pesticide was enhanced by DHAB only above the CMC. Tween 20 did not influence the solubility of CLP-m.  
Keywords: Sodium  
Keywords: Soil  
Keywords: Sulfates  
Keywords: Behavior  
Keywords: Colloids  
Keywords: P 5000:LAND POLLUTION  
Keywords: Agricultural wastes  
Keywords: Pesticides  
Keywords: Adsorption  
Keywords: Pollution Abstracts; Environment Abstracts  
Keywords: Surfactants  
Keywords: ENA 02:Toxicology & Environmental Safety  
Date revised - 2009-06-01  
Language of summary - English  
Pages - 235-240  
ProQuest ID - 20669703  
SubjectsTermNotLitGenreText - Sulfates; Sodium; Soil; Colloids; Behavior; Agricultural wastes; Pesticides; Adsorption; Surfactants  
Last updated - 2012-12-14  
British nursing index edition - Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants and Agricultural Wastes [J. Environ. Sci. Health, Pt. B: Pestic., Food Contam., Agric. Wastes]. Vol. 44, no. 3, pp. 235-240. Mar 2009.  
Corporate institution author - Gennari, Mara; Messina, Cristina; Abbate, Cristina; Baglieri, Andrea; Boursier, Carlotta  
DOI - MD-0009875945; 9448533; 0360-1234 English

472. Georgakopoulos, Panagiotis; Mylona, Aggeliki; Athanasopoulos, Panagiotis; Drosinos, Eleftherios H., and Skandamis, Panagiotis N. Evaluation of cost-effective methods in the pesticide residue analysis of non-fatty baby foods. 2009 Aug 1-; 115, (3): 1164-1169.   
Rec #: 5850  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Three non-fatty ready-to-eat baby food matrices (fruits: juice, pur+\_e and cocktail plus rice flour/starch and sugar) were fortified with 0.01, 0.05, 0.1 and 0.2 mg/kg of dimethoate, chlorpyrifos, methidathion, phosalone and diazinon. Simple methods including extraction by ethyl acetate [EtAc] and acetone partition and determination by gas chromatography with NitrogenÇôPhosphorus Detector (GCÇôNPD) were used. Acceptable pesticides recoveries (70Çô110%), low detection and quantification limits (0.001 to &gt;0.1 mg/kg and 0.005 to 0.04 mg/kg, respectively) and repeatabilities (%RSDs), in 0.01 mg/kg, within 2.9Çô13.9% were observed. However, analytes recoveries were affected (p &lt; 0.05) by both the baby food formulation and the extraction method used. Specifically, fruits pur+\_e and cocktail EtAc extracts gave excessively over-(dimethoate recoveries of 119.7Çô153.5%) or underestimation (phosalone and especially diazinon recoveries of 19.3Çô79.2%) in contrast to fruits juice (e.g., 61.3Çô87.9%). Also, EtAc extracts showed higher amount of lipophilic compounds and provided lower recoveries for non-polar analytes than those of acetone partition. Consequently, the examined methods may be successfully applied in non-fatty baby foods with the matrix-matched standards determination, following improvements of certain parameters in relation to the clean-up of samples. Baby food/ Pesticide residues/ Gas chromatography

473. Georgakopoulos, Panagiotis; Zachari, Rodanthi; Mataragas, Marios; Athanasopoulos, Panagiotis; Drosinos, Eleftherios H., and Skandamis, Panagiotis N. Optimisation of octadecyl (C18) sorbent amount in QuEChERS analytical method for the accurate organophosphorus pesticide residues determination in low-fatty baby foods with response surface methodology. 2011 Sep 15-; 128, (2): 536-542.   
Rec #: 4140  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Three low-fatty baby food matrices were fortified with 0.01Çô0.2 mg/kg of phorate, diazinon, chlorpyrifos and methidathion. A ÇŁquick, easy, cheap, effective, rugged and safeÇĄ Çô like method (QuEChERS) was used. Quantities of octadecyl (C18) sorbent differed with fortification level and matrix fat, based on central composite experimental design. Quantification was performed by NitrogenÇôPhosphorus Detector gas chromatography, using matrix-matched standards. The highest (p &lt; 0.05) recoveries were observed for methidathion, the lowest fortification levels for a specific C18 amount and the lowest C18 amounts. In meals containing vegetables (1.9% fat) and lamb (3.0% fat), 180Çô210 mg C18 gave recoveries from 67.0% to 105.0% and absence of co-extracts. Yogurt dessert (4.5% fat) required 200Çô230 mg C18 for similar results. Recoveries could also be predicted with &lt;20% error by a polynomial model. The results suggest that modified QuEChERS could be effectively used in the low-fatty baby meals residue analysis. Baby food/ Pesticide residues/ QuEChERS/ Octadecyl/ Gas chromatography/ Central composite design

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Rec #: 60599  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: FDA TOTAL DIET, ASSESSMENT SURVEY NHEXAS, PERCUTANEOUS-ABSORPTION,  
ISI Document Delivery No.: 339DJ

475. Georgopoulos, Panos G; Sasso, Alan F; Isukapalli, Sastry S; Lioy, Paul J; Vallero, Daniel a; Okino, Miles; Reiter, Larry, and Georgopoulos, Panos G. Reconstructing Population Exposures to Environmental Chemicals From Biomarkers: Challenges and Opportunities. 2009 Feb; 19, (2): 149-171.   
Rec #: 45079  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A conceptual/computational framework for exposure reconstruction from biomarker data combined with auxiliary exposure-related data is presented, evaluated with example applications, and examined in the context of future needs and opportunities. This framework employs physiologically based toxicokinetic (PBTK) modeling in conjunction with numerical "inversion" techniques. To quantify the value of different types of exposure data "accompanying" biomarker data, a study was conducted focusing on reconstructing exposures to chlorpyrifos, from measurements of its metabolite levels in urine. The study employed biomarker data as well as supporting exposure-related information from the National Human Exposure Assessment Survey (NHEXAS), Maryland, while the MENTOR-3P system (Modeling ENvironment for TOtal Risk with Physiologically based Pharmacokinetic modeling for Populations) was used for PBTK modeling. Recently proposed, simple numerical reconstruction methods were applied in this study, in conjunction with PBTK models. Two types of reconstructions were studied using (a) just the available biomarker and supporting exposure data and (b) synthetic data developed via augmenting available observations. Reconstruction using only available data resulted in a wide range of variation in estimated exposures. Reconstruction using synthetic data facilitated evaluation of numerical inversion methods and characterization of the value of additional information, such as study-specific data that can be collected in conjunction with the biomarker data. Although the NHEXAS data set provides a significant amount of supporting exposure-related information, especially when compared to national studies such as the National Health and Nutrition Examination Survey (NHANES), this information is still not adequate for detailed reconstruction of exposures under several conditions, as demonstrated here. The analysis presented here provides a starting point for introducing improved designs for future biomonitoring studies, from the perspective of exposure reconstruction; identifies specific limitations in existing exposure reconstruction methods that can be applied to population biomarker data; and suggests potential approaches for addressing exposure reconstruction from such data.Journal of Exposure Science and Environmental Epidemiology (2009) 19, 149-171; doi:10.1038/jes.2008.9; published online 26 March 2008  
Keywords: Chemicals  
Keywords: Bioindicators  
Keywords: Data processing  
Keywords: Physiology  
Keywords: Metabolites  
Keywords: Computer applications  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Nutrition  
Keywords: biomarkers  
Keywords: Pharmacokinetics  
Keywords: Models  
Keywords: Chlorpyrifos  
Keywords: Epidemiology  
Keywords: Inversion  
Keywords: Urine  
Keywords: Pesticides  
Keywords: Toxicology Abstracts; Pollution Abstracts; Risk Abstracts  
Keywords: biomonitoring  
Keywords: R2 23060:Medical and environmental health  
Keywords: X 24330:Agrochemicals  
Keywords: USA, Maryland  
Keywords: Internet  
Date revised - 2010-09-01  
Language of summary - English  
Location - USA, Maryland  
Pages - 149-171  
ProQuest ID - 754885463  
SubjectsTermNotLitGenreText - Data processing; Metabolites; Computer applications; biomarkers; Nutrition; Pharmacokinetics; Models; Chlorpyrifos; Epidemiology; Inversion; Urine; biomonitoring; Internet; Chemicals; Bioindicators; Pesticides; Physiology; USA, Maryland  
Last updated - 2012-03-29  
British nursing index edition - Journal of Exposure Science and Environmental Epidemiology [J. Exposure Sci. Environ. Epidemiol.]. Vol. 19, no. 2, pp. 149-171. Feb 2009.  
Corporate institution author - Georgopoulos, Panos G; Sasso, Alan F; Isukapalli, Sastry S; Lioy, Paul J; Vallero, Daniel A; Okino, Miles; Reiter, Larry  
DOI - 6aff6d8f-ea08-4ff9-b6e8mfgefd108; 13443684; 1559-0631 English

476. Geter, David R; Kan, H Lynn; Lowe, Ezra R; Rick, David L; Charles, Grantley D; Gollapudi, Bhaskar B; Mattsson, Joel L, and Geter, David R. Investigations of Oxidative Stress, Antioxidant Response, and Protein Binding in Chlorpyrifos Exposed Rat Neuronal Pc12 Cells. 2008 Jan; 18, (1): 17-23.   
Rec #: 42369  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos (CPF) is a widely used organophosphate insecticide. In addition to its known properties of cholinesterase inhibition, the production of reactive oxygen species (ROS) has been suggested as a possible toxic mechanism. To investigate CPF-generated ROS, **rat neuronal PC12 cells were exposed to CPF** concentrations of 0 to 5000 is a subset of g/mL in Krebs buffered media (KRH), KRH + 4% bovine serum albumin (BSA), and KRH + 25 is a subset of M of the antioxidant Trolox for 0 to 5 h. Paraquat served as a positive control for ROS. The fluorescent probe 2,7-dichlorodihydro-fluorescein and the MTS assay were used to measure ROS and cytotoxicity, respectively. Examinations into CPF-albumin binding were also conducted. CPF was not strongly cytotoxic to PC12 cells, causing only mild cytotoxicity at 5000 is a subset of g/ml. In KRH media, CPF-generated ROS was observed at 4 and 5 h at 500 and 1000 is a subset of g/mL, and at 1 to 5 h at 5000 is a subset of g/mL CPF. In KRH + 4% BSA, ROS was seen only at 5 h in 5000 is a subset of g/mL CPF. Trolox significantly reduced CPF- and paraquat-induced ROS. Calculated CPF-albumin binding at 1, 10, and 100 is a subset of g/mL CPF in 4% BSA was 96%, 75%, and 15%. These data show CPF at >=500 is a subset of g/mL induced ROS in PC12 cells, but the addition of the antioxidant Trolox and 4% BSA dramatically reduced ROS levels.  
Keywords: Antioxidants  
Keywords: Data processing  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: Toxicology Abstracts; CSA Neurosciences Abstracts  
Keywords: organophosphates  
Keywords: Cholinesterase  
Keywords: Chlorpyrifos  
Keywords: Vitamin E  
Keywords: Cytotoxicity  
Keywords: Insecticides  
Keywords: Pheochromocytoma cells  
Keywords: Bovine serum albumin  
Keywords: Reactive oxygen species  
Keywords: Oxidative stress  
Keywords: Fluorescent indicators  
Keywords: X 24300:Methods  
Keywords: Paraquat  
Date revised - 2009-02-01  
Language of summary - English  
Pages - 17-23  
ProQuest ID - 20276909  
SubjectsTermNotLitGenreText - Reactive oxygen species; Pheochromocytoma cells; Vitamin E; Antioxidants; Cytotoxicity; Chlorpyrifos; Fluorescent indicators; Cholinesterase; Data processing; organophosphates; Oxidative stress; Insecticides; Paraquat; Bovine serum albumin  
Last updated - 2011-12-14  
British nursing index edition - Toxicology Mechanisms and Methods [Toxicol. Mech. Methods]. Vol. 18, no. 1, pp. 17-23. Jan 2008.  
Corporate institution author - Geter, David R; Kan, H Lynn; Lowe, Ezra R; Rick, David L; Charles, Grantley D; Gollapudi, Bhaskar B; Mattsson, Joel L  
DOI - MD-0009198917; 8883045; 1537-6516; 1537-6524 English

477. Ghazala; Mahboob, S; Asi, M R, and Ghazala. Determination of Organochlorine and Nitrogen Containing Pesticide Residues in Cirrhina Mrigala, Sediments and Water by Reverse Phase High Performance Liquid Chromatography. 2009; 29, 70-71.   
Rec #: 48959  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Some organochlorine and nitrogen containing pesticide residues in cultured mori fish (Cirrhina mrigala), sediment and water samples were determined to find out the extent of pesticide contamination and accumulation in the farm raised fish. Farmed raised fish of two weight groups designated as WI (250-750g) and W2 (800-1300g) were collected from a Local Fish Hatchery. The extracted residues were analyzed through reverse phase high performance liquid chromatography (HPLC) technique. a-Endosulfan, DDE, parathion methyl, isoproturon, atrazine and carbofuran were detected in fish. All of these pesticide residues including carbaryl and except for isoproturon were identified in the soil sediments, whereas in water samples all of these pesticide residues except isoproturon, and DDE were also identified. DDT, Heptachlor, Endosulfan, Chlorpyrifos, dimethoate, captan, Cypermethrin, carbaryl, Chlorobromuron and Chlorotoluron were absent from all samples of fish and water, whereas in sediments all these were absent except carbaryl. Total fat contents in flesh of Cirrhina mrigala were recorded as 1.24% plus or minus 0.005 and 3.44% plus or minus 0.026 under the weight groups WI and W2, respectively The pesticide residues level in Cirrhina mrigala was noted as 0.089 plus or minus 0.0007 and 0.411 plus or minus 0.09 mu g/g under weight groups WI and W2, respectively with highly significant differences at P<0.01. Maximum concentration of pesticides was recorded in fish of weight group W super(2) followed W sub(1) The level of all pesticide residues was lower than maximum residue limit in fish samples. In sediments DDE was remained highest while the same was not detected in water samples.  
Keywords: Insecticides  
Keywords: Pakistan  
Keywords: Nitrous oxide  
Keywords: Water sampling  
Keywords: Liquid chromatography  
Keywords: Pesticide residues  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: DDE  
Keywords: Carbaryl  
Keywords: Fish  
Keywords: Sediments  
Keywords: Pollution Abstracts; Aqualine Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Date revised - 2012-11-01  
Language of summary - English  
Location - Pakistan  
Pages - 70-71  
ProQuest ID - 1171870145  
SubjectsTermNotLitGenreText - Insecticides; Nitrous oxide; Water sampling; Liquid chromatography; Pesticide residues; DDE; Carbaryl; Fish; Sediments; Pakistan  
Last updated - 2012-12-03  
British nursing index edition - Proceedings of Pakistan Congress of Zoology [Proc. Pak. Congress Zool.]. Vol. 29, pp. 70-71. 2009.  
Corporate institution author - Mahboob, S; Asi, M R  
DOI - MD-0019808967; 17172951; 1013-3461 English

478. Ghedira, Jihene; Jebali, Jamel; Banni, Mohamed; Chouba, Lassaad; Boussetta, Hamadi; Lopez-Barea, Juan; Alhama, Jose, and Ghedira, Jihene. Use of Oxidative Stress Biomarkers in Carcinus Maenas to Assess Littoral Zone Contamination in Tunisia. 2011; 14, (1): 87-98.   
Rec #: 47479  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: **Biological effects of pollutants were studied in Carcinus maenas crabs from 3 polluted sites** (Bizerte, Teboulba, Gargour) along the Tunisian littoral zone using biochemical biomarkers. A metal contamination gradient was found, Bizerte standing out as the most metal-polluted area. Gargour animals nonetheless showed higher oxidative stress responses, such as glutathione reductase and 6-phosphogluconate dehydrogenase activities, as well as malondialdehyde (MDA) levels in gills. The gills showed higher lipid peroxidation than did the digestive gland, in keeping with their respiratory role. Animals were also exposed for different periods to 2 model pollutants, cadmium and chlorpyriphos-ethyl. Although cadium induces oxidative stress, mainly in gills, thus increasing lipid peroxidation, principal-component analysis indicated that metal content in sediments and crabs from in-field monitoring does not fully correlate with oxidative stress biomarker responses. Catalase and MDA were the most sensitive biomarkers, and gills the most responsive organ. A lower catalase content in gills was linked to higher MDA levels.  
Keywords: glutathione reductase  
Keywords: Contamination  
Keywords: Heavy metals  
Keywords: Lipids  
Keywords: Pollution effects  
Keywords: Biomarkers  
Keywords: dehydrogenase  
Keywords: Carcinus maenas  
Keywords: Pollutants  
Keywords: Oxidative stress  
Keywords: Glands  
Keywords: Pollution Abstracts; ASFA 1: Biological Sciences & Living Resources; Ecology Abstracts  
Keywords: Cadmium  
Keywords: Tunisia  
Keywords: Marine crustaceans  
Keywords: Gills  
Keywords: Malondialdehyde  
Keywords: Littoral zone  
Keywords: Bioindicators  
Keywords: Metals  
Keywords: Marine  
Keywords: Peroxidation  
Keywords: Decapoda  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Crustacea  
Keywords: biomarkers  
Keywords: Sediments  
Keywords: Catalase  
Keywords: Lipid peroxidation  
Keywords: Q1 01286:Physiology, biochemistry, biophysics  
Keywords: Digestive glands  
Keywords: D 04040:Ecosystem and Ecology Studies  
Date revised - 2012-10-01  
Language of summary - English  
Location - Tunisia  
Pages - 87-98  
ProQuest ID - 1113216973  
SubjectsTermNotLitGenreText - Digestive glands; Contamination; Pollutants; Heavy metals; Pollution effects; Biomarkers; Marine crustaceans; Gills; Littoral zone; glutathione reductase; biomarkers; dehydrogenase; Sediments; Catalase; Lipid peroxidation; Oxidative stress; Glands; Cadmium; Malondialdehyde; Bioindicators; Metals; Peroxidation; Crustacea; Lipids; Decapoda; Carcinus maenas; Tunisia; Marine  
Last updated - 2012-12-03  
British nursing index edition - Aquatic Biology. Vol. 14, no. 1, pp. 87-98. 2011.  
Corporate institution author - Ghedira, Jihene; Jebali, Jamel; Banni, Mohamed; Chouba, Lassaad; Boussetta, Hamadi; Lopez-Barea, Juan; Alhama, Jose  
DOI - 228e857a-1d63-46c3-94a4-aa95750483b6; 17248227; CS1261853; 1864-7782 English

479. Gholami, A. ; Kassis, R.; Real, E.; Delmas, O.; Guadagnini, S.; Larrous, F.; Obach, D.; Prevost, M. C.; Jacob, Y., and Bourhy, H. Mitochondrial Dysfunction in Lyssavirus-Induced Apoptosis.   
Rec #: 51259  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Virol. 1999 Apr;73(4):2921-9 (medline /10074141)  
COMMENTS: Cites: J Mol Biol. 1999 Feb 5;285(5):2105-17 (medline /9925788)  
COMMENTS: Cites: Am J Hum Genet. 1999 Sep;65(3):611-20 (medline /10441567)  
COMMENTS: Cites: Protein Sci. 2000 Jun;9(6):1162-76 (medline /10892809)  
COMMENTS: Cites: Science. 2000 Aug 18;289(5482):1150-1 (medline /10970229)  
COMMENTS: Cites: J Neurovirol. 2000 Oct;6(5):373-81 (medline /11031690)  
COMMENTS: Cites: Biochemistry. 2000 Oct 24;39(42):12989-95 (medline /11041864)  
COMMENTS: Cites: J Exp Med. 2001 Feb 19;193(4):509-19 (medline /11181702)  
COMMENTS: Cites: EMBO J. 2001 Mar 1;20(5):951-60 (medline /11230119)  
COMMENTS: Cites: J Med Microbiol. 2001 Mar;50(3):238-42 (medline /11232769)  
COMMENTS: Cites: J Virol. 2001 Apr;75(7):3268-76 (medline /11238853)  
COMMENTS: Cites: Annu Rev Immunol. 2001;19:475-96 (medline /11244044)  
COMMENTS: Cites: Nat Rev Mol Cell Biol. 2001 May;2(5):339-49 (medline /11331908)  
COMMENTS: Cites: Crit Rev Biochem Mol Biol. 2001;36(3):291-336 (medline /11450972)  
COMMENTS: Cites: J Virol. 2001 Nov;75(22):10623-9 (medline /11602704)  
COMMENTS: Cites: J Virol. 2001 Nov;75(22):10800-7 (medline /11602721)  
COMMENTS: Cites: J Virol. 2002 Apr;76(7):3374-81 (medline /11884563)  
COMMENTS: Cites: J Biol Chem. 2002 Sep 13;277(37):34424-33 (medline /12093802)  
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ABSTRACT: Lyssaviruses are highly neurotropic viruses associated with neuronal apoptosis. Previous observations have indicated that the matrix proteins (M) of some lyssaviruses induce strong neuronal apoptosis. However, the molecular mechanism(s) involved in this phenomenon is still unknown. We show that for Mokola virus (MOK), a lyssavirus of low pathogenicity, the M (M-MOK) targets mitochondria, disrupts the mitochondrial morphology, and induces apoptosis. Our analysis of truncated M-MOK mutants suggests that the information required for efficient mitochondrial targeting and dysfunction, as well as caspase-9 activation and apoptosis, is held between residues 46 and 110 of M-MOK. We used a yeast two-hybrid approach, a coimmunoprecipitation assay, and confocal microscopy to demonstrate that M-MOK physically associates with the subunit I of the cytochrome c (cyt-c) oxidase (CcO) of the mitochondrial respiratory chain; this is in contrast to the M of the highly pathogenic Thailand lyssavirus (M-THA). M-MOK expression induces a significant decrease in CcO activity, which is not the case with M-THA. M-MOK mutations (K77R and N81E) resulting in a similar sequence to M-THA at positions 77 and 81 annul cyt-c release and apoptosis and restore CcO activity. As expected, the reverse mutations, R77K and E81N, introduced in M-THA induce a phenotype similar to that due to M-MOK. These features indicate a novel mechanism for energy depletion during lyssavirus-induced apoptosis.  
MESH HEADINGS: Amino Acid Sequence  
MESH HEADINGS: Amino Acid Substitution/genetics  
MESH HEADINGS: Animals  
MESH HEADINGS: \*Apoptosis  
MESH HEADINGS: Caspase 9/metabolism  
MESH HEADINGS: Cell Line  
MESH HEADINGS: Cricetinae  
MESH HEADINGS: Electron Transport Complex IV/antagonists &amp  
MESH HEADINGS: inhibitors/\*metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunoprecipitation  
MESH HEADINGS: Lyssavirus/genetics/\*pathogenicity  
MESH HEADINGS: Mice  
MESH HEADINGS: Microscopy, Confocal  
MESH HEADINGS: Mitochondria/\*physiology/\*virology  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Mutagenesis, Site-Directed  
MESH HEADINGS: Protein Binding  
MESH HEADINGS: Two-Hybrid System Techniques  
MESH HEADINGS: Viral Proteins/genetics/metabolism eng

480. Ghosh, R. P.; Horowitz-Scherer, R. A.; Nikitina, T.; Shlyakhtenko, L. S., and Woodcock, C. L. Mecp2 Binds Cooperatively to Its Substrate and Competes With Histone H1 for Chromatin Binding Sites.   
Rec #: 50469  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Proc Natl Acad Sci U S A. 1998 Nov 24;95(24):14173-8 (medline /9826673)  
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COMMENTS: Cites: Cell. 1997 Feb 21;88(4):471-81 (medline /9038338)  
COMMENTS: Cites: Nature. 1997 Sep 18;389(6648):251-60 (medline /9305837)  
COMMENTS: Cites: Nature. 1998 Apr 30;392(6679):885-8 (medline /9582068)  
COMMENTS: Cites: Biochemistry. 1998 Oct 20;37(42):14776-87 (medline /9778352)  
ABSTRACT: Sporadic mutations in the hMeCP2 gene, coding for a protein that preferentially binds symmetrically methylated CpGs, result in the severe neurological disorder Rett syndrome (RTT). In the present work, employing a wide range of experimental approaches, we shed new light on the many levels of MeCP2 interaction with DNA and chromatin. We show that strong methylation-independent as well as methylation-dependent binding by MeCP2 is influenced by DNA length. Although MeCP2 is strictly monomeric in solution, its binding to DNA is cooperative, with dimeric binding strongly correlated with methylation density, and strengthened by nearby A/T repeats. Dimeric binding is abolished in the F155S and R294X severe RTT mutants. MeCP2 also binds chromatin in vitro, resulting in compaction-related changes in nucleosome architecture that resemble the classical zigzag motif induced by histone H1 and considered important for 30-nm-fiber formation. In vivo chromatin binding kinetics and in vitro steady-state nucleosome binding of both MeCP2 and H1 provide strong evidence for competition between MeCP2 and H1 for common binding sites. This suggests that chromatin binding by MeCP2 and H1 in vivo should be viewed in the context of competitive multifactorial regulation.  
MESH HEADINGS: AT Rich Sequence/genetics  
MESH HEADINGS: Animals  
MESH HEADINGS: Azacitidine/analogs &amp  
MESH HEADINGS: derivatives/pharmacology  
MESH HEADINGS: BALB 3T3 Cells  
MESH HEADINGS: Binding Sites  
MESH HEADINGS: Binding, Competitive  
MESH HEADINGS: Chromatin/genetics/\*metabolism  
MESH HEADINGS: DNA/genetics/\*metabolism  
MESH HEADINGS: DNA Methylation/drug effects  
MESH HEADINGS: Enzyme Inhibitors/pharmacology  
MESH HEADINGS: Fluorescence Polarization  
MESH HEADINGS: Green Fluorescent Proteins/genetics/metabolism  
MESH HEADINGS: Histones/genetics/\*metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Methyl-CpG-Binding Protein 2/chemistry/genetics/\*metabolism  
MESH HEADINGS: Mice  
MESH HEADINGS: Microscopy, Atomic Force  
MESH HEADINGS: Microscopy, Electron  
MESH HEADINGS: Microscopy, Fluorescence  
MESH HEADINGS: Mutation  
MESH HEADINGS: Nucleosomes/genetics/metabolism/ultrastructure  
MESH HEADINGS: Protein Binding  
MESH HEADINGS: Protein Multimerization eng

481. Ghoshdastidar, A. J.; Saunders, J. E.; Brown, K. H., and Tong, A. Z. Membrane bioreactor treatment of commonly used organophosphate pesticides. 2012; 47, (7): 742-750.   
Rec #: 60639  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Five pesticide formulations registered for use in Canada containing organophosphate-insecticide active ingredients azinphos-methyl, chlorpyrifos, diazinon, malathion and phorate were subjected to treatment by membrane bioreactor (MBR) technology. The target active ingredients were introduced to the MBR at ppm level concentrations. The biodegradation of these compounds was analyzed daily using selected ion monitoring gas chromatography-mass spectrometry (GC/MS-SIM) following extraction of the analytes using solid-phase extraction (SPE). Amounts measuring 83 % to 98 % of the target analytes were removed with steady-state concentrations being reached within 5 days of their introduction. The dissolved oxygen, temperature, pH, and total heterotrophic bacterial population were monitored daily to ensure optimal conditions for biodegradation. The quality of the effluent from the MBR was assessed daily through spectrophotometric methods. Measurements were conducted for the concentration of ammonia, nitrate, nitrite, total and reactive phosphorus, as well as the chemical oxygen demand (COD) of the effluent. This study demonstrated that the MBR technology is feasible and efficient for treatment of organophosphate pesticides without introducing additional chemical additives.  
Keywords: Membrane bioreactor, organophosphate pesticides, wastewater treatment,  
ISI Document Delivery No.: 936SG

482. Ginsberg, Gary; Neafsey, Patricia; Hattis, Dale; Guyton, Kathryn Z; Sonawane, Babasaheb, and Johns, Douglas O. Genetic Polymorphism in Paraoxonase 1 (Pon1): Population Distribution of Pon1 Activity. 2009; 12, (5/6): 473-507.   
Rec #: 48459  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Paraoxonase-1 (PON1) is a serum esterase that hydrolyzes the activated oxon form of several organophosphates. The central role of PON1 in detoxification of organophosphate (OP) pesticides was demonstrated in knockout mouse studies, suggesting that human variability in PON1 needs to be considered in health risk assessments involving exposure to these pesticides. The current analysis focused on two genetic loci in which polymorphisms demonstrated to affect PON1 activity. Detailed kinetic studies and population studies found that the \*192Q (wild type) allele is more active toward some substrates (such as **sarin, soman, and diazoxon**) and less active toward others (such as **paraoxon or chlorpyrifos** ) relative to the variant \*192R allele. Another allele that affects activity is \*55M; PON1 enzyme quantity, rather than specific activity or substrate preference, is altered. The \*192R variant occurs commonly with a frequency of 25-64% across the populations analyzed. The \*55M allele is less common, occurring in 5-40% of individuals depending upon the ethnic group studied. These activity and allele frequency data were incorporated into Monte Carlo simulations in which the frequency of both variant alleles was simultaneously modeled in Caucasian, African American, and Japanese populations. The resulting Monte Carlo activity distributions were bimodal for the substrate paraoxon with approximately fourfold differences between low- and high-activity modal medians. Differences in activity between total population median and 1st percentile were five- to sixfold. When sarin metabolic variability was simulated, the population distributions were unimodal. However, there was an even greater degree of interindividual variability (median to 1st percentile difference >20-fold). These results show that the combined effects of two PON1 allelic variants yielded a population distribution that is associated with a considerable degree of interindividual variability in enzyme activity. This indicates that assessments involving PON1 substrates need to evaluate polymorphism-related variability in enzyme activity to display the distribution of internal doses and adverse responses. This may best be achieved via physiologically based pharmacokinetic (PBPK) models that input PON1 activity distributions, such as those generated in this analysis, to simulate the range of oxon internal doses possible across the population. [PUBLICATION ABSTRACT]  
Keywords: Pharmacy And Pharmacology  
Copyright - Copyright Taylor & Francis Ltd. 2009  
Language of summary - English  
Pages - 473-507  
ProQuest ID - 760949745  
Last updated - 2012-02-08  
Place of publication - Philadelphia  
Corporate institution author - Ginsberg, Gary; Neafsey, Patricia; Hattis, Dale; Guyton, Kathryn Z; Sonawane, Babasaheb; Johns, Douglas O  
DOI - 2174669011; 55155651; 105332; JTXB; ContentEditor.105332.5606697 English

483. Giordano, Ady; Richter, Pablo; Ahumada, Ines, and Giordano, Ady. Determination of Pesticides in River Water Using Rotating Disk Sorptive Extraction and Gas Chromatography-Mass Spectrometry. 2011 Oct 15; 85, (5): 2425-2429.   
Rec #: 47049  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The rotating disk sorptive extraction (RDSE) technique was applied to the determination of pesticides in aqueous samples. Pesticides of different polarities were considered in this study: chlorpyrifos, diazinon, fenvalarate, cyhalothrin, cypermethrin, lindane and malathion. The sorptive/desorptive behavior of the pesticides was studied using a rotating disk containing a polydimethylsiloxane (PDMS) phase on one of its surfaces. The analyte polarity was a significant factor in the extraction time; shorter extraction times were required for the more apolar pesticides. The optimum variables for the extraction of all analytes were: extraction time of 3 h, sample volume of 25 mL, rotational velocity of the disk 1250 rpm, desorption time of 30 min using methanol. For pesticides with values of Log K sub(ow) 4, the extraction time can be reduced to 30 min for a quantitative extraction. Under these conditions, recoveries between 76% and 101% were obtained for the target pesticides, and the repeatability of the methodology, expressed as relative standard deviation, was determined to be between 10% and 20%. Additionally, the limits of detection of the analytes were lower than 3.1 mu g L super(-1). The extraction method developed using the RDSE was compared to a stir bar sorptive extraction (SBSE) under the same conditions. It can be observed that the extraction using the rotating disk offers higher recoveries because of its higher PDMS volume and its higher surface area to volume ratio that allows for improved mass transfer.  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: Agricultural Chemicals  
Keywords: Desorption  
Keywords: Standard Deviation  
Keywords: Pesticides  
Keywords: Mass Transfer  
Keywords: Water Resources Abstracts; Aqualine Abstracts; ASFA 2: Ocean Technology Policy & Non-Living Resources  
Keywords: Velocity  
Keywords: Polarity  
Keywords: Lindane  
Keywords: Malathion  
Date revised - 2012-05-01  
Language of summary - English  
Pages - 2425-2429  
ProQuest ID - 926336592  
SubjectsTermNotLitGenreText - Desorption; Agricultural Chemicals; Standard Deviation; Pesticides; Mass Transfer; Velocity; Lindane; Polarity; Malathion  
Last updated - 2012-12-14  
British nursing index edition - Talanta [Talanta]. Vol. 85, no. 5, pp. 2425-2429. 15 Oct 2011.  
Corporate institution author - Giordano, Ady; Richter, Pablo; Ahumada, Ines  
DOI - 2a0d9f39-2182-487e-bf69csaobj201; 15796163; 0039-9140 English

484. Glotfelty, D. E.; Seiber, J. N., and Liljedahl, L. A. Pesticides in Fog. 1987; 325, 602-605.   
Rec #: 850  
Keywords: FATE  
Call Number: NO FATE (ACR,ATZ,CPY,DZ,MDT,MLN,MP,MTL,PDM,SZ,TBF)  
Notes: Chemical of Concern: ACR,ATZ,CPY,DZ,EPRN,MDT,MLN,MP,MTL,PDM,PRN,SZ,TBF

485. Goda, S. K. ; Elsayed, I. E.; Khodair, T. A.; El-Sayed, W. , and Mohamed, M. E. Screening for and isolation and identification of malathion-degrading bacteria: cloning and sequencing a gene that potentially encodes the malathion-degrading enzyme, carboxylestrase in soil bacteria. 2010; 21, (6): 903-913.   
Rec #: 60679  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Five **malathion**-degrading bacterial strains were enriched and isolated from soil samples collected from different agricultural sites in Cairo, Egypt. Malathion was used as a sole source of carbon (50 mg/l) to enumerate malathion degraders, which were designated as IS1, IS2, IS3, IS4, and IS5. They were identified, based on their morphological and biochemical characteristics, as Pseudomonas sp., Pseudomonas putida, Micrococcus lylae, Pseudomonas aureofaciens, and Acetobacter liquefaciens, respectively. IS1 and IS2, which showed the highest degrading activity, were selected for further identification by partial sequence analysis of their 16S rRNA genes. The 16S rRNA gene of IS1 shared 99% similarity with that of Alphaprotoebacterium BAL284, while IS2 scored 100% similarity with that of Pseudomonas putida 32zhy. Malathion residues almost completely disappeared within 6 days of incubation in IS2 liquid cultures. LC/ESI-MS analysis confirmed the degradation of malathion to malathion monocarboxylic and dicarboxylic acids, which formed as a result of carboxylesterase activity. A carboxylesterase gene (CE) was amplified from the IS2 genome by using specifically designed PCR primers. The sequence analysis showed a significant similarity to a known CE gene in different Pseudomonas sp. We report here the isolation of a new malathion-degrading bacteria from soils in Egypt that may be very well adapted to the climatic and environmental conditions of the country. We also report the partial cloning of a new CE gene. Due to their high biodegradation activity, the bacteria isolated from this work merit further study as potential biological agents for the remediation of soil, water, or crops contaminated with the pesticide malathion.  
Keywords: Malathion, Pesticide degradation, Pseudomonas, GC-ECD, Carboxylesterase  
ISI Document Delivery No.: 666WL

486. Goel, P. and Kapur-Ghai, J. Development of an enzyme-linked immunosorbent assay for detection of the organophosphate pesticide, chlorpyrifos. 2012; 103, (9): 989-990.   
Rec #: 60709  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: TANDEM MASS-SPECTROMETRY, IMMUNOASSAY, FENTHION, SAMPLES, ELISA  
ISI Document Delivery No.: 048AJ

487. Goldoni, M. ; Caglieri, A.; Poli, D.; Vettori, M. V.; Ceccatelli, S., and Mutti, A. Methylmercury at low doses modulates the toxicity of PCB153 on PC12 neuronal cell line in asynchronous combination experiments. 2008; 46, (2): 808-811.   
Rec #: 60729  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: **Me-Hg and PCB153** are known neurotoxic contaminants which tend to accumulate in food, particularly in fish. Aim of this study was to perform asynchronous and combined exposure to Me-Hg and PCB153 in a neuronal rat cell line (PC12) to better characterise the antagonism observed at some combination concentrations. PC12 cells were treated with three concentrations of Me-Hg (0.1-0.5-1.0 mu M) and PCB153 at one concentration (175 mu M) in single and combined asynchronous exposures, using viability (MTT assay) as end-point. At all concentrations used, a statistically significant antagonistic effect was observed when Me-Hg preceded PCB 153 exposure, while effect was additive when PCB153 preceded Me-Hg exposure. The antagonism is particularly evident at low concentrations of Me-Hg (0. 1 mu M). In conclusion, combined asynchronous exposure showed that whereas Me-Hg can modulate PCB 153 toxicity, the opposite seems not to be true. Therefore, the use of asynchronous exposure could be a promising approach to study the mechanisms of toxicity of binary mixtures. (C) 2007 Elsevier Ltd. All rights reserved.  
Keywords: methyl-mercury, PCB153, PC12, neurotoxicity, combined exposure  
ISI Document Delivery No.: 268JZ

488. Goldsmith, M. and Tawfik, D. S. Potential Role of Phenotypic Mutations in the Evolution of Protein Expression and Stability.   
Rec #: 50869  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Proc Natl Acad Sci U S A. 2007 Feb 6;104(6):1907-12 (medline /17264207)  
COMMENTS: Cites: Antimicrob Agents Chemother. 2007 Apr;51(4):1304-9 (medline /17220412)  
COMMENTS: Cites: Nature. 2006 Dec 14;444(7121):929-32 (medline /17122770)  
COMMENTS: Cites: Chem Biol. 2006 Oct;13(10):1091-100 (medline /17052613)  
COMMENTS: Cites: Biochem Soc Trans. 2006 Nov;34(Pt 5):738-42 (medline /17052186)  
COMMENTS: Cites: Nature. 2006 Sep 7;443(7107):50-5 (medline /16906134)  
COMMENTS: Cites: Nat Genet. 2006 Jun;38(6):636-43 (medline /16715097)  
COMMENTS: Cites: Genetics. 2006 Jan;172(1):197-206 (medline /16143614)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2005 Oct 4;102(40):14338-43 (medline /16176987)  
COMMENTS: Cites: Mol Biol Evol. 2005 Jun;22(6):1444-55 (medline /15774424)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2005 Jan 18;102(3):606-11 (medline /15644440)  
COMMENTS: Cites: J Gen Virol. 1998 Dec;79 ( Pt 12):2921-8 (medline /9880005)  
COMMENTS: Cites: J Biol Chem. 1998 May 22;273(21):13170-6 (medline /9582358)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1997 Aug 5;94(16):8801-6 (medline /9238058)  
COMMENTS: Cites: Bioessays. 1995 Nov;17(11):987-97 (medline /8526893)  
COMMENTS: Cites: Biochemistry. 1994 Jun 21;33(24):7505-9 (medline /8011615)  
COMMENTS: Cites: Biochemistry. 1992 Feb 4;31(4):954-8 (medline /1370910)  
COMMENTS: Cites: Annu Rev Genet. 1992;26:29-50 (medline /1482115)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1991 Aug 15;88(16):7160-4 (medline /1831267)  
COMMENTS: Cites: Biochemistry. 1986 Oct 7;25(20):5920-8 (medline /3098280)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1982 Jun;79(11):3438-41 (medline /7048305)  
COMMENTS: Cites: Mol Gen Genet. 1983;191(2):207-12 (medline /6353160)  
COMMENTS: Cites: Mol Gen Genet. 1982;188(2):169-72 (medline /6759868)  
COMMENTS: Cites: Evolution. 2003 Sep;57(9):1959-72 (medline /14575319)  
COMMENTS: Cites: J Mol Biol. 2002 Jul 5;320(2):369-87 (medline /12079393)  
COMMENTS: Cites: Trends Genet. 2001 Aug;17(8):425-8 (medline /11485798)  
COMMENTS: Cites: Chembiochem. 2001 Mar 2;2(3):212-9 (medline /11828447)  
COMMENTS: Cites: EMBO J. 2001 Sep 17;20(18):5280-9 (medline /11566891)  
COMMENTS: Cites: Antimicrob Agents Chemother. 2001 Apr;45(4):1278-80 (medline /11257046)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2001 Jan 2;98(1):283-8 (medline /11114163)  
COMMENTS: Cites: Neurobiol Aging. 2000 Nov-Dec;21(6):879-91 (medline /11124436)  
COMMENTS: Cites: Int Immunol. 2000 Nov;12(11):1521-9 (medline /11058571)  
COMMENTS: Cites: Protein Expr Purif. 2000 Jul;19(2):235-45 (medline /10873536)  
COMMENTS: Cites: Cell. 2008 Jul 25;134(2):341-52 (medline /18662548)  
COMMENTS: Cites: Biol Direct. 2008;3:18 (medline /18479505)  
COMMENTS: Cites: J Mol Biol. 2008 Jun 20;379(5):1029-44 (medline /18495157)  
COMMENTS: Cites: Genetics. 2008 Mar;178(3):1653-60 (medline /18245823)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2008 Feb 26;105(8):3076-81 (medline /18287048)  
COMMENTS: Cites: PLoS Comput Biol. 2007 Nov;3(11):e203 (medline /18039025)  
COMMENTS: Cites: J Mol Biol. 2007 Jun 22;369(5):1318-32 (medline /17482644)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2007 May 1;104(18):7522-7 (medline /17452638)  
COMMENTS: Cites: Trends Biochem Sci. 2007 May;32(5):204-6 (medline /17419062)  
COMMENTS: Cites: RNA. 2007 Jan;13(1):87-96 (medline /17095544)  
ABSTRACT: Phenotypic mutations (errors occurring during protein synthesis) are orders of magnitude more frequent than genetic mutations. Consequently, the sequences of individual protein molecules transcribed and translated from the same gene can differ. To test the effects of such mutations, we established a bacterial system in which an antibiotic resistance gene (TEM-1 beta-lactamase) was transcribed by either a high-fidelity RNA polymerase or its error-prone mutant. This setup enabled the analysis of individual mRNA transcripts that were synthesized under normal or error-prone conditions. We found that an increase of approximately 20-fold in the frequency of transcription errors promoted the evolution of higher TEM-1 expression levels and of more stable enzyme variants. The stabilized variants exhibited a distinct advantage under error-prone transcription, although under normal transcription they conferred resistance similar to wild-type TEM-1. They did so, primarily, by increasing TEM-1's tolerance to destabilizing deleterious mutations that arise from transcriptional errors. The stabilized TEM-1 variants also showed increased tolerance to genetic mutations. Thus, although phenotypic mutations are not individually subjected to inheritance and natural selection, as are genetic mutations, they collectively exert a direct and immediate effect on protein fitness. They may therefore play a role in shaping protein traits such as expression levels, stability, and tolerance to genetic mutations.  
MESH HEADINGS: Ampicillin/pharmacology  
MESH HEADINGS: DNA, Complementary/genetics  
MESH HEADINGS: Databases, Nucleic Acid  
MESH HEADINGS: \*Evolution, Molecular  
MESH HEADINGS: Gene Expression Regulation  
MESH HEADINGS: Mutation/genetics  
MESH HEADINGS: Phenotype  
MESH HEADINGS: Selection, Genetic  
MESH HEADINGS: Transcription, Genetic/drug effects/genetics  
MESH HEADINGS: beta-Lactamases/\*genetics/\*metabolism eng

489. Gomes, J. and Lloyd, O. L. Oral exposure of mice to formulations of organophosphorous pesticides: gestational and litter outcomes. 2009; 19, (2): 125-137.   
Rec #: 60749  
Keywords: MIXTURE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The purpose of this study was to examine gestational and litter outcomes in mice models from **oral exposure to a mixture of formulations of organophosphorous pesticides used in local vegetable production**. Male and female mice were exposed to premating and preconception, respectively, to a mixture of organophosphorous pesticide formulations for a period of 7 weeks. The pregnant dams were monitored during gestation and delivered by Caesarean section pre-partum. The percentages of resorptions and the resorptions/implantations ratios, in all the exposed groups, were significantly higher than the reference and the control groups. Percentages of litters with one or more lost embryos were observed in all the exposed groups and were significantly higher than the comparison groups. Fetal weights were significantly lower and the maternal weight gains per live fetus were significantly higher in the medium-dose-exposed groups than the control group. Percentages of fetuses with intra-uterine growth retardation at one standard deviation were significantly higher in all the exposed groups than the comparison groups.  
Keywords: reproductive toxicity, organophosphorous pesticide formulations, fetal  
ISI Document Delivery No.: 434SZ

490. Gomes, J.; Lloyd, O. L., and Hong, Z. Oral Exposure of Male and Female Mice to Formulations of Organophosphorous Pesticides: Congenital Malformations. 2008; 27, (3): 231-240.   
Rec #: 2470  
Keywords: MIXTURE  
Call Number: NO MIXTURE (CPY,DDVP,PIRM)  
Notes: Chemical of Concern: CPY,DDVP,PIRM

491. Gonz+ílez-Curbelo, Miguel +üngel; Hern+índez-Borges, Javier; Ravelo-P+\_rez, Lidia M., and Rodr+ˇguez-Delgado, Miguel +üngel. Insecticides extraction from banana leaves using a modified QuEChERS method. 2011 Apr 1-; 125, (3): 1083-1090.   
Rec #: 5420  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: An analytical method employing gas chromatography (GC) with nitrogenÇôphosphorus detection has been developed for the simultaneous determination of eight insecticides (seven organophosphorus pesticides: ethoprophos, diazinon, chlorpyrifos-methyl, fenitrothion, malathion, chlorpyrifos and fenamiphos, and one thiadiazine: buprofezin) in banana leaves that are currently being used to feed cattle or hogs. The extraction and preconcentration of these pesticides were carried out using a modified QuEChERS procedure and the whole method was validated in terms of repeatability, linearity, precision and accuracy. Triphenylphosphate was used as internal standard. Matrix effect evaluation was also carried out using a matrix matched calibration. The developed procedure gave satisfactory recovery (89Çô104%) and relative standard deviation values (&lt;9.1%) for the studied pesticides in banana leaves, while limits of detection ranged between 0.002 and 0.064 mg/kg. The method was finally applied to the determination of these pesticides in 12 treated banana leaves samples collected at different banana cultivars of the Canary Islands. Residues of chlorpyrifos were found in ten of these samples. Pesticide confirmation was carried out by GC with tandem mass spectrometry detection. QuEChERS/ Insecticides/ Banana leaves/ Gas chromatography/ NitrogenÇôphosphorus detection/ Tandem mass spectrometry

492. Gonzalez-Curbelo, Ma; Hernandez-Borges, J; Borges-Miquel, T M; Rodriguez-Delgado, Ma, and Gonzalez-Curbelo, MA. Determination of Pesticides and Their Metabolites in Processed Cereal Samples. 2012 Jan; 29, (1): 104-116.   
Rec #: 42929  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Fifteen pesticides including some of their metabolites (disulfoton sulfoxide, ethoprophos, cadusafos, dimethoate, terbufos, disulfoton, chlorpyrifos-methyl, malaoxon, fenitrothion, pirimiphos-methyl, malathion, chlorpyrifos, terbufos sulfone, disulfoton sulfone and fensulfothion) were analysed in milled toasted wheat and maize as well as in wheat flour and baby cereals. The QuEChERS (quick, easy, cheap, effective, rugged and safe) methodology was used and its dispersive solid-phase extraction procedure was optimised by means of an experimental design with the aim of reducing the amount of co-extracted lipids and obtaining a clean extract. Gas chromatography with nitrogen phosphorus detection were used as the separation and detection techniques, respectively. The method was validated in terms of selectivity, recoveries, calibration, precision and accuracy as well as matrix effects. Limits of detection were between 0.07 and 34.8 mu g kg-1 with recoveries in the range of 71-110% (relative standard deviations were below 9%). A total of 40 samples of different origin were analysed. Residues of pirimiphos-methyl were found in six of the samples at concentrations in the range 0.08-0.47 mg kg-1, which were below the MRLs established for this pesticide in cereal grains. Tandem mass spectrometry confirmation was also carried out in order to identify unequivocally the presence of this pesticide.  
Keywords: Risk Abstracts  
Keywords: Residues  
Keywords: Lipids  
Keywords: Metabolites  
Keywords: Chlorpyrifos  
Keywords: Triticum aestivum  
Keywords: Food additives  
Keywords: Zea mays  
Keywords: Pesticides  
Keywords: Economics  
Keywords: R2 23060:Medical and environmental health  
Keywords: Wheat  
Keywords: Nitrogen  
Date revised - 2012-09-01  
Language of summary - English  
Pages - 104-116  
ProQuest ID - 1038614554  
SubjectsTermNotLitGenreText - Chlorpyrifos; Food additives; Residues; Lipids; Economics; Pesticides; Metabolites; Wheat; Nitrogen; Triticum aestivum; Zea mays  
Last updated - 2013-02-08  
British nursing index edition - Food Additives & Contaminants: Part A - Chemistry, Analysis, Control, Exposure & Risk Assessment. Vol. 29, no. 1, pp. 104-116. Jan 2012.  
Corporate institution author - Gonzalez-Curbelo, MA; Hernandez-Borges, J; Borges-Miquel, T M; Rodriguez-Delgado, MA  
DOI - d9d1046b-f6e1-4501-ae26mfgefd107; 17032559; 1944-0049; 1944-0057 English

493. Gonzalez-Curbelo, Miguel Angel; Asensio-Ramos, Maria; Herrera-Herrera, Antonio V; Hernandez-Borges, Javier, and Gonzalez-Curbelo, Miguel Angel. Pesticide Residue Analysis in Cereal-Based Baby Foods Using Multi-Walled Carbon Nanotubes Dispersive Solid-Phase Extraction. 2012 Jul; 404, (1): 183-196.   
Rec #: 42659  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the present study, a new analytical method has been developed for the simultaneous quantification of 15 organophosphorus pesticides, including some of their metabolites, (disulfoton-sulfoxide, ethoprophos, cadusafos, dimethoate, terbufos, disulfoton, chlorpyrifos-methyl, malaoxon, fenitrothion, pirimiphos-methyl, malathion, chlorpyrifos, terbufos-sulfone, disulfoton-sulfone and fensulfothion) in three different types of commercial cereal-based baby foods. Dispersive solid-phase extraction (dSPE) with multi-walled carbon nanotubes (MWCNTs) was used together with gas chromatography with nitrogen phosphorus detection. Most favorable conditions involved a previous ultrasound-assisted extraction of the sample with acetonitrile containing formic acid. After evaporation of the extract and redissolution in water, a dSPE procedure was carried out with MWCNTs. The whole method was validated in terms of repeatability, linearity, precision and accuracy and matrix effect was also evaluated. Absolute recoveries were in the range 64--105 % with relative standard deviation values below 7.6 %. Limits of quantification achieved ranged from 0.31 to 5.50 Delta \*mg/kg, which were lower than the European Union maximum residue limits for pesticide residues in cereal-based baby foods.  
Keywords: Chlorpyrifos  
Keywords: European Union  
Keywords: P 9999:GENERAL POLLUTION  
Keywords: Evaporation  
Keywords: Pesticide residues  
Keywords: Pesticides  
Keywords: Metabolites  
Keywords: Dimethoate  
Keywords: Pollution Abstracts  
Keywords: Malathion  
Keywords: Nitrogen  
Keywords: Nanotechnology  
Date revised - 2012-11-01  
Language of summary - English  
Location - European Union  
Pages - 183-196  
ProQuest ID - 1171876842  
SubjectsTermNotLitGenreText - Chlorpyrifos; Evaporation; Pesticide residues; Pesticides; Metabolites; Dimethoate; Malathion; Nitrogen; Nanotechnology; European Union  
Last updated - 2013-02-08  
British nursing index edition - Analytical and Bioanalytical Chemistry [Anal. Bioanal. Chem.]. Vol. 404, no. 1, pp. 183-196. Jul 2012.  
Corporate institution author - Gonzalez-Curbelo, Miguel Angel; Asensio-Ramos, Maria; Herrera-Herrera, Antonio V; Hernandez-Borges, Javier  
DOI - 957ed207-82f6-453a-b95acsamfg201; 17286135; 1618-2642 English

494. Goodbred, S. L.; Gilliom, R. J.; Gross, T. S.; Denslow, N. P.; Bryant, W. L., and Schoeb, T. R. Reconnaissance of 17beta-Estradiol, 11-Ketotestosterone, Vitellogenin, and Gonad Histopathology in Common Carp of United States Streams: Potential for Contaminant-Induced Endocrine Disruption. 1996: 60 p.   
Rec #: 860  
Keywords: NO DURATION,SEDIMENT CONC,SURVEY  
Call Number: NO DURATION (ACR,ADC,ATZ,AZ,CBF,CBL,CPMR,CPY,DCPA,DEAL,DMT,DS,DZ,EP,EPTC,MCB,MLN,MP,MTL,OYZ,PDM,PPG,PPN,PPX,PRO,PRT,SZ,TBC,TBO,TFN), NO SEDIMENT CONC (ACR,ADC,ATZ,AZ,CBF,CBL,CPMR,CPY,DCPA,DEAL,DMT,DS,DZ,EP,EPTC,MCB,MLN,MP,MTL,OYZ,PDM,PPG,PPN,PPX,PRO,PRT,SZ,TBC,TBO,TFN), NO SURVEY (ACR,ADC,ATZ,AZ,CBF,CBL,CPMR,CPY,DCPA,DEAL,DMT,DS,DZ,EP,EPTC,MCB,MLN,MP,MTL,OYZ,PDM,PPG,PPN,PPX,PRO,PRT,SZ,TBC,TBO,TFN)  
Notes: Chemical of Concern: ACR,ADC,AND,ATZ,AZ,BFL,CBF,CBL,CPMR,CPY,CZE,DCPA,DDT,DEAL,DLD,DMT,DS,DZ,EFL,EN,EP,EPRN,EPTC,HCCH,HPT,MBZ,MCB,MLN,MP,MRX,MTL,MXC,NPP,OYZ,PCH,PDM,PEB,PPCP,PPG,PPN,PPX,PRN,PRO,PRT,SZ,TBC,TBO,TFN,TRB,TRL,TXP

495. Graham, J. M. GLUT1 deficiency syndrome as a cause of encephalopathy that includes cognitive disability, treatment-resistant infantile epilepsy and a complex movement disorder. 2012; 55, (5): 332-334.   
Rec #: 60829  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Glucose transporter-1 (GLUT1) deficiency syndrome is caused by heterozygous mutations in the SLC2A1 gene, resulting in impaired glucose transport into the brain. It is characterized by a low glucose concentration in the cerebrospinal fluid (hypoglycorrhachia) in the absence of hypoglycemia, in combination with low to normal lactate in the cerebrospinal fluid (CSF). It often results in treatment-resistant infantile epilepsy with progressive developmental disabilities and a complex movement disorder. Recognizing GLUT1 deficiency syndrome is important, since initiation of a ketogenic diet can reduce the frequency of seizures and the severity of the movement disorder. There can be a considerable delay in diagnosing GLUT1 deficiency syndrome, and this point is illustrated by the natural history of this disorder in a 21-year-old woman with severe, progressive neurological disabilities. Her encephalopathy consisted of treatment-resistant seizures, a complex movement disorder, progressive intellectual disability, and deceleration of her head growth after late infancy. Focused evaluation at age 21 revealed GLUT1 deficiency caused by a novel heterozygous missence mutation in exon 7 (c. 938C > A; p. Ser313Try) in SLC2A1 as the cause for her disabilities. (c) 2011 Elsevier Masson SAS. All rights reserved.  
Keywords: Genetic encephalopathy, GLUT1 deficiency syndrome, SLC2A1, Absence  
ISI Document Delivery No.: 989DJ

496. Gray, K. and Lawler, C. P. Strength in Numbers: Three Separate Studies Link in Utero Organophosphate Pesticide Exposure and Cognitive Development. 2011; 119, (8): A328-A329.   
Rec #: 60839  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: PRENATAL EXPOSURE, CHLORPYRIFOS, CHILDREN  
ISI Document Delivery No.: 801MU

497. Greenstein, M. Phytoextraction of Chlorpyrifos Contaminated Soil Using Indian Mustard (Brassica juncea). SOIL; 1999; 165.  
Rec #: 870  
Keywords: NOT PURSUING,ABSTRACT  
Call Number: NO ABSTRACT (CPY)  
Notes: Chemical of Concern: CPY

498. Grigoryan, H.; Li, B.; Anderson, E. K.; Xue, W. H.; Nachon, F.; Lockridge, O., and Schopfer, L. M. Covalent binding of the organophosphorus agent FP-biotin to tyrosine in eight proteins that have no active site serine. 2009; 180, (3): 492-498.   
Rec #: 60859  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorus (OP) esters are known to bind covalently to the active site serine of enzymes in the serine hydrolase family. It was a surprise to find that proteins with no active site serine are also covalently modified by OP. The binding site in albumin, transferrin, and tubulin was identified as tyrosine. The goal of the present work was to determine whether binding to tyrosine is a general phenomenon. Fourteen proteins were treated with a biotin-tagged organophosphorus agent called FP-biotin. The proteins were digested with trypsin and the labeled peptides enriched by binding to monomeric avidin. Peptides were purified by HPLC and fragmented by collision induced dissociation in a tandem ion trap mass spectrometer. Eight proteins were labeled and six were not. Tyrosine was labeled in human alpha-2-glycoprotein 1 zinc-binding protein (Tyr 138, Tyr 174 and Tyr 181), human kinesin 3C motor domain (Tyr 145), human keratin I (Tyr 230), bovine actin (Tyr 55 and Tyr 200), murine ATP synthase beta (Tyr 431), murine adenine nucleotide translocase 1 (Tyr 81), bovine chymotrypsinogen (Tyr 201) and porcine pepsin (Tyr 310). Only 1-3 tyrosines per protein were modified, suggesting that the reactive tyrosine was activated by nearby residues that facilitated ionization of the hydroxyl group of tyrosine. These results suggest that OP binding to tyrosine is a general phenomenon. It is concluded that organophosphorus-reactive proteins include not only enzymes in the serine hydrolase family, but also proteins that have no active site serine. The recognition of a new OP-binding motif to tyrosine suggests new directions to search for mechanisms of long-term effects of OP exposure. Another application is in the search for biomarkers of organophosphorus agent exposure. Previous searches have been limited to serine hydrolases. Now proteins such as albumin and keratin can be considered. (C) 2009 Elsevier Ireland Ltd. All rights reserved.  
Keywords: FP-biotin, Organophosphorus agent, Tyrosine, Non-cholinesterase, Mass  
ISI Document Delivery No.: 471SA

499. Grigoryan, Hasmik; Li, Bin; Xue, Weihua; Grigoryan, Marine; Schopfer, Lawrence M., and Lockridge, Oksana. Mass spectral characterization of organophosphate-labeled lysine in peptides. 2009 Nov 1-; 394, (1): 92-100.   
Rec #: 3060  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Organophosphate (OP) esters bind covalently to the active site serine of enzymes in the serine hydrolase family. Recently, mass spectrometry identified covalent binding of OPs to tyrosine in a wide variety of proteins when purified proteins were incubated with OPs. In the current work, manual inspection of tandem mass spectrometry (MS/MS) data led to the realization that lysines also make a covalent bond with OPs. **OP-labeled lysine residues were found in seven proteins that had been treated with either chlorpyrifos oxon (CPO) or diisopropylfluorophosphate (DFP):** human serum albumin (K212, K414, K199, and K351), human keratin 1 (K211 and K355), human keratin 10 (K163), bovine tubulin alpha (K60, K336, K163, K394, and K401), bovine tubulin beta (K58), bovine actin (K113, K291, K326, K315, and K328), and mouse transferrin (K296 and K626). These results suggest that OP binding to lysine is a general phenomenon. Characteristic fragments specific for CPO-labeled lysine appeared at 237.1, 220.0, 192.0, 163.9, 128.9, and 83.9 amu. Characteristic fragments specific for DFP-labeled lysine appeared at 164.0, 181.2, and 83.8 amu. This new OP-binding motif to lysine suggests new directions to search for mechanisms of long-term effects of OP exposure and in the search for biomarkers of OP exposure. Mass spectrometry/ Organophosphate esters/ Chlorpyrifos oxon/ Diisopropylfluorophosphate/ Serum albumin/ Keratin/ Tubulin/ Actin/ Transferrin

500. Grigoryan, Hasmik; Lockridge, Oksana, and Grigoryan, Hasmik. Nanoimages Show Disruption of Tubulin Polymerization by Chlorpyrifos Oxon: Implications for Neurotoxicity. 2009 Oct 15; 240, (2): 143-148.   
Rec #: 40949  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorus agents cause cognitive deficits and depression in some people. We hypothesize that the mechanism by which organophosphorus agents cause these disorders is by modification of proteins in the brain. One such protein could be tubulin. Tubulin polymerizes to make the microtubules that transport cell components to nerve axons. The goal of the present work was to measure the effect of the organophosphorus agent chlorpyrifos oxon on tubulin polymerization. An additional goal was to identify the amino acids covalently modified by chlorpyrifos oxon in microtubule polymers and to compare them to the amino acids modified in unpolymerized tubulin dimers.  **Purified bovine tubulin (0.1AmM) was treated with 0.005a"0.1AmM chlorpyrifos oxon** for 30Amin at room temperature and then polymerized by addition of 1AmM GTP to generate microtubules. Microtubules were visualized by atomic force microscopy. Chlorpyrifos oxon-modified residues were identified by tandem ion trap electrospray ionization and matrix-assisted laser desorption/ionization mass spectrometry of tryptic peptides. Nanoimaging showed that low concentrations (0.005 and 0.01AmM) of chlorpyrifos oxon yielded short, thin microtubules. A concentration of 0.025AmM stimulated polymerization, while high concentrations (0.05 and 0.1AmM) caused aggregation. Of the 17 tyrosines covalently modified by chlorpyrifos oxon in unpolymerized tubulin dimers, only 2 tyrosines were labeled in polymerized microtubules. The two labeled tyrosines in polymerized tubulin were Tyr 103 in EDAANNYaR of alpha tubulin, and Tyr 281 in GSQQYaR of beta tubulin. In conclusion, chlorpyrifos oxon binding to tubulin disrupts tubulin polymerization. These results may lead to an understanding of the neurotoxicity of organophosphorus agents.  
Keywords: X 24390:Radioactive Materials  
Keywords: CSA Neurosciences Abstracts; Toxicology Abstracts  
Keywords: Temperature effects  
Keywords: Microtubules  
Keywords: Pharmacy And Pharmacology  
Keywords: Amino acids  
Keywords: Polymerization  
Keywords: Depression  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: atomic force microscopy  
Keywords: Brain  
Keywords: GTP  
Keywords: Tyrosine  
Keywords: Mass spectroscopy  
Keywords: Nerves  
Keywords: Chlorpyrifos  
Keywords: Cognitive ability  
Keywords: Neurotoxicity  
Keywords: Tryptic peptides  
Keywords: Axons  
Keywords: Lasers  
Keywords: Tubulin  
Keywords: Ionization  
Date revised - 2010-02-01  
Language of summary - English  
Pages - 143-148  
ProQuest ID - 810776830  
SubjectsTermNotLitGenreText - Temperature effects; Microtubules; Depression; Polymerization; Amino acids; Brain; atomic force microscopy; Tyrosine; GTP; Mass spectroscopy; Nerves; Chlorpyrifos; Cognitive ability; Neurotoxicity; Tryptic peptides; Axons; Lasers; Tubulin; Ionization  
Last updated - 2011-11-02  
Corporate institution author - Grigoryan, Hasmik; Lockridge, Oksana  
DOI - OB-6e6ce6c9-07fa-4559-a383csamfg201; 13008588; 0041-008X English

501. Grigoryan, Hasmik; Schopfer, Lawrence M; Peeples, Eric S; Duysen, Ellen G; Grigoryan, Marine; Thompson, Charles M; Lockridge, Oksana, and Grigoryan, Hasmik. Mass Spectrometry Identifies Multiple Organophosphorylated Sites on Tubulin. 2009 Oct 15; 240, (2): 149-158.   
Rec #: 40959  
Keywords: IN VITRO   
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Acute toxicity of organophosphorus poisons (OP) is explained by inhibition of acetylcholinesterase in nerve synapses. Low-dose effects are hypothesized to result from modification of other proteins, whose identity is not yet established. The goal of the present work was to obtain information that would make it possible to identify tubulin as a target of OP exposure. Tubulin was selected for study because live mice injected with a nontoxic dose of a biotinylated organophosphorus agent appeared to have OP-labeled tubulin in brain as determined by binding to avidin beads and mass spectrometry. The experiments with live mice were not conclusive because binding to avidin beads could be nonspecific. To be convincing, it is necessary to find and characterize the OP-labeled tubulin peptide. The search for OP-labeled tubulin peptides was begun by identifying residues capable of making a covalent bond with OP. **Pure bovine tubulin (0.012AmM) was treated with 0.01a"0.5AmM chlorpyrifos oxon for 24Ah at 37AA degree C in pH 8.3 buffer.** The identity of labeled amino acids and percent labeling was determined by mass spectrometry. Chlorpyrifos oxon bound covalently to tyrosines 83, 103, 108, 161, 224, 262, 272, 357, and 399 in bovine alpha tubulin, and to tyrosines 50, 51, 59, 106, 159, 281, 310, and 340 in bovine beta tubulin. The most reactive were tyrosine 83 in alpha and tyrosine 281 in beta tubulin. In the presence of 1AmM GTP, percent labeling increased 2-fold. Based on the crystal structure of the tubulin heterodimer (PDB 1jff) tyrosines 83 and 281 are well exposed to solvent. In conclusion seventeen tyrosines in tubulin have the potential to covalently bind chlorpyrifos oxon. These results will be useful when searching for OP-labeled tubulin in live animals.  
Keywords: Synapses  
Keywords: Pharmacy And Pharmacology  
Keywords: Amino acids  
Keywords: Acetylcholinesterase  
Keywords: Solvents  
Keywords: Brain  
Keywords: Tyrosine  
Keywords: GTP  
Keywords: Acute toxicity  
Keywords: Mass spectroscopy  
Keywords: Chlorpyrifos  
Keywords: Nerves  
Keywords: Avidin  
Keywords: Crystal structure  
Keywords: Tubulin  
Keywords: X 24330:Agrochemicals  
Keywords: pH effects  
Keywords: Toxicology Abstracts  
Date revised - 2010-02-01  
Language of summary - English  
Pages - 149-158  
ProQuest ID - 810697154  
SubjectsTermNotLitGenreText - Synapses; Amino acids; Acetylcholinesterase; Brain; Solvents; GTP; Tyrosine; Acute toxicity; Mass spectroscopy; Nerves; Chlorpyrifos; Avidin; Crystal structure; Tubulin; pH effects  
Last updated - 2011-11-02  
Corporate institution author - Grigoryan, Hasmik; Schopfer, Lawrence M; Peeples, Eric S; Duysen, Ellen G; Grigoryan, Marine; Thompson, Charles M; Lockridge, Oksana  
DOI - OB-9a1d2a5d-dbcc-42e8-8be9csamfg201; 13008586; 0041-008X English

502. Guducu, H. E.; Inam, R., and Aboul-Enein, H. Y. DETERMINATION OF ORGANOPHOSPHORUS AND TRIAZOLE PESTICIDES BY GAS CHROMATOGRAPHY AND APPLICATION TO VEGETABLE AND COMMERCIAL SAMPLES. 2011; 34, (19): 2473-2483.   
Rec #: 60909  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A multiresidue method using gas chromatography with electron-capture detection (ECD), nitrogen-phosphorus detection (NPD), or flame ionization detection (FID) has been developed for the determination of triazole residues such as triadimefon, penconazole, hexaconazole, diniconazole, and organophosphorus residues such as chlorpyrifos-methyl. The method has been successfully applied to the analysis of tomatoes and eggplant samples. The recoveries obtained from NPD detector for tomatoes and eggplants were in the range 62.0-109% and 66.0-104% with the relative standard deviation varied from 5.0 to 13.1% and 3.2 to 18.0%, respectively. The method was validated and applied for the determination of triazole and organophosphorus pesticides in agrochemical formulations within the recoveries of 96.3-107.2%.  
Keywords: agrochemical formulations analysis, food analysis, gas chromatography,  
ISI Document Delivery No.: 880AI

503. Guiã±Azãº, Natalia; Rena, Viviana; Genti-Raimondi, Susana; Rivero, Virginia, and Magnarelli, Gladis. Effects of the Organophosphate Insecticides Phosmet and Chlorpyrifos on Trophoblast Jeg-3 Cell Death, Proliferation and Inflammatory Molecule Production. 2012 Apr; 26, (3): 406-413.   
Rec #: 38929  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Epidemiological data have associated environmental organophosphate insecticide (OP) exposure during pregnancy with fetal growth deficits. To better understand OP injury that may adversely affect pregnancy, we used the JEG-3 choriocarcinoma cell line, which provide a recognized in vitro model to study placental function. The effects of the OP phosmet (Pm) and chlorpyrifos (Cp) on JEG-3 cells viability, proliferation, cell cycle and inflammatory molecule production were evaluated. Both insecticides affected cellular viability in a concentration- and time-dependent manner, inducing apoptosis and decreasing [(3)H]-thymidine incorporation. However, only Pm reduced DNA synthesis independently of cellular death and decreased the cell percentage at the S-phase. Unlike apoptosis, TNFÎ± production varied with the concentration tested, suggesting that other TNFÎ± independent mechanisms might trigger cell death. No induction of the inflammatory molecule nitric oxide was detected. The mRNA levels of pro-inflammatory IL-6, IL-17 and the anti-inflammatory IL-13 cytokines were differentially modulated. These findings show that Pm and Cp generate a specific toxicity signature, altering cell viability and inducing an inflammatory cytokine profile, suggesting that trophoblasts may represent a possible target for OP adverse effects. Copyright Ã‚Â© 2012 Elsevier Ltd. All rights reserved.  
Keywords: Phosmet  
Keywords: 2921-88-2  
Keywords: Trophoblasts -- pathology  
Keywords: Insecticides -- administration & dosage  
Keywords: Humans  
Keywords: Trophoblasts -- drug effects  
Keywords: Nitric Oxide -- metabolism  
Keywords: Choriocarcinoma -- pathology  
Keywords: Insecticides  
Keywords: Cell Survival -- drug effects  
Keywords: 732-11-6  
Keywords: Apoptosis -- drug effects  
Keywords: Inflammation Mediators  
Keywords: Cytokines  
Keywords: Time Factors  
Keywords: Insecticides -- toxicity  
Keywords: Cell Proliferation -- drug effects  
Keywords: Chlorpyrifos -- administration & dosage  
Keywords: Dose-Response Relationship, Drug  
Keywords: Cell Line, Tumor  
Keywords: Cytokines -- metabolism  
Keywords: Cell Death -- drug effects  
Keywords: 10102-43-9  
Keywords: Pregnancy  
Keywords: Inflammation Mediators -- metabolism  
Keywords: Chlorpyrifos  
Keywords: Nitric Oxide  
Keywords: RNA, Messenger  
Keywords: 0  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Phosmet -- toxicity  
Keywords: RNA, Messenger -- metabolism  
Keywords: Phosmet -- administration & dosage  
Keywords: Female  
Date completed - 2012-06-26  
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Language of summary - English  
Pages - 406-413  
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British nursing index edition - Toxicology in vitro : an international journal published in association with BIBRA, April 2012, 26(3):406-413  
Corporate institution author - GuiÃ±azÃº, Natalia; Rena, Viviana; Genti-Raimondi, Susana; Rivero, Virginia; Magnarelli, Gladis  
DOI - MEDL-22265773; 22265773; 1879-3177 eng

504. Gunier, Robert B; Ward, Mary H; Airola, Matthew; Bell, Erin M; Colt, Joanne; Nishioka, Marcia; Buffler, Patricia a; Reynolds, Peggy; Rull, Rudolph P; Hertz, Andrew; Metayer, Catherine; Nuckols, John R, and Gunier, Robert B. Determinants of Agricultural Pesticide Concentrations in Carpet Dust. 2011 Feb 17; 119, (7): 970-976.   
Rec #: 43549  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Residential proximity to agricultural pesticide applications has been used as a surrogate for exposure in epidemiologic studies, although little is known about the relationship with levels of pesticides in homes. Objective: We identified determinants of concentrations of agricultural pesticides in dust. Methods: We collected samples of carpet dust and mapped crops within 1,250 m of 89 residences in California. We measured concentrations of seven pesticides used extensively in agriculture (carbaryl, chlorpyrifos, chlorthal-dimethyl, diazinon, iprodione, phosmet, and simazine). We estimated use of agricultural pesticides near residences from a statewide database alone and by linking the database with crop maps. We calculated the density of pesticide use within 500 and 1,250 m of residences for 180, 365, and 730 days before collection of dust and evaluated relationships between agricultural pesticide use estimates and pesticide concentrations in carpet dust. Results: For five of the seven pesticides evaluated, residences with use of agricultural pesticides within 1,250 m during the previous 365 days had significantly higher concentrations of pesticides than did residences with no nearby use. The highest correlation with concentrations of pesticides was generally for use reported within 1,250 m of the residence and 730 days before sample collection. Regression models that also accounted for occupational and home use of pesticides explained only a modest amount of the variability in pesticide concentrations (4-28%). Conclusions: Agricultural pesticide use near residences was a significant determinant of concentrations of pesticides in carpet dust for five of seven pesticides evaluated.  
Keywords: agriculture  
Keywords: Carbaryl  
Keywords: Simazine  
Keywords: Herbicides  
Keywords: Dust  
Keywords: Crops  
Keywords: Environmental Studies  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Pesticides  
Keywords: Environment Abstracts  
Keywords: USA, California  
Keywords: Diazinon  
Date revised - 2012-03-01  
Language of summary - English  
Location - USA, California  
Pages - 970-976  
ProQuest ID - 919376237  
SubjectsTermNotLitGenreText - Chlorpyrifos; Pesticides; agriculture; Carbaryl; Herbicides; Simazine; Diazinon; Crops; Dust; USA, California  
Last updated - 2012-08-08  
Corporate institution author - Gunier, Robert B; Ward, Mary H; Airola, Matthew; Bell, Erin M; Colt, Joanne; Nishioka, Marcia; Buffler, Patricia A; Reynolds, Peggy; Rull, Rudolph P; Hertz, Andrew; Metayer, Catherine; Nuckols, John R  
DOI - OB-fc767b71-088c-4284-8114csamfg201; 16210168; 0091-6765; 1552-9924 English

505. Guo, Xishan ; Zhang, Xueyin; Cai, Qiang; Shen, Tao, and Zhu, Songming. Developing a novel sensitive visual screening card for rapid detection of pesticide residues in food. 2013 Mar; 30, (1): 15-23.   
Rec #: 5060  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: A novel sensitive visual screening card for rapid detection of pesticide residues was developed based on the blue-green color intensity changes, which were generated as a result of indoxyl acetate hydrolysis catalyzed by acetylcholinesterase (AChE) and the inhibition of AChE activity by pesticides. The procedure for preparing the test card was optimized. The AChE was immobilized onto the Hybond N+ nylon membrane using physical adsorption method. The immobilization temperature was set at 4-á-\_C and the immobilization time was set to 30-ámin. The immobilized enzyme was freeze dried under vacuum conditions for 2-ámin. The indoxyl acetate was dissolved in methanol and diluted to 10-ámM by phosphate buffer solution (pH7.5). The inhibition time and the color development time were set to 15-ámin and 10-ámin respectively. The final experimental results on determining various pesticides showed that the limit of detection (LOD) of this assay system was 1-á++g/mL for omethoate, 0.1-á++g/mL for dichlorvos, 2-á++g/mL for methamidophos, 0.05-á++g/mL for chlorpyrifos, 1.5-á++g/mL for carbaryl, and 0.8-á++g/mL for pirimicarb. Detection results of pesticide residues in real food samples of fruit juices and vegetable showed this visual screening card had high sensitivity, good reproducibility and stable-storage property, suggesting its great potential for practical application in rapid determination of pesticide residues. Pesticide residues/ Acetylcholinesterase/ Indoxyl acetate hydrolysis/ Rapid determination

506. Gupta, S. and Gajbhiye, V. T. Persistence of acetamiprid in soil. 2007; 78, (5): 349-352.   
Rec #: 61019  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: ALLUVIAL SOIL, CHLORPYRIFOS, MOISTURE  
ISI Document Delivery No.: 195JZ

507. Gupta, S.; Gajbhiye, V. T.; Sharma, R. K., and Gupta, R. K. Dissipation of Cypermethrin, Chlorpyriphos, and Profenofos in Tomato Fruits and Soil Following Application of Pre-Mix Formulations. Springer Science & Business Media//: SOIL; 2011; 174, (1-4): 337-345.   
Rec #: 2650  
Keywords: MIXTURE  
Call Number: NO MIXTURE (CPY,CYP,IMC,PFF)  
Notes: Chemical of Concern: CPY,CYP,PFF

508. Gurevich, I.; Zhang, C.; Encarnacao, P. C.; Struzynski, C. P.; Livings, S. E., and Aneskievich, B. J. Ppar&Gamma; and Nf-&Kappa;B Regulate the Gene Promoter Activity of Their Shared Repressor, Tnip1.   
Rec #: 73379  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Lipid Res. 2003 Apr;44(4):686-95 (medline /12562861)  
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ABSTRACT: Human TNFAIP3 interacting protein 1 (TNIP1) has diverse functions including support of HIV replication through its interaction with viral Nef and matrix proteins, reduction of TNF&alpha;-induced signaling through its interaction with NF-&kappa;B pathway proteins, and corepression of agonist-bound retinoic acid receptors and peroxisome proliferator-activated receptors (PPAR). The wide tissue distribution of TNIP1 provides the opportunity to influence numerous cellular responses in these roles and defining control of TNIP1 expression would be central to improved understanding of its impact on cell function. We cloned 6kb of the human TNIP1 promoter and performed predictive and functional analyses to identify regulatory elements. The promoter region proximal to the transcription start site is GC-rich without a recognizable TATA box. In contrast to this proximal ~500bp region, 6kb of the promoter increased reporter construct constitutive activity over five-fold. Throughout the 6kb length, in silico analysis identified several potential binding sites for both constitutive and inducible transcription factors; among the latter were candidate NF-&kappa;B binding sequences and peroxisome proliferator response elements (PPREs). We tested NF-&kappa;B and PPAR regulation of the endogenous TNIP1 gene and cloned promoter by expression studies, electrophoretic mobility shift assays, and chromatin immunoprecipitations. We validated NF-&kappa;B sites in the TNIP1 promoter proximal and distal regions as well as one PPRE in the distal region. The ultimate control of the TNIP1 promoter is likely to be a combination of constitutive transcription factors and those subject to activation such as NF-&kappa;B and PPAR.  
MESH HEADINGS: Base Sequence  
MESH HEADINGS: Binding Sites  
MESH HEADINGS: DNA-Binding Proteins/\*genetics/metabolism  
MESH HEADINGS: Gene Expression Regulation  
MESH HEADINGS: HeLa Cells  
MESH HEADINGS: Humans  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: NF-kappa B/\*genetics/metabolism  
MESH HEADINGS: PPAR gamma/\*genetics/metabolism  
MESH HEADINGS: Peroxisome Proliferator-Activated Receptors/genetics/metabolism  
MESH HEADINGS: \*Promoter Regions, Genetic  
MESH HEADINGS: Protein Binding/genetics  
MESH HEADINGS: Regulatory Sequences, Nucleic Acid/\*genetics  
MESH HEADINGS: Response Elements/genetics  
MESH HEADINGS: Signal Transduction  
MESH HEADINGS: Transcription Factor RelA/genetics/metabolism  
MESH HEADINGS: Transcription Initiation Site  
MESH HEADINGS: Transcriptional Activation/genetics eng

509. Gururangan, S.; Chi, S. N.; Young Poussaint, T.; Onar-Thomas, A.; Gilbertson, R. J.; Vajapeyam, S.; Friedman, H. S.; Packer, R. J.; Rood, B. N.; Boyett, J. M., and Kun, L. E. Lack of Efficacy of Bevacizumab Plus Irinotecan in Children With Recurrent Malignant Glioma and Diffuse Brainstem Glioma: a Pediatric Brain Tumor Consortium Study.   
Rec #: 50529  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Clin Oncol. 1999 May;17(5):1516-25 (medline /10334539)  
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COMMENTS: Cites: J Clin Oncol. 1990 Jul;8(7):1277-80 (medline /2358840)  
COMMENTS: Cites: J Neurooncol. 1999 May;43(1):43-7 (medline /10448870)  
ABSTRACT: PURPOSE: A phase II study of bevacizumab (BVZ) plus irinotecan (CPT-11) was conducted in children with recurrent malignant glioma (MG) and intrinsic brainstem glioma (BSG).  
ABSTRACT: PATIENTS AND METHODS: Eligible patients received two doses of BVZ intravenously (10 mg/kg) 2 weeks apart and then BVZ plus CPT-11 every 2 weeks until progressive disease, unacceptable toxicity, or a maximum of 2 years of therapy. Correlative studies included diffusion weighted and T1 dynamic contrast-enhanced permeability imaging, BVZ pharmacokinetics, and estimation of vascular endothelial growth factor receptor 2 (VEGFR-2) phosphorylation in peripheral blood mononuclear cells (PBMC) after single-agent BVZ.  
ABSTRACT: RESULTS: Thirty-one evaluable patients received a median of two courses of BVZ plus CPT-11 (range, 1 to 19). No sustained responses were observed in either stratum. Median time to progression for all 34 eligible patients enrolled was 127 days for MG and 71 days for BSG. Progression-free survival rates at 6 months were 41.8% and 9.7% for MG and BSG, respectively. Toxicities related to BVZ included grade 1 to 3 fatigue in seven patients, grade 1 to 2 hypertension in seven patients, grade 1 CNS hemorrhage in four patients, and grade 4 CNS ischemia in two patients. The mean diffusion ratio decreased after two doses of BVZ in patients with MG only. Vascular permeability parameters did not change significantly after therapy in either stratum. Inhibition of VEGFR-2 phosphorylation in PBMC was detected in eight of 11 patients after BVZ exposure.  
ABSTRACT: CONCLUSION: BVZ plus CPT-11 was well-tolerated but had minimal efficacy in children with recurrent malignant glioma and brainstem glioma.  
MESH HEADINGS: Adolescent  
MESH HEADINGS: Adult  
MESH HEADINGS: Antibodies, Monoclonal/administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Antibodies, Monoclonal, Humanized  
MESH HEADINGS: Antineoplastic Combined Chemotherapy Protocols/\*therapeutic use  
MESH HEADINGS: Brain Neoplasms/\*drug therapy/metabolism/pathology  
MESH HEADINGS: Brain Stem Neoplasms/\*drug therapy/metabolism/pathology  
MESH HEADINGS: Camptothecin/administration &amp  
MESH HEADINGS: dosage/analogs &amp  
MESH HEADINGS: derivatives  
MESH HEADINGS: Child  
MESH HEADINGS: Diffusion Magnetic Resonance Imaging  
MESH HEADINGS: Glioma/\*drug therapy/metabolism/pathology  
MESH HEADINGS: Humans  
MESH HEADINGS: Neoplasm Recurrence, Local/\*drug therapy/metabolism/pathology  
MESH HEADINGS: Phosphorylation  
MESH HEADINGS: Survival Rate  
MESH HEADINGS: Treatment Outcome  
MESH HEADINGS: Vascular Endothelial Growth Factor Receptor-2/metabolism  
MESH HEADINGS: Young Adult eng

510. Guyton, K. Z.; Chiu, W. A.; Bateson, T. F.; Jinot, J.; Scott, C. S.; Brown, R. C., and Caldwell, J. C. A Reexamination of the Ppar-Alpha Activation Mode of Action as a Basis for Assessing Human Cancer Risks of Environmental Contaminants.   
Rec #: 50719  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: BACKGROUND: Diverse environmental contaminants, including the plasticizer di(2-ethylhexyl)phthalate (DEHP), are hepatocarcinogenic peroxisome proliferators in rodents. Peroxisome proliferator-activated receptor-alpha (PPAR-alpha) activation and its sequelae have been proposed to constitute a mode of action (MOA) for hepatocarcinogenesis by such agents as a sole causative factor. Further, based on a hypothesized lower sensitivity of humans to this MOA, prior reviews have concluded that rodent hepatocarcinogenesis by PPAR-alpha agonists is irrelevant to human carcinogenic risk.  
ABSTRACT: DATA SYNTHESIS: Herein, **we review recent studies that experimentally challenge the PPAR-alpha activation MOA hypothesis, providing evidence that DEHP is hepatocarcinogenic in PPAR-alpha-null mice and that the MOA but not hepatocarcinogenesis is evoked by PPAR-alpha activation in a transgenic mouse model.** We further examine whether relative potency for PPAR-alpha activation or other steps in the MOA correlates with tumorigenic potency. In addition, for most PPAR-alpha agonists of environmental concern, available data are insufficient to characterize relative human sensitivity to this rodent MOA or to induction of hepatocarcinogenesis.  
ABSTRACT: CONCLUSIONS: Our review and analyses raise questions about the hypothesized PPAR-alpha activation MOA as a sole explanation for rodent hepatocarcinogenesis by PPAR-alpha agonists and therefore its utility as a primary basis for assessing human carcinogenic risk from the diverse compounds that activate PPAR-alpha. These findings have broad implications for how MOA hypotheses are developed, tested, and applied in human health risk assessment. We discuss alternatives to the current approaches to these key aspects of mechanistic data evaluation.  
MESH HEADINGS: Animals  
MESH HEADINGS: Diethylhexyl Phthalate/toxicity  
MESH HEADINGS: Environmental Pollutants/\*toxicity  
MESH HEADINGS: Humans  
MESH HEADINGS: Liver Neoplasms/\*chemically induced  
MESH HEADINGS: Liver Neoplasms, Experimental/chemically induced  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Knockout  
MESH HEADINGS: PPAR alpha/\*agonists/metabolism  
MESH HEADINGS: Peroxisome Proliferators/toxicity  
MESH HEADINGS: Risk Assessment/methods  
MESH HEADINGS: Species Specificity eng

511. Hackbarth, J. S.; Galvez-Peralta, M.; Dai, N. T.; Loegering, D. A.; Peterson, K. L.; Meng, X. W.; Karnitz, L. M., and Kaufmann, S. H. Mitotic Phosphorylation Stimulates Dna Relaxation Activity of Human Topoisomerase I.   
Rec #: 51249  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Cancer Res. 1992 Feb 1;52(3):525-32 (medline /1310066)  
COMMENTS: Cites: Ann N Y Acad Sci. 2002 Nov;973:31-43 (medline /12485830)  
COMMENTS: Cites: J Biol Chem. 1992 Jun 25;267(18):12408-11 (medline /1319995)  
COMMENTS: Cites: Antonie Van Leeuwenhoek. 1992 Aug;62(1-2):15-24 (medline /1332607)  
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COMMENTS: Cites: Nature. 1984 Dec 20-1985 Jan 2;312(5996):785-6 (medline /6096721)  
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COMMENTS: Cites: Biochem J. 1993 Apr 1;291 ( Pt 1):303-7 (medline /8385936)  
COMMENTS: Cites: J Cell Sci. 1993 Feb;104 ( Pt 2):533-43 (medline /8389377)  
COMMENTS: Cites: J Biol Chem. 1993 Jul 5;268(19):14394-8 (medline /8390992)  
COMMENTS: Cites: Biochem J. 1993 Jul 1;293 ( Pt 1):297-304 (medline /8392338)  
COMMENTS: Cites: Cancer Res. 1996 Apr 1;56(7):1674-81 (medline /8603419)  
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COMMENTS: Cites: Blood. 1997 Mar 15;89(6):2098-104 (medline /9058732)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 1976 Oct;73(10):3488-91 (medline /1068461)  
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COMMENTS: Cites: Cancer Res. 2001 Jan 1;61(1):53-8 (medline /11196197)  
COMMENTS: Cites: Mol Cell. 2001 Feb;7(2):283-92 (medline /11239457)  
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COMMENTS: Cites: Exp Cell Res. 2001 Nov 1;270(2):277-88 (medline /11640891)  
COMMENTS: Cites: Nat Rev Mol Cell Biol. 2002 Jun;3(6):430-40 (medline /12042765)  
COMMENTS: Cites: J Biol Chem. 1992 Jun 5;267(16):11156-62 (medline /1317858)  
ABSTRACT: Human DNA topoisomerase I (topo I) is an essential mammalian enzyme that regulates DNA supercoiling during transcription and replication. In addition, topo I is specifically targeted by the anticancer compound camptothecin and its derivatives. Previous studies have indicated that topo I is a phosphoprotein and that phosphorylation stimulates its DNA relaxation activity. The locations of most topo I phosphorylation sites have not been identified, preventing a more detailed examination of this modification. To address this issue, mass spectrometry was used to identify four topo I residues that are phosphorylated in intact cells: Ser(10), Ser(21), Ser(112), and Ser(394). Immunoblotting using anti-phosphoepitope antibodies demonstrated that these sites are phosphorylated during mitosis. In vitro kinase assays demonstrated that Ser(10) can be phosphorylated by casein kinase II, Ser(21) can be phosphorylated by protein kinase Calpha, and Ser(112) and Ser(394) can be phosphorylated by Cdk1. When wild type topo I was pulled down from mitotic cells and dephosphorylated with alkaline phosphatase, topo I activity decreased 2-fold. Likewise, topo I polypeptide with all four phosphorylation sites mutated to alanine exhibited 2-fold lower DNA relaxation activity than wild type topo I after isolation from mitotic cells. Further mutational analysis demonstrated that Ser(21) phosphorylation was responsible for this change. Consistent with these results, wild type topo I (but not S21A topo I) exhibited increased sensitivity to camptothecin-induced trapping on DNA during mitosis. Collectively these results indicate that topo I is phosphorylated during mitosis at multiple sites, one of which enhances DNA relaxation activity in vitro and interaction with DNA in cells.  
MESH HEADINGS: Amino Acid Sequence  
MESH HEADINGS: CDC2 Protein Kinase/metabolism  
MESH HEADINGS: \*Camptothecin/pharmacology  
MESH HEADINGS: DNA/\*chemistry  
MESH HEADINGS: DNA Topoisomerases, Type I/\*chemistry  
MESH HEADINGS: \*Gene Expression Regulation, Enzymologic  
MESH HEADINGS: Humans  
MESH HEADINGS: K562 Cells  
MESH HEADINGS: \*Mitosis  
MESH HEADINGS: Models, Biological  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Mutagenesis, Site-Directed  
MESH HEADINGS: Phosphorylation  
MESH HEADINGS: Sequence Homology, Amino Acid  
MESH HEADINGS: Serine/chemistry eng

512. Hadjmohammadi, M. R.; Peyrovi, M., and Biparva, P. Comparison of C18 Silica and Multi-Walled Carbon Nanotubes as the Adsorbents for the Solid-Phase Extraction of Chlorpyrifos and Phosalone in Water Samples Using Hplc.   
Rec #: 77219  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: A comparison between C(18) silica and multi-walled carbon nanotubes (MWCNTs) in the extraction of Chlorpyrifos and Phosalone in environmental water samples was carried out using HPLC. Parameters affecting the extraction were type and volume of elution solvent, pH and flow rate of sample through the adsorbent. The optimum conditions obtained by C(18) cartridge for adsorption of these pesticides were 4 mL dichloromethane as elution solvent, sample pH of 5, flow rate of 1 mL/min, and those for MWCNT cartridge were 3 mL dichloromethane, pH of 5 and flow rate of 10 mL/min, respectively. Optimized mobile phase for separation and determination of these compounds by HPLC was methanol/water (80:20 v/v) with pH=5 (adjusted with phosphate buffer). Under optimal chromatographic and SPE conditions, LOD, linear range and precision (RSD n=8) were 3.03x10(-3), 0.01-5.00 microg/mL and 2.7% for Chlorpyrifos and 4.03x10(-4), 0.01-5.00 microg/mL and 2.3% for Phosalone, in C(18) cartridge, respectively. These values for MWCNT were 4.02x10(-6), 0.001-0.500 microg/mL and 1.8% for Chlorpyrifos and 1.02x10(-6), 0.001-0.500 microg/mL and 1.5% for Phosalone, respectively.  
MESH HEADINGS: Adsorption  
MESH HEADINGS: Chlorpyrifos/\*analysis  
MESH HEADINGS: Chromatography, High Pressure Liquid  
MESH HEADINGS: Hydrogen-Ion Concentration  
MESH HEADINGS: Nanotubes, Carbon/\*chemistry  
MESH HEADINGS: Organothiophosphorus Compounds/\*analysis  
MESH HEADINGS: Particle Size  
MESH HEADINGS: Reproducibility of Results  
MESH HEADINGS: Silicon Dioxide/\*chemistry  
MESH HEADINGS: \*Solid Phase Extraction  
MESH HEADINGS: Surface Properties  
MESH HEADINGS: Water Pollutants, Chemical/\*chemistry eng

513. Hageman, K. J.; Hafner, W. D.; Campbell, D. H.; Jaffe, D. A.; Landers, D. H., and Simonich, S. L. M. Variability in Pesticide Deposition and Source Contributions to Snowpack in Western US National Parks. 2010; 44, (12): 4452-4458.   
Rec #: 61159  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Fifty-six seasonal snowpack samples were collected at remote alpine, subarctic, and arctic sites in eight Western U.S. national parks during three consecutive years (2003-2005). Four current-use pesticides (CUPs) (dacthal (DCPA), chlorpyrifos, endosulfans, and gamma-hexachlorocyclohexane (HCH)) and four historic-use pesticides (HUPs) (dieldrin, alpha-HCH, chlordanes, and hexachlorobenzene (HCB)) were commonly measured at all sites, during all years. The mean coefficient of variation for pesticide concentrations was 15% for site replicate samples, 41% for intrapark replicate samples, and 59% for interannual replicate samples. The relative pesticide concentration profiles were consistent from year to year but unique for individual parks, indicating a regional source effect. HUP concentrations were well-correlated with regional cropland intensity when the effect of temperature on snow-air partitioning was considered. The mass of individual CUPs used in regions located one-day upwind of the parks was calculated using air mass back trajectories, and this was used to explain the distribution of CUPs among the parks. The percent of the snowpack pesticide concentration due to regional transport was high (>75%) for the majority of pesticides in all parks. These results suggest that the majority of pesticide contamination in U.S. national parks is due to regional pesticide use in North America.  
Keywords: SEMIVOLATILE ORGANIC-COMPOUNDS, ORGANOCHLORINE COMPOUNDS, ATMOSPHERIC  
ISI Document Delivery No.: 608WP

514. Hahn, Stefan; Schneider, Klaus; Gartiser, Stefan; Heger, Wolfgang; Mangelsdorf, Inge, and Hahn, Stefan. Consumer Exposure to Biocides - Identification of Relevant Sources and Evaluation of Possible Health Effects. 2010; 9, (1): 7.   
Rec #: 44309  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Products containing biocides are used for a variety of purposes in the home environment. To assess potential health risks, data on products containing biocides were gathered by means of a market survey, exposures were estimated using a worst case scenario approach (screening), the hazard of the active components were evaluated, and a preliminary risk assessment was conducted. Methods: Information on biocide-containing products was collected by on-site research, by an internet inquiry as well as research into databases and lists of active substances. Twenty active substances were selected for detailed investigation. The products containing these substances were subsequently classified by range of application; typical concentrations were derived. Potential exposures were then estimated using a worst case scenario approach according to the European Commission's Technical Guidance Document on Risk Assessment. Relevant combinations of scenarios and active substances were identified. The toxicological data for these substances were compiled in substance dossiers. For estimating risks, the margins of exposure (MOEs) were determined. Results: Numerous consumer products were found to contain biocides. However, it appeared that only a limited number of biocidal active substances or groups of biocidal active substances were being used. The lowest MOEs for dermal exposure or exposure by inhalation were obtained for the following scenarios and biocides: indoor pest control using sprays, stickers or evaporators (chlorpyrifos, dichlorvos) and spraying of disinfectants as well as cleaning of surfaces with concentrates (hydrogen peroxide, formaldehyde, glutardialdehyde). The risk from aggregate exposure to individual biocides via different exposure scenarios was higher than the highest single exposure on average by a factor of three. From the 20 biocides assessed 10 had skin-sensitizing properties. The biocides isothiazolinone (mixture of 5-chloro-2-methyl-2H-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one, CMI/MI), glutardialdehyde, formaldehyde and chloroacetamide may be present in household products in concentrations which have induced sensitization in experimental studies. Conclusions: Exposure to biocides from household products may contribute to induction of sensitization in the population. The use of biocides in consumer products should be carefully evaluated. Detailed risk assessments will become available within the framework of the EU Biocides Directive.  
Keywords: H 9000:Consumer and Recreation Safety  
Keywords: Chlorpyrifos  
Keywords: Inhalation  
Keywords: Risk assessment  
Keywords: Consumer products  
Keywords: Hydrogen peroxide  
Keywords: Sprays  
Keywords: Risk Abstracts; Health & Safety Science Abstracts  
Keywords: Formaldehyde  
Keywords: R2 23060:Medical and environmental health  
Keywords: Biocides  
Keywords: Internet  
Date revised - 2013-01-01  
Language of summary - English  
Number of references - 26  
Pages - 7  
ProQuest ID - 1272701363  
SubjectsTermNotLitGenreText - Inhalation; Chlorpyrifos; Risk assessment; Consumer products; Hydrogen peroxide; Sprays; Formaldehyde; Biocides; Internet  
Last updated - 2013-02-08  
British nursing index edition - Environmental Health (London) [Environ. Health]. Vol. 9, no. 1, 7 p. 2010.  
Corporate institution author - Hahn, Stefan; Schneider, Klaus; Gartiser, Stefan; Heger, Wolfgang; Mangelsdorf, Inge  
DOI - fd442282-482b-419e-8ee4mfgefd107; 17522737; 1476-069X English

515. Hale, T. M. ; Bushfield, T. L.; Woolard, J.; Pang, J. J.; Rees-Milton, K. J., and Adams, M. A. Changes Critical to Persistent Lowering of Arterial Pressure in Spontaneously Hypertensive Rat Occur Early in Antihypertensive Treatment.   
Rec #: 50379  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: OBJECTIVES: Angiotensin-converting enzyme inhibition (ACEI) in adult spontaneously hypertensive rats (SHRs) produces reductions in mean arterial pressure (MAP) and vascular structure that persist after treatment cessation. This study used an intermittent treatment strategy to determine the time course of changes in MAP, vascular resistance properties, and the tissue levels of endothelin.  
ABSTRACT: METHODS: Adult SHRs were treated with enalapril and low sodium diet for three 2-week treatment cycles, each separated by 2-week washout periods. MAP was measured via radiotelemetry. Hindlimb structurally based vascular resistance properties were assessed after two treatment cycles. Endothelin was measured in mesenteric vessels, renal cortex and medulla in untreated SHR (Con), and at day 10 of the first and third treatment cycles.  
ABSTRACT: RESULTS: Treatment produced a persistent reduction in MAP; however, the magnitude of change in the 'off-treatment' level decreased following successive treatments (cycle 1: -15 &plusmn; 1.7%, cycle 2: -8 &plusmn; 1.9%, and cycle 3: -1 &plusmn; 1.7%). Reduction in hindlimb vascular structure after two cycles of treatment was not different from that previously observed after one cycle. Endothelin levels were significantly elevated during the third cycle in renal medulla (Con: 797 &plusmn; 102 pg/g tissue, cycle 1: 767 &plusmn; 81 pg/g tissue, cycle 3: 1097 &plusmn; 205 pg/g tissue) and mesenteric vessels (Con: 711 &plusmn; 226 pg/g tissue, cycle 1: 696 &plusmn; 231 pg/g tissue, cycle 3: 1063 &plusmn; 741 pg/g tissue). Concomitant treatment with an endothelin antagonist did not impact arterial pressure.  
ABSTRACT: CONCLUSION: These findings demonstrate that during ACEI treatment, most of the changes that confer persistent changes in MAP and vascular structure occur within the first 2 weeks. Elevation in endothelin levels is likely unrelated to arterial pressure.  
MESH HEADINGS: Animals  
MESH HEADINGS: Antihypertensive Agents/\*therapeutic use  
MESH HEADINGS: Apoptosis  
MESH HEADINGS: \*Blood Pressure  
MESH HEADINGS: Enalapril/\*therapeutic use  
MESH HEADINGS: Endothelin-1/blood  
MESH HEADINGS: Hypertension/\*drug therapy/pathology  
MESH HEADINGS: Male  
MESH HEADINGS: Myocardium/pathology  
MESH HEADINGS: Organ Size  
MESH HEADINGS: Rats  
MESH HEADINGS: Rats, Inbred SHR  
MESH HEADINGS: Receptors, Endothelin/antagonists &amp  
MESH HEADINGS: inhibitors  
MESH HEADINGS: \*Vascular Resistance eng

516. Hall, L. and Anderson, R. D. Historical trends analysis of 2004 to 2009 toxicity and pesticide data for California's central valley. 2012; 47, (6): 801-811.   
Rec #: 61189  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The goals of this study were to conduct temporal trends analysis of 2004-2009 toxicity and pesticide data sets for four Central Valley Water Quality Coalitions in California. The general conclusions from analysis of 6 years of toxicity and pesticide data from these Central Valley Coalitions is that a significant decline has occurred with Ceriodaphnia toxicity, diazinon concentrations and chlorpyrifos concentrations. There was no data to support a significant increase in toxicity or pesticide concentrations from any of the data sets analyzed from 2004 to 2009. In addition, the percent of diazinon and chlorpyrifos samples exceeding water quality objectives of these organophosphate insecticides has also declined significantly from 2004 to 2009. Interpretation of all toxicity and pesticide data used in this analysis within a "weight of evidence context" suggests that water quality conditions have generally improved in the Central Valley Region of California from 2004 to 2009.  
Keywords: Trends analysis, pesticides, toxicity data, water quality objectives,  
ISI Document Delivery No.: 924BP

517. Hall, Patricia. Gc/Ms and Gc/Ms/Ms Analysis and Atmospheric Concentrations of Organochlorine and Organophosphorus Pesticides and Selected Current Use Herbicides in Saskatchewan. 2011.  
Rec #: 51689  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: From April 2003 to April 2004, atmospheric samples were collected at Bratt's Lake, Saskatchewan (an agricultural site approximately 30 km SSW of Regina). These samples were used to develop a gas chromatography - mass spectrometry (GC-MS) analysis method, to improve the collection efficiency of the commonly used polyurethane foam (PUF) plug and to examine the atmospheric concentrations and trends in concentration of the targeted pesticides (organochlorine (OC) and organophosphorus (OP) pesticides and three current use herbicides). The GC-MS and GC tandem MS (GC-MS/MS) methods were developed by comparing different ionization modes (electron ionization (El) and negative chemical ionization (NCI)) and MS techniques (selected ion monitoring (SIM) and selected reaction monitoring (SRM)). NCI-SIM provided the best sensitivity and selectivity for the targeted list of pesticides with method detection limits (MDL) for most OCs of less than 10 pg Î¼L -1 (corresponds to an atmospheric concentration of approximately 55 pg m-3 for a 1-day sample and 13 pg m-3 for a 4-day sample). EI SIM was used for some pesticides that had high MDLs with NCI-SIM. The methods included 19 OP pesticides, 28 OC pesticides and 3 pre-emergent herbicides. During sample collection, 7 different granular sorbents (XAD-2, XAD-4, Tenax-TA, Chromosorb-102 (Chrom), Chromosorb-108, Chromosorb-750, and Anasorb-747) were compared for their ability improve collection of gas phase pesticides compared to a 7.62 cm PUF plug. The sorbent was sandwiched between two smaller (2.54 cm on bottom, 5.08 cm on top) PUF plugs. These sample layers were analyzed separately to determine how the pesticide was being collected. The PUF/sorbent improved the collection efficiency for ethalfluralin, trifluralin and chlorpyrifos, but collected similar amounts to the PUF alone for triallate. The most effective sorbents were XAD-2, Chrom-108, Tenax-TA, and XAD-4. Chrom-102 and Anasorb 747 improved collection efficiency, but not as much, while Chrom-750 was the least effective. Four pesticides were detected more frequently than others, chlorpyrifos (an OP insecticide), ethalfluralin, triallate, and trifluralin (herbicides). In addition, 36 pesticides (14 OCs and 22 OPs) were detected at least once, mainly on the four-day samples. The commonly detected pesticides were analyzed to determine if there was a contribution from volatilization. Chlorpyrifos was detected at the highest atmospheric concentrations (up to 250000 pg m -3 ). The maximum concentrations for ethalfluralin, trifluralin and triallate were 1330 pg m-3 , 1010 pg m-3 and 27300 pg m-3 , respectively.  
Start Page: 209  
ISSN/ISBN: 9780494885963  
Keywords: 0486:Analytical chemistry  
Keywords: 0371:Atmospheric Chemistry  
Keywords: Pesticides  
Keywords: Herbicides  
Keywords: Organochlorine  
Keywords: Earth sciences  
Keywords: Pure sciences  
Keywords: Organophosphorus  
9780494885963  
Hall, Patricia  
64047241  
0486: Analytical chemistry  
Herbicides  
66569  
Organochlorine  
n/a  
English  
Organophosphorus  
0371: Atmospheric Chemistry  
NR88596  
Copyright ProQuest, UMI Dissertations Publishing 2011  
Pesticides  
2011  
2770143871  
2012-11-19  
1074790552  
Pure sciences  
Earth sciences English

518. Hama, H. Insecticide Resistance of Diamondback Moth, Plutella xylostella in Japan. 1990; 24, (1): 22-30.   
Rec #: 90  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ACP,CBL,CPY,CPYM,DDVP,DMT,DZ,FNT,FNV,MDT,MLN,MOM,PFF,PIRM,SMT,TCF), NO REVIEW (ACP,CBL,CPY,CPYM,DDVP,DMT,DZ,FNT,FNV,MDT,MLN,MOM,PFF,PIRM,SMT,TCF)  
Notes: Chemical of Concern: ACP,CBL,CPY,CPYM,DDVP,DMT,DZ,FNT,FNV,MDT,MLN,MOM,PFF,PIRM,SMT,TCF

519. Han, C; Zhu, L-S; Wang, J; Wang, J-H; Xie, H; Su, J, and Han, C. Residue Analysis of Chlorpyrifos and Its Toxic Metabolite Tcp in Water by Hplc. 2009 Jul; 28, ( 7): 1552-1556.   
Rec #: 41139  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A method was developed for analysis the residues of chlorpyrifos and its toxic metabolite 3,5,6-trichloro-2-pyridinol (TCP) in water. In this method, different conditions of mobile phase, different kinds of extraction solvents and different amount of extraction solvents were studied. Ethyl acetate, dichloromethane, chloroform and petroleum ether were tested as the extraction solvent, respectively. And the best extraction was obtained when using ethyl acetate as extraction solvent Water samples were extracted by two step liquid-liquid distribution, 50 mL ethyl acetate was used in the first partitioning step, and 30 mL was used in the second. The detection method was based on using high-performance liquid chromatography (HPLC) with reversed-phase C sub(18) column, and gradient UV detector. The column was maintained at 25 C with a mobile phase flow rate of 1.0 mL; min super(-1). The mobile phase was consisted of methanol-water (90:10, V/V) or acetonitrile-water (90:10, V/V). Chlorpyrifos and TCP were all detected at 300 nm. The retention times of chlorpyrifos and TCP were 6.4 min and 3.6 min when using methanol-water (90:10, V/V) as mobile phase, and 5.6 min and 2.5 min when using acetonitrile-water(90:10, V/V). The detection limits for chlorpyrifos and TCP were found to be 0.5 ng and 0.15 ng, respectively. When adding chlorpyrifos and TCP at the concentration of 0.0165 mg; L super(-1), the average recoveries of chlorpyrifos and TCP from water samples were about 91.4%6105.1% and 90.6%6105.4%, and the relative standard deviation ranged from 0.99%64.12% to 0.29%69.33%. The lowest detectable concentration of chlorpyrifos and TCP in water sample were 2 ng; mL super(-1) and 0.6 ng; mL super(-1). The results showed that the method met the demands of pesticide residue analysis.  
Keywords: High-performance liquid chromatography  
Keywords: Water sampling  
Keywords: Water Analysis  
Keywords: Pesticide residues  
Keywords: Water Sampling  
Keywords: Pollution Abstracts; Toxicology Abstracts; Water Resources Abstracts; Aqualine Abstracts  
Keywords: SW 3030:Effects of pollution  
Keywords: Metabolites  
Keywords: petroleum ether  
Keywords: Flow rates  
Keywords: Chloroform  
Keywords: Standard Deviation  
Keywords: Petroleum  
Keywords: Liquid Chromatography  
Keywords: Ethers  
Keywords: X 24330:Agrochemicals  
Keywords: Residues  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Solvents  
Keywords: Pesticide Residues  
Keywords: AQ 00003:Monitoring and Analysis of Water and Wastes  
Keywords: Chlorpyrifos  
Keywords: Standard deviation  
Keywords: Dichloromethane  
Keywords: Liquid chromatography  
Keywords: Ethyl acetate  
Keywords: Pesticides  
Date revised - 2009-09-01  
Language of summary - English  
Pages - 1552-1556  
ProQuest ID - 20795543  
SubjectsTermNotLitGenreText - High-performance liquid chromatography; Chlorpyrifos; Chloroform; Dichloromethane; Standard deviation; Pesticide residues; Ethyl acetate; Solvents; Metabolites; petroleum ether; Residues; Water sampling; Liquid chromatography; Petroleum; Pesticides; Ethers; Flow rates; Standard Deviation; Water Analysis; Water Sampling; Pesticide Residues; Liquid Chromatography  
Last updated - 2012-03-29  
British nursing index edition - Journal of Agro-Environment Science [J. Agro-Environ. Sci.]. Vol. 28, no. 7, pp. 1552-1556. Jul 2009.  
Corporate institution author - Han, C; Zhu, L-S; Wang, J; Wang, J-H; Xie, H  
DOI - MD-0010406365; 10876940; 1672-2043 English

520. Han, Don-Hee and Han, Don-Hee. Airborne Concentrations of Organophosphorus Pesticides in Korean Pesticide Manufacturing/Formulation Workplaces. 2011; 49, (6): 703-713.   
Rec #: 43649  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticide manufacturing/formulation workers rather than farmers or applicators or people living with them are primarily exposed to organophosphorus pesticides (OPs). However, airborne concentrations in the workplace have rarely been determined. A total of 121 air samples (personal or area sampling) were collected at 4 factories where chlorpyrifos, EPN, parathion, and phorate, were manufactured/formulated from March through July, 2007-2008. Samples were collected by the National Institute for Occupational Safety and Health (NIOSH) method and were analyzed by GC-MS. The geometric mean (GM) level of airborne chlorpyrifos was 0.17 mg/m3, 85% Korean Occupational Exposure Limit (KOEL) of 0.2 mg/m3, and at 95% confidence, airborne concentrations exceeded the KOEL 58.8% of the time or less, indicating that this concentration level was unacceptable according to exposure assessment using a LogNorm2 registered . However, compared with levels of TLV and/or PEL and/or WEL, the GM concentration levels of other OPs were remarkably low (range, 0.1-15.0%) and that these levels of concentrations to the other OPs were acceptable. The levels of airborne concentrations of OPs depended on isolation of the process; in other words, the levels depended on the extent to which the process was automated. The reason that the airborne concentration levels, except for those of chlorpyrifos, were very much lower than expected may be attributable to the fact that there was not exposed to 100% toxic active ingredients in pesticide formulation workplaces because of the use of supplemental agents or additives to produce complete pesticides. This study is limited since there were seldom or neither any data of previous studies to be compared with the study results nor dermal exposure data. The results were used to revise KOELs for OPs in 2010.  
Keywords: Chlorpyrifos  
Keywords: Factories  
Keywords: Pesticides  
Keywords: Occupational safety  
Keywords: Air sampling  
Keywords: H 1000:Occupational Safety and Health  
Keywords: Health & Safety Science Abstracts  
Keywords: Additives  
Keywords: Occupational exposure  
Keywords: Parathion  
Date revised - 2012-01-01  
Language of summary - English  
Pages - 703-713  
ProQuest ID - 918054343  
SubjectsTermNotLitGenreText - Chlorpyrifos; Factories; Occupational safety; Pesticides; Air sampling; Additives; Occupational exposure; Parathion  
Last updated - 2012-12-14  
British nursing index edition - Industrial Health [Ind. Health]. Vol. 49, no. 6, pp. 703-713. 2011.  
Corporate institution author - Han, Don-Hee  
DOI - 9068bd31-949c-41c1-863ccsamfg201; 16156294; 1880-8026 English

521. Han, Xiao-Le; Tian, Fang-Fang; Ge, Yu-Shu; Jiang, Feng-Lei; Lai, Lu; Li, Dong-Wei; Yu, Qiu-Liyang; Wang, Jia; Lin, Chen, and Liu, Yi. Spectroscopic, structural and thermodynamic properties of chlorpyrifos bound to serum albumin: A comparative study between BSA and HSA. 2012 Apr 2-; 109, (0): 1-11.   
Rec #: 1110  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Chlorpyrifos (CPF) is a widely used organophosphate insecticide which could bind with human serum albumin (HSA) and bovine serum albumin (BSA). The binding behavior was studied employing fluorescence, three-dimensional fluorescence, Circular dichroism (CD) spectroscopy, UVÇôvis absorption spectroscopy, electrochemistry and molecular modeling methods. The fluorescence spectra revealed that CPF causes the quenching of the fluorescence emission of serum albumin. SternÇôVolmer plots were made and quenching constants were thus obtained. The results suggested the formation of the complexes of CPF with serum albumins, which were in good agreement with the results from electrochemical experiments. Association constants at 25 -\_C were 3.039 +ù 105 mol LêÆ1 for HSA, and 0.3307 +ù 105 mol LêÆ1 for BSA, which could affect the distribution, metabolism, and excretion of pesticide. The alterations of protein secondary structure in the presence of CPF were confirmed by the evidences from UV and CD spectra. Site competitive experiments also suggested that the primary binding site for CPF on serum albumin is close to tryptophan residues 214 of HSA and 212 of BSA, which was further confirmed by molecular modeling. Chlorpyrifos/ Serum albumin/ Fluorescence quenching/ Circular dichroism/ Electrochemistry/ FRET

522. Han, Yongtao; Li, Wenming; Dong, Fengshou; Xu, Jun; Liu, Xingang; Li, Yuanbo; Kong, Zhiqiang; Liang, Xuyang, and Zheng, Yongquan. The behavior of chlorpyrifos and its metabolite 3,5,6-trichloro-2-pyridinol in tomatoes during home canning. 2013 Jun; 31, (2): 560-565.   
Rec #: 860  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: The behavior of home canning on residue levels of chlorpyrifos and its metabolite 3,5,6-trichloro-2-pyridinol in tomatoes was assessed. The residues were determined by ultra-performance liquid chromatography coupled with tandem mass spectrometry (UPLC-MS/MS) after each step including washing, peeling, homogenization, simmering, and sterilization. Results showed that the amount of chlorpyrifos after washing reduced 29.9%, while the amount of 3,5,6-trichloro-2-pyridinol after washing remained the same as that in raw tomatoes. Chlorpyrifos and 3,5,6-trichloro-2-pyridinol were proved to be mostly retained in tomato skin. The peeling process caused the loss of 63.5% of chlorpyrifos and 53.3% of 3,5,6-trichloro-2-pyridinol from tomatoes, with the processing factor of peeling at 0.09 and 0.43 respectively, whereas homogenization, simmering, and sterilization process had little effects on the removal of chlorpyrifos and 3,5,6-trichloro-2-pyridinol residue. Tomato/ UPLC-MS/MS/ Chlorpyrifos/ 3,5,6-trichloro-2-pyridinol/ Processing

523. Handal, A. J.; Harlow, S. D.; Breilh, J., and Lozoff, B. Occupational Exposure to Pesticides During Pregnancy and Neurobehavioral Development of Infants and Toddlers. 2008; 19, (6): 851-859.   
Rec #: 61229  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Few studies have examined the effects of in utero exposure to organophosphate and carbamate pesticides on neurobehavioral development in infants and young children. This study considers the potential effects of maternal occupation in the cutflower industry during pregnancy on neurobehavioral development in Ecuadorian children. Methods: Data were collected during 2003-2004 for 121 children aged 3-23 months and living in the rural highland region of Cayambe, Ecuador. Children were administered the Ages and Stages Questionnaire and were given specific developmental tests including prehension (reach-and-grasp) and visual skills. Information was gathered on maternal health and work characteristics, the home environment, and child health status. Growth measurements and a hemoglobin finger-prick blood test were obtained. We conducted multiple linear and logistic regression analyses. Results: Children whose mothers worked in the flower industry during pregnancy scored lower on communication (8% decrease in score, 95% confidence interval [CI]: - 16% to 0.5%) and fine motor skills (13% decrease, 95% CI: -22% to -5), and had a higher odds of having poor visual acuity (odds ratio = 4.7 [CI =1.1-20]), compared with children whose mothers did not work in the flower industry during pregnancy, after adjusting for potential confounders. Conclusions: Maternal occupation in the cut-flower industry during pregnancy may be associated with delayed neurobehavioral development of children aged 3-23 months. Possible hazards associated with working in the flower industry during pregnancy include pesticide exposure, exhaustion, and job stress.  
Keywords: ACUITY CARD PROCEDURE, FETAL LEAD-EXPOSURE, ORGANOPHOSPHATE PESTICIDE,  
ISI Document Delivery No.: 362IP

524. Handal, A. J.; Lozoff, B.; Breilh, J., and Harlow, S. D. Neurobehavioral development in children with potential exposure to pesticides. 2007; 18, (3): 312-320.   
Rec #: 61239  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Children may be at higher risk than adults from pesticide exposure, due to their rapidly developing physiology, unique behavioral patterns, and interactions with the physical environment. This preliminary study conducted in Ecuador examines the association between household and environmental risk factors for pesticide exposure and neurobehavioral development. Methods: We collected data over 6 months in the rural highland region of Cayambe, Ecuador (2003-2004). Children age 24-61 months residing in 3 communities were assessed with the Ages and Stages Questionnaire and the Visual Motor Integration Test. We gathered information on maternal health and work characteristics, the home and community environment, and child characteristics. Growth measurements and a hemoglobin finger-prick blood test were obtained. Multiple linear regression analyses were conducted. Results: Current maternal employment in the flower industry was associated with better developmental scores. Longer hours playing outdoors were associated with lower gross and fine motor and problem solving skills. Children who played with irrigation water scored lower on fine motor skills (8% decrease; 95% confidence interval = -9.31 to -0.53), problem-solving skills (7% decrease; -8.40 to -0.39), and Visual Motor Integration test scores (3% decrease; -12.00 to 1.08). Conclusions: These results suggest that certain environmental risk factors for exposure to pesticides may affect child development, with contact with irrigation water of particular concern. However, the relationships between these risk factors and social characteristics are complex, as corporate agriculture may increase risk through pesticide exposure and environmental contamination, while indirectly promoting healthy development by providing health care, relatively higher salaries, and daycare options.  
Keywords: CENTRAL WASHINGTON-STATE, AGRICULTURAL COMMUNITY, PRESCHOOL-CHILDREN,  
ISI Document Delivery No.: 161DA

525. Harnly, M. E.; Bradman, A.; Nishioka, M.; McKone, T. E.; Smith, D.; McLaughlin, R.; Kavanagh-Baird, G.; Castorina, R., and Eskenazi, B. Pesticides in Dust from Homes in an Agricultural Area. 2009; 43, (23): 8767-8774.   
Rec #: 61289  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We collected indoor dust samples from homes in the Salinas Valley of California. Of 22 pesticides measured in 504 samples, permethrins and the organophosphate chlorpyrifos were present in highest amounts. In multivariate Tobit regression models among samples from 197 separate residences, reported agricultural uses of chlorpyrifos, a herbicide (2,3,5,6-tetrachloroterephthalate (DCPA)), and a fungicide (iprodione) on agricultural fields were significantly (p < 0.01) associated, with 83%, 19%, and 49% increases, respectively, in dust concentrations for each kg applied per day, near participant homes, in the month or season prior to sample collection. However, agricultural use of diazinon, which was 2.2 times that of chlorpyrifos, and of permethrin were not significantly associated with dust levels. Other variables independently associated with dust levels included temperature and rainfall, farmworkers storing work shoes in the home, storing a diazinon product in the home, housing density, having a home less clean, and having an air conditioner. Permethrins, chlorpyrifos, DCPA, and iprodione have either a log octanol-water partition coefficient (K(ow),) greater than 4.0, a very low vapor pressure, or both. Health risk assessments for pesticides that have these properties may need to include evaluation of exposures to house dust.  
Keywords: SALINAS VALLEY, CARPET DUST, EXPOSURE, CHILDREN, ASSOCIATION, COMMUNITY,  
ISI Document Delivery No.: 522ZM

526. Harris, Eric Sj; Cao, Shugeng; Littlefield, Bruce a; Craycroft, Jane a; Scholten, Robert; Kaptchuk, Ted; Fu, Yanling; Wang, Wenquan; Liu, Yong; Chen, Hubiao; Zhao, Zhongzhen; Clardy, Jon; Woolf, Alan D; Eisenberg, David M, and Chen, Hubiao. Heavy Metal and Pesticide Content in Commonly Prescribed Individual Raw Chinese Herbal Medicines. 2011 Sep 15; 409, (20): 4297-4305.   
Rec #: 43139  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Heavy metal and pesticide contamination has previously been reported in Chinese Herbal Medicines (CHMs), in some cases at potentially toxic levels. This study was conducted to determine general patterns and toxicological significance of heavy metal and pesticide contamination in a broad sample of raw CHMs. Three-hundred-thirty-four samples representing 126 species of CHMs were collected throughout China and examined for arsenic, cadmium, chromium, lead, and mercury. Of the total, 294 samples representing 112 species were also tested for 162 pesticides. At least 1 metal was detected in all 334 samples (100%) and 115 samples (34%) had detectable levels of all metals. Forty-two different pesticides were detected in 108 samples (36.7%), with 1 to 9 pesticides per sample. Contaminant levels were compared to toxicological reference values in the context of different exposure scenarios. According to a likely scenario of CHM consumption, only 3 samples (1%) with heavy metals and 14 samples (5%) with pesticides were found with concentrations that could contribute to elevated background levels of contaminant exposure. According to the most conservative scenario of CHM consumption, 231 samples (69%) with heavy metals and 81 samples (28%) with pesticides had contaminants that could contribute to elevated levels of exposure. Wild collected plants had higher contaminant levels than cultivated samples. Cadmium, chromium, lead, and chlorpyrifos contamination showed weak correlations with geographic location. Based on our assumptions of the likely mode of consumption of raw CHMs, the vast majority (95%) of the 334 samples in this study contained levels of heavy metals or pesticides that would be of negligible concern. However, given the number of samples with detectable contaminants and the range between the more likely and more conservative scenarios of contaminant exposure, more research and monitoring of heavy metals (especially cadmium and chromium) and pesticide residues (especially chlorpyrifos) in raw CHMs are advised.  
Keywords: Pollution monitoring  
Keywords: Metals  
Keywords: herbal medicines  
Keywords: Pesticide residues  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Lead  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos  
Keywords: Pesticides  
Keywords: Mercury  
Keywords: Environment Abstracts; Pollution Abstracts  
Keywords: China, People's Rep.  
Keywords: heavy metals  
Date revised - 2012-01-01  
Language of summary - English  
Location - China, People's Rep.  
Pages - 4297-4305  
ProQuest ID - 889697616  
SubjectsTermNotLitGenreText - Chlorpyrifos; Metals; Pollution monitoring; herbal medicines; Pesticide residues; Pesticides; Mercury; Lead; heavy metals; China, People's Rep.  
Last updated - 2012-08-02  
Corporate institution author - Harris, Eric SJ; Cao, Shugeng; Littlefield, Bruce A; Craycroft, Jane A; Scholten, Robert; Kaptchuk, Ted; Fu, Yanling; Wang, Wenquan; Liu, Yong; Chen, Hubiao; Zhao, Zhongzhen; Clardy, Jon; Woolf, Alan D; Eisenberg, David M  
DOI - OB-de7a021b-05e4-45ef-ae19csamfg201; 15619633; 0048-9697 English

527. Harris, W.; Munoz, D.; Bonner, P. L. R., and Hargreaves, A. J. Effects of phenyl saligenin phosphate on cell viability and transglutaminase activity in N2a neuroblastoma and HepG2 hepatoma cell lines. 2009; 23, (8): 1559-1563.   
Rec #: 61309  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The main aim of this study was to determine whether sub-lethal concentrations of the **organophosphate compound phenyl saligenin phosphate** (PSP) could disrupt the activity of the Ca(2+)-activated enzyme tissue transglutaminase (TGase 2) from cultured cell lines of neuronal (N2a) and hepatic (HepG2) origin. The results indicated that PSP added directly to cytosol extracts from healthy cells was able to inhibit TGase 2 activity by 40-60% of control levels at sub-lethal concentrations (>= 0.1 mu M) that were approximately 100-fold lower than their IC(50) values in cytotoxicity assays. Following 24 h exposure of N2a cells to 0.3 and 3 mu M PSP in situ, a similar reduction in activity was observed in subsequent assays of TGase 2 activity. However, significantly increased activity was observed following in situ exposure of HepG2 cells to PSP (ca. 4-fold at 3 mu M). Western blotting analysis indicated slightly reduced levels of TGase 2 in N2a cells compared to the control, whereas an increase was observed in the level of TGase 2 in HepG2 cells. We suggest that TGase 2 represents a potential target of organophosphate toxicity and that its response may vary in different cellular environments, possibly affected by its expression pattern. (C) 2009 Elsevier Ltd. All rights reserved.  
Keywords: N2a neuroblastoma, HepG2 hepatoma, Organophosphate, Neurotoxicity,  
ISI Document Delivery No.: 526GV

528. Hart, E.; Coscolla, C.; Pastor, A., and Yusa, V. GC-MS characterization of contemporary pesticides in PM10 of Valencia Region, Spain. 2012; 62, 118-129.   
Rec #: 61319  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Better knowledge of the occurrence of pesticides in the inhalable fraction of particulate matter (PM10) could be very useful for future exposure assessment in individuals of the general public. The present work studies the spatial and temporal distribution of the occurrence of currently used pesticides (CUPs) in PM10. Ambient air samples were collected from January through December 2010 at one remote, one urban and three rural sites in Valencia Region (Spain) and analyzed for 42 CUPs using a gas chromatography coupled to mass spectrometry in tandem (GC-MS/MS) approach. Overall, 24 pesticides were detected in the PM10 fraction, four of them currently banned pesticides. Among those detected, concentrations of two particle-bound pesticides (permethrin and pyrimethanil) were, to our knowledge, reported for the first time in air in the literature. The detected pesticides appeared at frequencies ranging from <1 to 47%, with chlorpyrifos, bifenthrin and diazinon presenting the highest frequencies. The concentrations detected ranged from a few to several hundred pg m(-3), with ethoprophos showing the highest average concentration (1492 pg m(-3)). Each station shows its own specific pesticide profile, which is linked to the different types of crops around each site. Seasonal patterns were observed in the rural stations of Alzira and Sant Jordi, correlating pesticide detection with their application in agricultural practices, mostly in spring and early summer. These findings suggest that more efforts are required to implement an extensive air monitoring network in Europe for pesticide control and to develop regulations or recommendations regarding pesticide levels in ambient air. (C) 2012 Elsevier Ltd. All rights reserved.  
Keywords: Pesticides, Temporal variations, PM10  
ISI Document Delivery No.: 038QC

529. Hartwell, Si and Hartwell, SI. Distribution of Ddt and Other Persistent Organic Contaminants in Canyons and on the Continental Shelf Off the Central California Coast. 2008 Apr; 65, (3): 199-217.   
Rec #: 49589  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Sediment samples were collected to delineate the distribution of contaminants along the central California coast. Sampling included a variety of Canyons and shelf/slope areas to evaluate contaminant transport patterns and potential delivery to Canyons and the continental slope to a depth of 1200m. Sediments were collected and analyzed for organic contaminants using standard techniques of the NOAA National Status and Trends Program (NS&T). DDT is distributed on the shelf within a zone of fine-grained sediments between Half Moon and Monterey Bays. DDT was found at higher concentrations in Ascension, Ano Nuevo, and Monterey/Soquel Canyons than in Pioneer and Carmel Canyons, the Gulf of the Farallones, or the continental slope. The Monterey Bay watershed appears to be the primary source of DDT. In contrast, PAHs and PCBs on the shelf appear to be derived primarily from San Francisco Bay. DDT appears to be delivered to the deep ocean via the Canyons more than from cross-shelf sediment transport. Sediment budget estimates for the continental shelf north of Monterey Bay need further refinement and more data to account for the movement of material from Monterey Bay onto the shelf.  
Keywords: INE, USA, California, Ano Nuevo  
Keywords: INE, USA, California, Monterey  
Keywords: Pollution dispersion  
Keywords: Watersheds  
Keywords: INE, USA, California, Monterey Bay, Soquel Canyon  
Keywords: Insecticides  
Keywords: Aromatic hydrocarbons  
Keywords: INE, USA, California, Monterey Bay  
Keywords: Sediment transport  
Keywords: budgets  
Keywords: PCB compounds  
Keywords: PCB  
Keywords: Bays  
Keywords: Sediment pollution  
Keywords: Continental slope  
Keywords: canyons  
Keywords: Coastal zone  
Keywords: Oceans  
Keywords: INE, USA, California, Carmel  
Keywords: DDT  
Keywords: P 1000:MARINE POLLUTION  
Keywords: INE, USA, California, San Francisco Bay  
Keywords: Pollution Abstracts; Oceanic Abstracts  
Keywords: Contaminants  
Keywords: Biology  
Date revised - 2008-05-01  
Language of summary - English  
Location - INE, USA, California, Monterey Bay; INE, USA, California, Ano Nuevo; INE, USA, California, San Francisco Bay; INE, USA, California, Monterey Bay, Soquel Canyon; INE, USA, California, Carmel; INE, USA, California, Monterey  
Pages - 199-217  
ProQuest ID - 289494605  
SubjectsTermNotLitGenreText - INE, USA, California, Monterey Bay; INE, USA, California, Ano Nuevo; INE, USA, California, San Francisco Bay; INE, USA, California, Monterey Bay, Soquel Canyon; INE, USA, California, Carmel; INE, USA, California, Monterey; canyons; DDT; Insecticides; Sediment pollution; Oceans; budgets; Contaminants; Sediment transport; Watersheds; Bays; PCB compounds; Coastal zone; Continental slope; Pollution dispersion; PCB; Aromatic hydrocarbons  
Last updated - 2011-10-26  
Corporate institution author - Hartwell, SI  
DOI - OB-MD-0007974866; 8102359; 0141-1136 English

530. Harwood, A. D. Temperature as a Toxicity Identification Evaluation Tool for Pyrethroid Insecticides: Toxicokinetic Confirmation. 2008: 55 p. (UMI# 1456838)(Publ As 117852).   
Rec #: 100  
Keywords: PUBL AS  
Notes: Chemical of Concern: CPY,DDT,LCYT,PMR

531. Harwood, Amanda D; Landrum, Peter F; Weston, Donald P, and Lydy, Michael J. Using Spme Fibers and Tenax to Predict the Bioavailability of Pyrethroids and Chlorpyrifos in Field Sediments. 2013 Feb; 173, 47-51.   
Rec #: 38429  
Keywords: MIXTURE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The presence of pyrethroids in both urban and agricultural sediments at levels lethal to invertebrates has been well documented. However, variations in bioavailability among sediments make accurate predictions of toxicity based on whole sediment concentrations difficult. A proposed solution to this problem is the use of bioavailability-based estimates, such as solid phase microextraction (SPME) fibers and Tenax beads. This study compared three methods to assess the bioavailability and ultimately toxicity of pyrethroid pesticides including field-deployed **SPME fibers, laboratory-exposed SPME fibers, and a 24-h Tenax extraction**. The objective of the current study was to compare the ability of these methods to quantify the bioavailable fraction of pyrethroids in contaminated field sediments that were toxic to **benthic invertebrates**. In general, Tenax proved a more sensitive method than SPME fibers and a correlation between Tenax extractable concentrations and mortality was observed. Copyright Â© 2012 Elsevier Ltd. All rights reserved.  
Keywords: 2921-88-2  
Keywords: Animals  
Keywords: Geologic Sediments -- chemistry  
Keywords: Chlorpyrifos -- chemistry  
Keywords: Polymers -- chemistry  
Keywords: Pyrethrins -- chemistry  
Keywords: Solid Phase Microextraction  
Keywords: Soil Pollutants -- chemistry  
Keywords: 24938-68-9  
Keywords: Soil Pollutants -- analysis  
Keywords: Soil Pollutants  
Keywords: Chlorpyrifos  
Keywords: Chlorpyrifos -- analysis  
Keywords: 0  
Keywords: Pyrethrins -- analysis  
Keywords: Pyrethrins  
Keywords: tenax  
Keywords: Polymers  
Keywords: Environmental Monitoring -- methods  
Date completed - 2013-02-01  
Date created - 2012-12-18  
Date revised - 2013-02-04  
Language of summary - English  
Pages - 47-51  
ProQuest ID - 1240902145  
Last updated - 2013-02-05  
British nursing index edition - Environmental pollution (Barking, Essex : 1987), February 2013, 173:47-51  
Corporate institution author - Harwood, Amanda D; Landrum, Peter F; Weston, Donald P; Lydy, Michael J  
DOI - MEDL-23202281; 23202281; 1873-6424 eng

532. Hassan, Jalal; Farahani, Abolfazl; Shamsipur, Mojtaba, and Damerchili, Fatemeh. Rapid and simple low density miniaturized homogeneous liquidÇôliquid extraction and gas chromatography/mass spectrometric determination of pesticide residues in sediment. 2010 Dec 15-; 184, (1Çô3): 869-871.   
Rec #: 5770  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: A simple, rapid and environmentally friendly analytical methodology is developed for extraction of pesticides (diazinon, chlorpyrifos and trifluralin) from sediment samples based on a technique called low density miniaturized homogenous liquidÇôliquid extraction (LDMHLLE) prior gas chromatography mass spectrometry determination. The method based on homogeneous liquidÇôliquid extraction with methanol containing n-hexane as a solvent of lower density than water (n-hexane). After addition of water, n-hexane solvent immediately forms a distinct water immiscible phase at the top of the vial, which can be easily separated and injected to the GC/MS instrument for quantification. Acquisition was performed in the selected ion monitoring mode. The limits of detection were estimated for the individual pesticides as 3Sb (three times of the standard deviation of baseline) of the measured chromatogram for pesticides. The proposed method is very fast, simple, and sensitive without any need for stirring and centrifugation and applied to real sediment samples, successfully. Low density miniaturized homogenous liquidÇôliquid solvent extraction/ Pesticides/ Sediment samples

533. Haswell, E. S.; Phillips, R., and Rees, D. C. Mechanosensitive Channels: What Can They Do and How Do They Do It?   
Rec #: 49979  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Nature. 2009 Sep 3;461(7260):120-4 (medline /19701184)  
COMMENTS: Cites: J Biol Chem. 2005 Oct 14;280(41):34684-90 (medline /16109709)  
COMMENTS: Cites: Biochemistry. 2005 Sep 13;44(36):12239-44 (medline /16142922)  
COMMENTS: Cites: Curr Biol. 2006 Jan 10;16(1):1-11 (medline /16401419)  
COMMENTS: Cites: Science. 2006 Apr 28;312(5773):534-5 (medline /16645081)  
COMMENTS: Cites: Biophys J. 2007 Feb 15;92(4):1233-40 (medline /17142294)  
COMMENTS: Cites: Annu Rev Biophys Biomol Struct. 2007;36:107-30 (medline /17263662)  
COMMENTS: Cites: Arch Microbiol. 2008 Jan;189(1):49-58 (medline /17665170)  
COMMENTS: Cites: Nat Struct Mol Biol. 2007 Dec;14(12):1141-9 (medline /18037888)  
COMMENTS: Cites: Appl Environ Microbiol. 2008 Apr;74(8):2454-60 (medline /18310427)  
COMMENTS: Cites: Curr Biol. 2008 May 20;18(10):730-4 (medline /18485707)  
COMMENTS: Cites: Methods Enzymol. 1997;277:505-24 (medline /18488322)  
COMMENTS: Cites: J Gen Physiol. 2008 Jul;132(1):67-83 (medline /18591417)  
COMMENTS: Cites: Arch Microbiol. 2009 May;191(5):403-14 (medline /19252899)  
COMMENTS: Cites: Eur Biophys J. 2009 Sep;38(7):1013-27 (medline /19424690)  
COMMENTS: Cites: Biophys J. 2009 Aug 19;97(4):1048-57 (medline /19686652)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2010 Jul 13;107(28):12664-9 (medline /20616037)  
COMMENTS: Cites: EMBO J. 2002 Oct 15;21(20):5323-30 (medline /12374733)  
COMMENTS: Cites: J Am Chem Soc. 2003 Oct 22;125(42):12722-3 (medline /14558816)  
COMMENTS: Cites: Biochemistry. 2003 Dec 9;42(48):14306-17 (medline /14640699)  
COMMENTS: Cites: Biophys J. 2004 Nov;87(5):3050-65 (medline /15339798)  
COMMENTS: Cites: J Gen Physiol. 2005 Feb;125(2):143-54 (medline /15657299)  
COMMENTS: Cites: Biophys J. 2003 Oct;85(4):2087-99 (medline /14507677)  
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ABSTRACT: While mechanobiological processes employ diverse mechanisms, at their heart are force-induced perturbations in the structure and dynamics of molecules capable of triggering subsequent events. Among the best characterized force-sensing systems are bacterial mechanosensitive channels. These channels reflect an intimate coupling of protein conformation with the mechanics of the surrounding membrane; the membrane serves as an adaptable sensor that responds to an input of applied force and converts it into an output signal, interpreted for the cell by mechanosensitive channels. The cell can exploit this information in a number of ways: ensuring cellular viability in the presence of osmotic stress and perhaps also serving as a signal transducer for membrane tension or other functions. **This review focuses on the bacterial mechanosensitive channels of large (MscL) and small (MscS) conductance and their eukaryotic homologs, with an emphasis on the outstanding issues surrounding the function and mechanism of this fascinating class of molecules.**  
MESH HEADINGS: Arabidopsis/metabolism/physiology  
MESH HEADINGS: Cell Membrane/metabolism/\*physiology  
MESH HEADINGS: Computational Biology  
MESH HEADINGS: Escherichia coli/metabolism/\*physiology  
MESH HEADINGS: Escherichia coli Proteins/metabolism  
MESH HEADINGS: Eukaryota/metabolism/\*physiology  
MESH HEADINGS: Hydrophobic and Hydrophilic Interactions  
MESH HEADINGS: Ion Channel Gating/physiology  
MESH HEADINGS: Ion Channels/metabolism  
MESH HEADINGS: \*Mechanotransduction, Cellular  
MESH HEADINGS: Membrane Proteins/metabolism  
MESH HEADINGS: Mutagenesis, Site-Directed  
MESH HEADINGS: Osmotic Pressure  
MESH HEADINGS: Protein Conformation  
MESH HEADINGS: Protein Stability eng

534. Hayward, S. J.; Gouin, T., and Wania, F. Levels and Seasonal Variability of Pesticides in the Rural Atmosphere of Southern Ontario. 2010; 58, (2): 1077-1084.   
Rec #: 61369  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Air samples were collected continuously in Egbert, Ontario, which is in a rural agricultural area north of Toronto, between March 2006 and September 2007 and analyzed for pesticides of both current and historic use. The fungicide chlorothalonil was present in highest abundance with levels exceeding 2000 pg.m(-3) in the summer. Almost as abundant, with summer time concentrations around 400 to 600 pg.m(-3), were the herbicides atrazine, alachlor, and metolachlor. Other pesticides in current use, such as trifluralin, pendimethalin, chlorpyrifos, endosulfan, and disulfoton were consistently present at levels approximately 1 order of magnitude lower. Concentrations of banned pesticides (chlordanes and hexachlorocyclohexane), were generally below 10 pg.m(-3), except for hexachlorobenzene, which was present at the global average of approximately 50 pg.m(-3). These levels and the fact that they are generally lower than what has been reported for the area previously are in agreement with pesticide usage data for Ontario. Only the concentrations of chlorothalonil, chlorpyrifos, and HCB were correlated with air mass origin, as determined by back trajectory analysis. All pesticides had higher levels during the growing season compared to those in winter, but the ratio of concentrations during the different seasons is much higher for the pesticides in current use. That ratio may aid in distinguishing seasonal variability caused by pesticide application during the growing season from that caused by temperature-driven revolatilization. Higher concentrations of the banned pesticides during 2607 compared to those in 2006 may be due to higher volatilization rates caused by higher surface temperatures consistent with the El Nino Southern Oscillation.  
Keywords: Pesticide, atmosphere, seasonal variability, back trajectory, El Nino  
ISI Document Delivery No.: 544PV

535. He, L.; Luo, X.; Xie, H.; Wang, C.; Jiang, X., and Lu, K. Ionic Liquid-Based Dispersive Liquid-Liquid Microextraction Followed High-Performance Liquid Chromatography for the Determination of Organophosphorus Pesticides in Water Sample.   
Rec #: 77959  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Using 1-octyl-3-methylimidazolium hexafluorophosphate ([C(8)MIM][PF(6)]) ionic liquid as extraction solvent, organophosphorus pesticides (OPPs) (parathion, phoxim, phorate and chlorpyifos) in water were determined by dispersive liquid-liquid microextraction (DLLME) combined with high-performance liquid chromatography (HPLC). The extraction procedure was induced by the formation of cloudy solution, which was composed of fine drops of [C(8)MIM][PF(6)] dispersed entirely into sample solution with the help of disperser solvent (methanol). Parameters including extraction solvent and its volume, disperser solvent and its volume, extraction time, centrifugal time, salt addition, extraction temperature and sample pH were investigated and optimized. Under the optimized conditions, up to 200-fold enrichment factor of analytes and acceptable extraction recovery (>70%) were obtained. The calibration curves were linear in the concentration range of 10.5-1045.0 microg L(-1) for parathion, 10.2-1020.0 microg L(-1) for phoxim, 54.5-1089.0 microg L(-1) for phorate and 27.2-1089.0 microg L(-1) for chlorpyifos, respectively. The limits of detection calculated at a signal-to-noise ratio of 3 were in the range of 0.1-5.0 microg L(-1). The relative standard deviations for seven replicate experiments at 200 microg L(-1) concentration level were less than 4.7%. The proposed method was applied to the analysis of four different sources water samples (tap, well, rain and Yellow River water) and the relative recoveries of spiked water samples are 99.9-115.4%, 101.8-113.7% and 87.3-117.6% at three different concentration levels of 75, 200 and 1000 microg L(-1), respectively.  
MESH HEADINGS: Chemical Fractionation/\*methods  
MESH HEADINGS: Chlorpyrifos/analysis/isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: Chromatography, High Pressure Liquid/\*methods  
MESH HEADINGS: Hydrogen-Ion Concentration  
MESH HEADINGS: Imidazoles/chemistry  
MESH HEADINGS: Ionic Liquids/\*chemistry  
MESH HEADINGS: Organothiophosphorus Compounds/analysis/isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: Parathion/analysis/isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: Pesticides/\*analysis/chemistry/isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: Phorate/analysis/isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: Salts  
MESH HEADINGS: Solvents/chemistry  
MESH HEADINGS: Temperature  
MESH HEADINGS: Time Factors  
MESH HEADINGS: Water Pollutants, Chemical/\*analysis/chemistry/isolation &amp  
MESH HEADINGS: purification eng

536. He, Li-Ming; Troiano, John; Wang, Albert; Goh, Kean, and He, Li-Ming. Environmental Chemistry, Ecotoxicity, and Fate of Lambda-Cyhalothrin. 2008.  
Rec #: 46359  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Lambda-cyhalothrin is a pyrethroid insecticide. Pyrethroids are synthetic chemical analogues of pyrethrins, which are naturally occurring insecticidal compounds produced in the flowers of chrysanthemums (Chrysanthemum cinerariaefolium). Insecticidal products containing pyrethroids have been widely used to control insect pests in agriculture, public health, and homes and gardens (Amweg and Weston 2005; Oros and Werner 2005). In agriculture, target crops include cotton, cereals, hops, ornamentals, potatoes, and vegetables, with applications made to control aphid, coleopterous, and lepidopterous pests. Pyrethroids are important tools used in public health management where applications are made to control cockroaches, mosquitoes, ticks, and flies, which may act as disease vectors. Residential use of pyrethroid products has increased because of the suspension of organophosphate products containing chlorpyrifos or diazinon (Oros and Werner 2005; Weston et al. 2005).  
Start Page: 71  
End Page: 91  
Keywords: Agriculture  
Keywords: Flowers  
Keywords: Vegetables  
Keywords: Cotton  
Keywords: Ixodidae  
Keywords: Aphididae  
Keywords: Vectors  
Keywords: organophosphates  
Keywords: Crops  
Keywords: hops  
Keywords: Public health  
Keywords: Chlorpyrifos  
Keywords: Insecticides  
Keywords: Cereals  
Keywords: Solanum tuberosum  
Keywords: Pests  
Keywords: Pyrethroids  
Keywords: X 24330:Agrochemicals  
Keywords: pyrethrins  
Keywords: Diazinon  
Keywords: Toxicology Abstracts  
Keywords: Chrysanthemum  
Date revised - 2010-03-01  
Language of summary - English  
Pages - 71-91  
ProQuest ID - 21371251  
SubjectsTermNotLitGenreText - Agriculture; Vegetables; Flowers; Cotton; Vectors; organophosphates; hops; Crops; Public health; Chlorpyrifos; Insecticides; Cereals; Pests; Pyrethroids; pyrethrins; Diazinon; Solanum tuberosum; Ixodidae; Aphididae; Chrysanthemum  
Last updated - 2011-12-14  
British nursing index edition - Reviews of Environmental Contamination and Toxicology [Rev. Environ. Contam. Toxicol.]. Vol. 195, pp. 71-91. 2008.  
Corporate institution author - He, Li-Ming; Troiano, John; Wang, Albert; Goh, Kean  
DOI - MD-0012837985; 12490675; 0179-5953 English

537. He, Weiyi; You, Minsheng; Vasseur, Liette; Yang, Guang; Xie, Miao; Cui, Kai; Bai, Jianlin; Liu, Chunhui; Li, Xiaojing; Xu, Xiufeng, and Huang, Shiguo. Developmental and insecticide-resistant insights from the de novo assembled transcriptome of the diamondback moth, Plutella xylostella. 2012 Mar; 99, (3): 169-177.   
Rec #: 3510  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: We present here the de novo assembly and annotation of the transcriptome of Plutella xylostella (diamondback moth (DBM)), a widespread destructive pest of cruciferous plants, using short reads generated by Illumina sequencing from different developmental stages and insecticide-resistant strains. A total of 171,262 non-redundant sequences, denoted as unigenes, were obtained. They represented approximately 100-fold of all DBM mRNA and EST sequences in GenBank thus far. We identified 38,255 unigenes highly similar to the known functional protein-coding genes, most of which were annotated using gene ontology (GO) and orthologous groups of proteins (COG). Global profiling of differentially expressed unigenes revealed enriched GOs and biological pathways that were related to specific developmental stages and insecticide resistance. We also evaluated the resistance-related single nucleotide polymorphism (SNP) using this high-throughput genotyping method. The newly developed transcriptome will facilitate researches on the DBM developmental biology and insecticide resistance evolution, and ultimately provide better pest management systems. Plutella xylostella/ Development/ Insecticide resistance/ Transcriptome/ Expression profiling/ Next generation sequencing

538. Hedlund, E. ; Karlsson, M.; Osborn, T.; Ludwig, W., and Isacson, O. Global Gene Expression Profiling of Somatic Motor Neuron Populations With Different Vulnerability Identify Molecules and Pathways of Degeneration and Protection.   
Rec #: 50459  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Brain Res. 1996 Nov 25;741(1-2):82-8 (medline /9001708)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 2002 Feb 5;99(3):1604-9 (medline /11818550)  
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COMMENTS: Cites: Cell. 1992 Jan 24;68(2):283-302 (medline /1346368)  
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COMMENTS: Cites: Nat Genet. 2006 Apr;38(4):411-3 (medline /16501576)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2006 Apr 11;103(15):6007-12 (medline /16581901)  
ABSTRACT: Different somatic motor neuron subpopulations show a differential vulnerability to degeneration in diseases such as amyotrophic lateral sclerosis, spinal muscular atrophy and spinobulbar muscular atrophy. Studies in mutant superoxide dismutase 1 over-expressing amyotrophic lateral sclerosis model mice indicate that initiation of disease is intrinsic to motor neurons, while progression is promoted by astrocytes and microglia. Therefore, analysis of the normal transcriptional profile of motor neurons displaying differential vulnerability to degeneration in motor neuron disease could give important clues to the mechanisms of relative vulnerability. Global gene expression profiling of motor neurons isolated by laser capture microdissection from three anatomical nuclei of the normal rat, oculomotor/trochlear (cranial nerve 3/4), hypoglossal (cranial nerve 12) and lateral motor column of the cervical spinal cord, displaying differential vulnerability to degeneration in motor neuron disorders, identified enriched transcripts for each neuronal subpopulation. There were striking differences in the regulation of genes involved in endoplasmatic reticulum and mitochondrial function, ubiquitination, apoptosis regulation, nitrogen metabolism, calcium regulation, transport, growth and RNA processing; cellular pathways that have been implicated in motor neuron diseases. Confirmation of genes of immediate biological interest identified differential localization of insulin-like growth factor II, guanine deaminase, peripherin, early growth response 1, soluble guanylate cyclase 1A3 and placental growth factor protein. Furthermore, the cranial nerve 3/4-restricted genes insulin-like growth factor II and guanine deaminase protected spinal motor neurons from **glutamate-induced toxicity** (P < 0.001, ANOVA), indicating that our approach can identify factors that protect or make neurons more susceptible to degeneration.  
MESH HEADINGS: Amyotrophic Lateral Sclerosis  
MESH HEADINGS: Animals  
MESH HEADINGS: Carrier Proteins/genetics/metabolism  
MESH HEADINGS: Cell Survival/genetics/physiology  
MESH HEADINGS: Cells, Cultured  
MESH HEADINGS: Cranial Nerves/metabolism  
MESH HEADINGS: Disease Models, Animal  
MESH HEADINGS: Female  
MESH HEADINGS: Gene Expression Profiling  
MESH HEADINGS: Guanine Deaminase/genetics/metabolism  
MESH HEADINGS: Insulin-Like Growth Factor II/genetics/metabolism  
MESH HEADINGS: Motor Neuron Disease/\*genetics/\*metabolism/pathology  
MESH HEADINGS: Motor Neurons/\*metabolism/pathology  
MESH HEADINGS: Nerve Degeneration/\*genetics/\*metabolism/pathology  
MESH HEADINGS: Rats  
MESH HEADINGS: Rats, Sprague-Dawley  
MESH HEADINGS: Rats, Transgenic  
MESH HEADINGS: Signal Transduction/genetics  
MESH HEADINGS: Spinal Cord/metabolism  
MESH HEADINGS: Superoxide Dismutase/genetics/metabolism eng

539. Hee-Yun, K; Jong-Sup, J; Yong-Hoon, K; Hee-Ju, C; So-Young, C; Hwa-Jeong, L; Jae-in, K; Young-Seon, K; Gye-Sun, C; Jae-Chun, C, and Hee-Yun, K. Monitoring of Pesticide Residues in Green Tea Produced in Korea. 2009; 41, (5): 483-489.   
Rec #: 45269  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Herein, we present the results of our investigation of 61 pesticide residues in 100 samples of green teas obtained from Korean markets. Bifenthrin, chlorpyrifos, dicofol, EPN, chlorfenapyr, tebuconazole, cyhalothrin, difenoconazole, and tebufenpyrad were detected in 22 of the 100 green tea samples. The quantity of pesticide residues for bifenthrin was 0.12 ppm (maximum residue limits (MRLs): 0.3 ppm) in one sample, chlorpyrifos was 0.24-0.78 ppm (MRLs: 2.0 ppm) in three samples, dicofol was 1.64-4.19 ppm (MRLs: 50.0 ppm) in two samples, EPN was 0.13 ppm (MRLs: 0.05 ppm) in one sample, chlorfenapyr was 0.01-1.23 ppm (MRLs: 3.0 ppm) in 16 samples, tebuconazole was 0.71 ppm (MRLs: 5.0 ppm) in one sample, cyhalothrin was 0.05-0.3 ppm (MRLs: 2.0 ppm) in five samples, difenoconazole was 0.23 ppm (MRLs: 2.0 ppm) in one sample, and tebufenpyrad was 0.06-0.07 ppm (MRLs: 2.0 ppm) in two samples. More than two pesticide residues were detected in seven samples. All detected pesticide residues (with the exception of EPN) were within the MRLs.  
Keywords: Chlorpyrifos  
Keywords: Pesticide residues  
Keywords: Pesticides  
Keywords: Korea, Rep.  
Keywords: Health & Safety Science Abstracts  
Keywords: tea  
Date revised - 2010-01-01  
Language of summary - English  
Location - Korea, Rep.  
Pages - 483-489  
ProQuest ID - 21147651  
SubjectsTermNotLitGenreText - Korea, Rep.; Pesticide residues; Pesticides; tea; Chlorpyrifos  
Last updated - 2011-12-14  
British nursing index edition - Korean Journal of Food Science and Technology [Korean J. Food Sci. Technol.]. Vol. 41, no. 5, pp. 483-489. 2009.  
Corporate institution author - Hee-Yun, K; Jong-Sup, J; Yong-Hoon, K; Hee-Ju, C; So-Young, C; Hwa-Jeong, L; Young-Seon, K; Gye-Sun, C; Jae-Chun, C  
DOI - MD-0011157825; 11292219; 0367-6293 English

540. Hein, Nichole D; Rainier, Shirley R; Richardson, Rudy J; Fink, John K, and Hein, Nichole D. Motor Neuron Disease Due to Neuropathy Target Esterase Mutation: Enzyme Analysis of Fibroblasts From Human Subjects Yields Insights Into Pathogenesis. 2010 Nov 10; 199, (1): 1-5.   
Rec #: 43779  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Recently, we identified neuropathy target esterase (NTE) mutation as the cause of an autosomal recessive motor neuron disease (NTE-MND). Subsequently, we showed that NTE-MND mutations reduced specific activity (SA) and altered inhibitory kinetics of NTE catalytic domain constructs. Recent preliminary results showed that NTE is expressed in cultured human skin fibroblasts, and others have used mutant forms of neuronal proteins expressed in fibroblasts as biomarkers of neurogenetic diseases. Therefore, the present study was carried out to test the hypothesis that NTE in cultured skin fibroblasts from NTE-MND subjects also exhibit altered enzymological properties assessed by SA and IC50 values of mipafox (MIP) and chlorpyrifos oxon (CPO). NTE SA was reduced to 65% of control (wild-type NTE from commercially obtained fibroblasts) in homozygous M1012V fibroblasts and 59-61% of control in compound heterozygous R890H/c2946\_2947InsCAGC fibroblasts. MIP IC50 values were unaffected by the NTE mutations, but the CPO IC50 increased 4.5-fold in homozygous M1012V fibroblasts. Interestingly, markedly reduced NTE SAs (40-43% of control) were observed in fibroblasts from asymptomatic subjects heterozygous for NTE insertion c2946\_2947InsCAGC. This insertion is predicted to produce truncated NTE missing the last 235 residues of its catalytic domain. These observations confirm that NTE-MND mutations reduce NTE SA in vitro. Moreover, to the extent observations made in cultured fibroblasts may be generalized to events in the nervous system, lack of correlation between reduced fibroblast NTE SA and the occurrence of NTE-MND in NTE insertion mutation heterozygotes indicates that reduction of NTE SA alone is insufficient to cause MND.  
Keywords: Genetics Abstracts; CSA Neurosciences Abstracts; Toxicology Abstracts  
Keywords: N3 11023:Neurogenetics  
Keywords: Pharmacy And Pharmacology  
Keywords: Skin  
Keywords: Neuropathy target esterase  
Keywords: Enzymes  
Keywords: Motor neuron disease  
Keywords: biomarkers  
Keywords: Fibroblasts  
Keywords: Chlorpyrifos  
Keywords: Nervous system  
Keywords: Kinetics  
Keywords: Heterozygotes  
Keywords: G 07710:Chemical Mutagenesis & Radiation  
Keywords: Neurogenetics  
Keywords: X 24330:Agrochemicals  
Keywords: Mutation  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 1-5  
ProQuest ID - 887395646  
SubjectsTermNotLitGenreText - Chlorpyrifos; Nervous system; Skin; Kinetics; Heterozygotes; Neuropathy target esterase; Enzymes; Neurogenetics; biomarkers; Motor neuron disease; Mutation; Fibroblasts  
Last updated - 2011-12-13  
Corporate institution author - Hein, Nichole D; Rainier, Shirley R; Richardson, Rudy J; Fink, John K  
DOI - OB-3b10c861-b5a2-46f4-a886csaobj202; 13819746; 0378-4274 English

541. Hein, Nichole D; Stuckey, Jeanne a; Rainier, Shirley R; Fink, John K; Richardson, Rudy J, and Hein, Nichole D. Constructs of Human Neuropathy Target Esterase Catalytic Domain Containing Mutations Related to Motor Neuron Disease Have Altered Enzymatic Properties. 2010 Jul 1; 196, (2): 67-73.   
Rec #: 44079  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Neuropathy target esterase (NTE) is a phospholipase/lysophospholipase associated with organophosphorus (OP) compound-induced delayed neurotoxicity (OPIDN). Distal degeneration of motor axons occurs in both OPIDN and the hereditary spastic paraplegias (HSPs). Recently, mutations within the esterase domain of NTE were identified in patients with a novel type of HSP (SPG39) designated NTE-related motor neuron disease (NTE-MND). Two of these mutations, arginine 890 to histidine (R890H) and methionine 1012 to valine (M1012V), were created in human recombinant NTE catalytic domain (NEST) to measure possible changes in catalytic properties. These mutated enzymes had decreased specific activities for hydrolysis of the artificial substrate, phenyl valerate. In addition, the M1012V mutant exhibited a reduced bimolecular rate constant of inhibition (k i) for all three inhibitors tested: mipafox, diisopropylphosphorofluoridate, and chlorpyrifos oxon. Finally, while both mutated enzymes inhibited by OP compounds exhibited altered time-dependent loss of their ability to be reactivated by nucleophiles (aging), more pronounced effects were seen with the M1012V mutant. Taken together, the results from specific activity, inhibition, and aging experiments suggest that the mutations found in association with NTE-MND have functional correlates in altered enzymological properties of NTE.  
Keywords: Heat shock proteins  
Keywords: Lysophospholipase  
Keywords: Pharmacy And Pharmacology  
Keywords: Arginine  
Keywords: esterase  
Keywords: Aging  
Keywords: Neuropathy target esterase  
Keywords: Enzymes  
Keywords: phospholipase  
Keywords: Motor neuron disease  
Keywords: Hydrolysis  
Keywords: Nests  
Keywords: Methionine  
Keywords: Chlorpyrifos  
Keywords: Nucleophiles  
Keywords: Motor neurons  
Keywords: Histidine  
Keywords: Neurotoxicity  
Keywords: Hereditary spastic parplegia  
Keywords: Degeneration  
Keywords: valine  
Keywords: X 24330:Agrochemicals  
Keywords: Mutation  
Keywords: Toxicology Abstracts  
Date revised - 2011-12-01  
Language of summary - English  
Pages - 67-73  
ProQuest ID - 913846136  
SubjectsTermNotLitGenreText - Lysophospholipase; Heat shock proteins; Arginine; esterase; Neuropathy target esterase; Aging; Enzymes; phospholipase; Hydrolysis; Motor neuron disease; Nests; Methionine; Chlorpyrifos; Nucleophiles; Motor neurons; Histidine; Neurotoxicity; Hereditary spastic parplegia; Degeneration; valine; Mutation  
Last updated - 2012-01-05  
Corporate institution author - Hein, Nichole D; Stuckey, Jeanne A; Rainier, Shirley R; Fink, John K; Richardson, Rudy J  
DOI - OB-bdf80c35-8a28-4681-8244csaobj202; 13202988; 0378-4274 English

542. Hellstrom, A.; Nilsson, M. L., and Kylin, H. Current-use and Organochlorine Pesticides and Polychlorinated Biphenyls in the Biodegradable Fraction of Source Separated Household Waste, Compost, and Anaerobic Digestate. 2011; 86, (1): 60-64.   
Rec #: 61439  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Several current-use (a parts per thousand currency sign80 ng g(-1) dry weight) and organochlorine pesticides (a parts per thousand currency sign15 ng g(-1) dry weight) and polychlorinated biphenyls (a parts per thousand currency sign18 ng g(-1) dry weight) were found in the biodegradable fraction of source separated household waste, compost, and/or anaerobic digestate. The degradation rates of individual compounds differ depending on the treatment. Dieldrin and pentachloroaniline, e.g., degrade more rapidly than the waste is mineralized and accumulates in the products after all treatments. Many organochlorines degrade at the same rate as the waste and have the same concentrations in the waste and products. Chlorpyrifos degrades slower than the waste and accumulates in all products and ethion during anaerobic digestion. The polychlorinated biphenyls and some pesticides show different degradations rates relative the waste during different processes. Understanding the degradation of the contaminants under different conditions is necessary to develop quality criteria for the use of compost and digestate.  
Keywords: Organic waste, Composting, Mesophilic digestion, Thermophilic digestion,  
ISI Document Delivery No.: 703RV

543. Heltshe, Sonya L; Lubin, Jay H; Koutros, Stella; Coble, Joseph B; Ji, Bu-Tian; Alavanja, Michael C R; Blair, Aaron; Sandler, Dale P; Hines, Cynthia J; Thomas, Kent W; Barker, Joseph; Andreotti, Gabriella; Hoppin, Jane a; Beane Freeman, Laura E, and Heltshe, Sonya L. Using Multiple Imputation to Assign Pesticide Use for Non-Responders in the Follow-up Questionnaire in the Agricultural Health Study. 2012 Jul; 22, (4): 409-416.   
Rec #: 46659  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The Agricultural Health Study (AHS), a large prospective cohort, was designed to elucidate associations between pesticide use and other agricultural exposures and health outcomes. The cohort includes 57,310 pesticide applicators who were enrolled between 1993 and 1997 in Iowa and North Carolina. A follow-up questionnaire administered 5 years later was completed by 36,342 (63%) of the original participants. Missing pesticide use information from participants who did not complete the second questionnaire impedes both long-term pesticide exposure estimation and statistical inference of risk for health outcomes. Logistic regression and stratified sampling were used to impute key variables related to the use of specific pesticides for 20,968 applicators who did not complete the second questionnaire. To assess the imputation procedure, a 20% random sample of participants was withheld for comparison. The observed and imputed prevalence of any pesticide use in the holdout dataset were 85.7% and 85.3%, respectively. The distribution of prevalence and days/year of use for specific pesticides were similar across observed and imputed in the holdout sample. When appropriately implemented, multiple imputation can reduce bias and increase precision and can be more valid than other missing data approaches.  
Keywords: Inventories  
Keywords: USA, North Carolina  
Keywords: Statistics  
Keywords: Data processing  
Keywords: USA, Iowa  
Keywords: H 5000:Pesticides  
Keywords: Health & Safety Science Abstracts; Risk Abstracts; Toxicology Abstracts  
Keywords: Pesticides  
Keywords: R2 23060:Medical and environmental health  
Keywords: Sampling  
Keywords: X 24330:Agrochemicals  
Keywords: Environmental Studies  
Date revised - 2012-11-01  
Language of summary - English  
Location - USA, North Carolina; USA, Iowa  
Pages - 409-416  
ProQuest ID - 1222433307  
SubjectsTermNotLitGenreText - Inventories; Statistics; Data processing; Pesticides; Sampling; USA, North Carolina; USA, Iowa  
Last updated - 2012-12-06  
Corporate institution author - Heltshe, Sonya L; Lubin, Jay H; Koutros, Stella; Coble, Joseph B; Ji, Bu-Tian; Alavanja, Michael C R; Blair, Aaron; Sandler, Dale P; Hines, Cynthia J; Thomas, Kent W; Barker, Joseph; Andreotti, Gabriella; Hoppin, Jane A; Beane Freeman, Laura E  
DOI - OB-aa7e000b-a381-475b-8273mfgefd108; 16841568; 1559-0631 English

544. Henderson, J. D.; Glucksman, G.; Leong, B.; Tigyi, A.; Ankirskaia, A.; Siddique, I.; Lam, H.; DePeters, E., and Wilson, B. W. Pyridostigmine bromide protection against acetylcholinesterase inhibition by pesticides. 2012; 26, (1): 31-34.   
Rec #: 61459  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pyridostigmine bromide (PB) has been used to protect soldiers from the toxic effects of soman, a chemical warfare agent. Recent research shows that pyridostigmine bromide protects a significant percentage of acetylcholinesterase in isolated human intercostal muscle. Findings presented here indicate that red blood cell acetylcholinesterase is similarly protected by pyridostigmine bromide from the action of diisopropyl fluorophosphate and several organophosphate pesticides including chlorpyrifos-oxon, diazinon-oxon, and paraoxon, but not malaoxon, using the bovine red blood cell as a subject. These findings suggest that pretreatment with PB may protect growers, farmworkers, first responders, and the public, in general, from the effects of selected pesticides. (C) 2011 Wiley Periodicals, Inc. J Biochem Mol Toxicol 26:31-34, 2012; View this article online at wileyonlinelibrary.com. DOI 10:1002/jbt.20410  
Keywords: Pyridostigmine Bromide, Acetylcholines- terase, Organophosphate,  
ISI Document Delivery No.: 883KX

545. Hern+índez-Borges, Javier; Cabrera, Juan Cabrera; Rodr+¡guez-Delgado, Miguel +üngel; Hern+índez-Su+írez, Estrella M., and Sa+¦co, V+ ctor Gal+ín. Analysis of pesticide residues in bananas harvested in the Canary Islands (Spain). 2009 Mar 1-; 113, (1): 313-319.   
Rec #: 5210  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: In this work, 11 pesticides (ethoprofos, dimethoate, diazinon, malaoxon, chlorpyrifos-methyl, fenitrothion, malathion, chlorpyrifos, fenamiphos, buprofezin and phosmet) were analysed in 57 banana samples taken from the local markets of the Canary Islands (Spain). Analyses were carried out by the QuEChERS approach developed for pesticide residue analysis in food, using gas chromatography (GC) with nitrogenÇôphosphorus detection (NPD). Triphenylphosphate (TPP) was used as internal standard. Recoveries ranged between 67% and 118% with RSD values below 16%. Typical limits of quantification (LOQs) of the method were 0.01Çô0.14 mg/kg, which are below the EU maximum residue limits (MRLs) established for these compounds in bananas. Chlorpyrifos was detected in 50 samples (88%) in the concentration range 0.03Çô0.65 mg/kg, malathion in five samples (8.8%) in the concentration range 0.16Çô0.17 mg/kg, fenitrothion in four samples (7.0%) in the concentration range 0.02Çô0.10 mg/kg and buprofezin in one sample (1.8%) at 0.15 mg/kg. All these values are below the MRLs established for these compounds except for two samples containing fenitrothion. Among the studied pesticides only chlorpyrifos has a high occurrence in the samples. However, the levels of these residues cannot be considered a serious public health problem according to EU regulations. Because of the high occurrence of chlorpyrifos, its distribution between the pulp and the peel was also investigated. Results show that most of the pesticide remains in the peel and that only amounts between 0.07 and 0.12 mg/kg occur in the pulp even at concentrations in the peel as high as 0.87 mg/kg. Gas chromatography/ NitrogenÇôphosphorous detection/ Pesticides/ Bananas/ Monitoring

546. Hern Ndez, F.; Grimalt, S.; Pozo, O. J., and Sancho, J. V. Use of Ultra-High-Pressure Liquid Chromatography-Quadrupole Time-of-Flight Ms to Discover the Presence of Pesticide Metabolites in Food Samples.   
Rec #: 78369  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: In this paper we illustrate the use of two different methodologies to investigate the presence of pesticide metabolites in parent pesticide-positive food samples, using ultra-high-pressure liquid chromatography coupled to hybrid quadrupole time-of-flight (UHPLC-QTOF) mass spectrometry. First, a common fragmentation pathway between the parent pesticide and its metabolites has been considered to search for metabolites in two positive market samples (imazalil in lemon, chlorpyrifos in grape). Secondly, olive oil samples from field residue trials were used for automated application of comparative software (MetaboLynx), which was used with treated and untreated samples to search for expected and unexpected metabolites of phosmet. One of the main objectives when using these approaches was to avoid the tedious manual searching for potential metabolites within the huge amount of information contained in the total ion chromatogram acquired by TOF MS. The common fragmentation approach applied to TOF MS full-acquisition data, considering an enhanced fragmentation in the collision cell, has allowed the discovery of two metabolites of imazalil (1-[2-(2,4-dichlorophenyl)-2-hydroxyethyl]-1H-imidazole and 1-[2-(2,4-dichlorophenyl)-2-oxoethyl]-1H-imidazole) in a lemon positive sample, as well as another two metabolites of chlorpyrifos (chlorpyrifos-oxon and 3,5,6-trichloro-2-pyridinol) in a grape positive sample. Moreover, MetaboLynx application to TOF MS data, without promoting fragmentation, from treated and untreated olive oil samples has been helpful in detecting the metabolite phosmet-oxon. In both strategies, every metabolite detected by TOF MS was confirmed using QTOF and/or triple quadrupole instruments. Accurate masses given by TOF MS together with the valuable information on product ions given by QTOF MS/MS experiments were crucial for the unambiguous identification of metabolites.  
MESH HEADINGS: Chlorpyrifos/chemistry/metabolism  
MESH HEADINGS: Chromatography, High Pressure Liquid/instrumentation/\*methods  
MESH HEADINGS: Citrus/chemistry  
MESH HEADINGS: Food Contamination/\*analysis  
MESH HEADINGS: Fungicides, Industrial/chemistry/metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Imidazoles/chemistry/metabolism  
MESH HEADINGS: Mass Spectrometry/instrumentation/\*methods  
MESH HEADINGS: Molecular Structure  
MESH HEADINGS: Pesticide Residues/\*analysis  
MESH HEADINGS: \*Pesticides/chemistry/metabolism  
MESH HEADINGS: Plant Oils/chemistry  
MESH HEADINGS: Software  
MESH HEADINGS: Vitis/chemistry eng

547. Hernandez-Hernandez, C. N. A.; Valle-Mora, J.; Santiesteban-Hernandez, A., and Bello-Mendoza, R. Comparative ecological risks of pesticides used in plantation production of papaya: Application of the SYNOPS indicator. 2007; 381, (1-3): 112-125.   
Rec #: 61499  
Keywords: NO EFFECT,MODELING  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Pesticides are used intensively for crop protection in tropical fruit plantations. Assessments of the relative risks posed by pesticides are needed to assist in the development of management plans that minimize ecological impacts. In this study, the **risk indicator SYNOPS-2** was used to compare risks to aquatic ecosystems by pesticides commonly used in papaya plantations. **Plant interception and spray drift were measured during six applications of three pesticides (chlorothalonil, chloropyrifos, and malathion) using a turbo fan driven sprayer.** Plant interception was estimated to be higher (42.6 +/- 12.7%; p=0.04) in late (8-14 months old) than in early (4 months old) trees (20.1 +/- 25.3%). Chlorothalonil concentrations of up to 11.0 mu g L(-1) were found in water from an adjacent ditch after field application. Concentrations of this pesticide (7.4 +/- 4.1 mu g(-1)) in runoff water were also significantly (p < 0.01) higher than those of malathion (2.4 +/- 1.9 mu g L(-1)) and chlorpyrifos (0.8 +/- 0.5 mu g L(-1)). Good correlation between measured and predicted values (r(2)=0.56-0.85, p < 0.01) showed that SYNOPS-2 is able to describe trends in runoff pollution in papaya plantations. Linear equations were obtained in order to correct numerical disagreement between measured and calculated runoff concentrations. An independent test showed a reasonable agreement between measured chlorothalonil concentrations and the predicted values using the proposed equations. **Fifteen pesticides used in papaya cultivation were ranked according to their calculated chronic biological risk index**. Pesticides with the highest risk index for non-target organisms were: chlorothalonil for algae, lambda cyahalotrin for Daphnia and fish, and malathion for earthworms. Chlorothalonil was the pesticide with the highest exposure level in water and therefore represents a high risk for aquatic life. Results show that SYNOPS-2 can be used as a pesticide risk indicator on papaya and possibly other tropical fruit plantations. (c) 2007 Elsevier B.V. All rights reserved.  
Keywords: papaya, pesticide risk indicator, runoff, spray drift, tropical  
ISI Document Delivery No.: 187FA

548. Higgins, P. C. and Jarvis, R. A. Chlorpyrifos - The Latest Advance in Controlling Fleas in Dogs and Cats. 1986; 16, 103-(ABS).   
Rec #: 110  
Keywords: ABSTRACT  
Call Number: NO ABSTRACT (CPY)  
Notes: Chemical of Concern: CPY

549. Hill, A. J.; Teraoka, H.; Heideman, W., and Peterson, R. E. Zebrafish as a Model Vertebrate for Investigating Chemical Toxicity. 2005; 86, (1): 6-19.   
Rec #: 2030  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ATZ,CPY,Cu,ES,PAH,Zn,Zn element), NO REVIEW (ATZ,CPY,Cu,ES,PAH,Zn,Zn element)  
Notes: Chemical of Concern: ATZ,Al,CPY,Cd,Co,Cu,EPRN,ES,Hg,NYP,Ni,PAH,PRN,Pb,TXP,Zn

550. Hinderliter, Paul M; Price, Paul S; Bartels, Michael J; Timchalk, Charles; Poet, Torka S, and Price, Paul S. Development of a Source-to-Outcome Model for Dietary Exposures to Insecticide Residues: an Example Using Chlorpyrifos. 2011 Oct; 61, (1): 82-92.   
Rec #: 39389  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Probabilistic models of interindividual variation in exposure and response were linked to create a source-to-outcome population model. This model was used to investigate cholinesterase inhibition from dietary exposures to an insecticide (chlorpyrifos) in populations of adults and 3year old children. A physiologically based pharmacokinetic and pharmacodynamic (PBPK/PD) model was used to calculate the variation in sensitivity occurring from interindividual variability in physiology, metabolism, and physical activity levels. A dietary intake model characterizes the variation in dietary insecticide exposures and variation in anthropometry in the populations. Published equations were used to describe the necessary physiology for each simulated individual based on the anthropometry from the dietary intake model. The model of the interindividual variation in response to chlorpyrifos was developed by performing a sensitivity analysis on the PBPK/PD model to determine the parameters that drive variation in pharmacodynamics outcomes (brain and red blood cell acetylcholinesterase inhibition). Distributions of interindividual variation were developed for parameters with the largest impact; the probabilistic model sampled from these distributions. The impact of age and interindividual variation on sensitivity at the doses that occur from dietary exposures, typically orders of magnitude lower than exposures assessed in toxicological studies, was assessed using the source-to-outcome model. The resulting simulations demonstrated that metabolic detoxification capacity was sufficient to prevent significant brain and red blood cell acetylcholinesterase inhibition, even in individuals with the lowest detoxification potential. Age-specific pharmacokinetic and pharmacodynamic parameters did not predict differences in susceptibility between adults and children. In the future, the approach of this case study could be used to assess the risks from low level exposures to other chemicals.  
Keywords: Detoxification  
Keywords: Acetylcholinesterase  
Keywords: Physical activity  
Keywords: Parkinson's disease  
Keywords: Erythrocytes  
Keywords: Physiology  
Keywords: Dietary intake  
Keywords: Anthropometry  
Keywords: Insecticides  
Keywords: Medical Sciences--Forensic Sciences  
Keywords: Environment Abstracts; Risk Abstracts; Toxicology Abstracts  
Keywords: Risk factors  
Keywords: R2 23060:Medical and environmental health  
Keywords: X 24330:Agrochemicals  
Keywords: Pharmacodynamics  
Keywords: Diets  
Keywords: Sensitivity  
Keywords: Mathematical models  
Keywords: Brain  
Keywords: Ingestion  
Keywords: Children  
Keywords: Pharmacokinetics  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Neurodegenerative diseases  
Keywords: Movement disorders  
Keywords: Pesticides  
Keywords: Toxicity testing  
Keywords: Metabolism  
Date revised - 2012-01-01  
Language of summary - English  
Pages - 82-92  
ProQuest ID - 894646677  
SubjectsTermNotLitGenreText - Detoxification; Mathematical models; Acetylcholinesterase; Physical activity; Parkinson's disease; Erythrocytes; Brain; Children; Dietary intake; Pharmacokinetics; Chlorpyrifos; Anthropometry; Neurodegenerative diseases; Insecticides; Movement disorders; Risk factors; Toxicity testing; Metabolism; Pharmacodynamics; Diets; Sensitivity; Physiology; Pesticides; Ingestion  
Last updated - 2012-01-26  
Corporate institution author - Hinderliter, Paul M; Price, Paul S; Bartels, Michael J; Timchalk, Charles; Poet, Torka S  
DOI - OB-cae50b24-9f80-43d9-8348csamfg201; 15673689; 0273-2300 English

551. Hjorth, K.; Johansen, K.; Holen, B.; Andersson, A.; Christensen, H. B.; Siivinen, K., and Toome, M. Pesticide residues in fruits and vegetables from South America - A Nordic project. 2011; 22, (11): 1701-1706.   
Rec #: 61549  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The aim of this study was to investigate the amount of pesticide residues in fruits and vegetables from South America. A total of 724 samples of 46 different fruits and vegetables from eight South American countries were collected in 2007. In 19% of the samples no residues were found, 72% of samples contained pesticide residues at or below MRL, and 8.4% of samples contained pesticide residues above MRL. Thiabendazole, imazalil and chlorpyrifos were the pesticide most frequently found. Thirty-seven pesticides were found with frequencies higher that 1% in the samples. The results emphasize the need for continuous monitoring of pesticide residues, especially in imported fruits and vegetables. (C) 2010 Published by Elsevier Ltd.  
Keywords: Pesticides, Residue analysis, South America, Fruit and vegetables  
ISI Document Delivery No.: 791ZS

552. Hladik, Michelle L; Smalling, Kelly L; Kuivila, Kathryn M, and Hladik, Michelle L. A Multi-Residue Method for the Analysis of Pesticides and Pesticide Degradates in Water Using Hlb Solid-Phase Extraction and Gas Chromatography-Ion Trap Mass Spectrometry. 2008 Feb; 80, ( 2): 139-144.   
Rec #: 49759  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A method was developed for the analysis of over 60 pesticides and degradates in water by HLB solid-phase extraction and gas-chromatography/mass spectrometry. Method recoveries and detection limits were determined using two surface waters with different dissolved organic carbon (DOC) concentrations. In the lower DOC water, recoveries and detection limits were 80%-108% and 1-12 ng/L, respectively. In the higher DOC water, the detection limits were slightly higher (1-15 ng/L). Additionally, surface water samples from four sites were analyzed and 14 pesticides were detected with concentrations ranging from 4 to 1,200 ng/L.  
Keywords: Mass Spectrometry  
Keywords: Pollution detection  
Keywords: Contamination  
Keywords: Surface water  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Pollution Abstracts; Water Resources Abstracts; Aqualine Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Toxicology Abstracts  
Keywords: Organic Carbon  
Keywords: SW 3030:Effects of pollution  
Keywords: Mass spectrometry  
Keywords: AQ 00003:Monitoring and Analysis of Water and Wastes  
Keywords: Surface Water  
Keywords: Q5 01502:Methods and instruments  
Keywords: Mass spectroscopy  
Keywords: Methodology  
Keywords: Environmental Studies  
Keywords: Agricultural Chemicals  
Keywords: Detection Limits  
Keywords: Analytical Methods  
Keywords: Pesticides  
Keywords: Dissolved organic carbon  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology  
Date revised - 2012-09-01  
Language of summary - English  
Pages - 139-144  
ProQuest ID - 293880209  
SubjectsTermNotLitGenreText - Pesticides; Dissolved organic carbon; Toxicology; Mass spectroscopy; Methodology; Surface water; Pollution detection; Mass spectrometry; Mass Spectrometry; Agricultural Chemicals; Contamination; Detection Limits; Analytical Methods; Organic Carbon; Surface Water  
Last updated - 2012-11-09  
Corporate institution author - Hladik, Michelle L; Smalling, Kelly L; Kuivila, Kathryn M  
DOI - OB-MD-0008068960; 8170401; CS0844092; 0007-4861 English

553. Ho, L.; Di Carlo, S.; Moran, K. L.; Bantseev, V., and Sivak, J. G. Effect of age on ocular irritancy as measured with in vitro bovine lenses. 2008; 22, (2): 450-456.   
Rec #: 61559  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Purpose: This project studied the effect of age on optical quality of cultured bovine lenses exposed to a number of common surfactants and alcohol. Methods: Lenses from calves (8-18 months) and cows (2-3 years) were isolated aseptically and studied optically for 96 h after treatment with various commercial surfactants and an alcohol. Potential eye irritancy was evaluated using a scanning laser in vitro assay system which records the change in focal characteristics (back vertex distance variability or BVDV) of the bovine lenses. Lenses were divided into a total of 14 groups. Both calf and cow lenses (a total of 257 lenses were used) were arranged into control, 0.01% BAK, 1% SDS, 1.0% Triton X-100, 100% ethanol, 10% Tween-20 and 1.0% Tween-20 treatment groups. Results: The cationic surfactant BAK caused the most amount of optical change to the bovine lenses, followed by SDS, Triton X-100, ethanol and then Tween-20. There was also a significant difference in BVDV between the cow and calf groups for all the treated groups, except for Tween-20, with the calf lenses showing greater optical damage. In the case of 10% Tween-20, both cow and calf lenses show equal optical damage while at 1.0% both groups show no effect and are no different from the untreated control lenses. Conclusion: Younger bovine lenses are more sensitive to the surfactants and alcohol tested when compared to their older counterparts, indicating that younger eyes may be more sensitive to these chemicals. The results further indicate that age is a factor that should be taken into account in assessing ocular risk. (C) 2007 Elsevier Ltd. All rights reserved.  
Keywords: bovine lenses, scanning laser in vitro assay system, back vertex  
ISI Document Delivery No.: 284GI

554. Hodeify, R. ; Megyesi, J.; Tarcsafalvi, A.; Safirstein, R. L., and Price, P. M. Protection of Cisplatin Cytotoxicity by an Inactive Cyclin-Dependent Kinase.   
Rec #: 50519  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Exp Med. 1999 Mar 15;189(6):957-68 (medline /10075979)  
COMMENTS: Cites: J Cell Sci. 1993 Oct;106 ( Pt 2):535-44 (medline /8282760)  
COMMENTS: Cites: Drugs. 2000;59 Suppl 4:9-17; discussion 37-8 (medline /10864226)  
COMMENTS: Cites: J Hepatol. 2000 Aug;33(2):266-74 (medline /10952244)  
COMMENTS: Cites: J Biol Chem. 2001 Jun 22;276(25):22404-9 (medline /11304535)  
COMMENTS: Cites: Nature. 2001 Jul 5;412(6842):95-9 (medline /11452314)  
COMMENTS: Cites: Mol Biol Cell. 2002 Mar;13(3):1030-45 (medline /11907280)  
COMMENTS: Cites: J Biol Chem. 2002 Oct 11;277(41):38476-85 (medline /12176996)  
COMMENTS: Cites: Cell Death Differ. 2002 Oct;9(10):1031-42 (medline /12232790)  
COMMENTS: Cites: J Clin Invest. 2002 Sep;110(6):835-42 (medline /12235115)  
COMMENTS: Cites: Science. 2002 Nov 22;298(5598):1587-92 (medline /12446902)  
COMMENTS: Cites: J Biol Chem. 2003 Mar 14;278(11):9100-6 (medline /12509415)  
COMMENTS: Cites: Curr Biol. 2003 Jan 21;13(2):R71-3 (medline /12546810)  
COMMENTS: Cites: Trends Cell Biol. 2003 Feb;13(2):65-70 (medline /12559756)  
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COMMENTS: Cites: Cancer Cell. 2004 Feb;5(2):163-75 (medline /14998492)  
COMMENTS: Cites: Nat Biotechnol. 2004 Dec;22(12):1567-72 (medline /15558047)  
COMMENTS: Cites: Cancer Lett. 2005 Jan 20;217(2):129-38 (medline /15617830)  
COMMENTS: Cites: J Am Soc Nephrol. 2005 Jul;16(7):1985-92 (medline /15901768)  
COMMENTS: Cites: Oncogene. 2006 Jul 6;25(29):4056-66 (medline /16491117)  
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COMMENTS: Cites: Am J Physiol Renal Physiol. 2008 Jul;295(1):F44-52 (medline /18400869)  
COMMENTS: Cites: J Mol Cell Cardiol. 2008 Nov;45(5):610-6 (medline /18692063)  
COMMENTS: Cites: Oncogene. 2008 Oct 27;27(50):6452-61 (medline /18955972)  
COMMENTS: Cites: Kidney Int. 2009 Sep;76(6):604-13 (medline /19536080)  
COMMENTS: Cites: Nature. 1970 Aug 15;227(5259):680-5 (medline /5432063)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1994 Apr 26;91(9):3754-8 (medline /8170983)  
COMMENTS: Cites: Cell. 1993 Nov 19;75(4):817-25 (medline /8242752)  
COMMENTS: Cites: Cell. 1996 Jul 12;86(1):147-57 (medline /8689682)  
COMMENTS: Cites: J Clin Invest. 1998 Feb 15;101(4):777-82 (medline /9466972)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1998 Mar 3;95(5):2509-14 (medline /9482916)  
COMMENTS: Cites: Mol Cell. 1998 Mar;1(4):553-63 (medline /9660939)  
COMMENTS: Cites: EMBO J. 1998 Dec 15;17(24):7209-18 (medline /9857178)  
COMMENTS: Cites: Nature. 1999 Feb 4;397(6718):441-6 (medline /9989411)  
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COMMENTS: Cites: Circ Res. 2001 Mar 2;88(4):408-14 (medline /11230108)  
COMMENTS: Cites: Toxicol Sci. 2001 Oct;63(2):196-207 (medline /11568363)  
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COMMENTS: Cites: Cell Death Differ. 2004 Dec;11(12):1277-86 (medline /15297883)  
COMMENTS: Cites: Am J Physiol Renal Physiol. 2005 Sep;289(3):F514-20 (medline /15840769)  
COMMENTS: Cites: Am J Physiol Renal Physiol. 2007 Jul;293(1):F52-9 (medline /17459956)  
COMMENTS: Cites: Biochem Biophys Res Commun. 1994 Jun 30;201(3):1072-8 (medline /8024548)  
COMMENTS: Cites: Science. 1993 Dec 24;262(5142):2050-4 (medline /8266103)  
COMMENTS: Cites: Histochem Cell Biol. 1999 May;111(5):359-65 (medline /10403114)  
ABSTRACT: Cisplatin cytotoxicity is dependent on cyclin-dependent kinase 2 (Cdk2) activity in vivo and in vitro. A Cdk2 mutant (Cdk2-F80G) was designed in which the ATP-binding pocket was altered. When expressed in mouse kidney cells, this protein was kinase inactive, did not inhibit endogenous Cdk2, but protected from cisplatin. The mutant was localized in the cytoplasm, but when coexpressed with cyclin A, it was activated, localized to the nucleus, and no longer protected from cisplatin cytotoxicity. Cells exposed to cisplatin in the presence of the activated mutant had an apoptotic phenotype, and endonuclease G was released from mitochondria similar to that mediated by endogenous Cdk2. But unlike apoptosis mediated by wild-type Cdk2, cisplatin exposure of cells expressing the activated mutant did not cause cytochrome c release or significant caspase-3 activation. We conclude that cisplatin likely activates both caspase-dependent and -independent cell death, and Cdk2 is required for both pathways. The mutant-inactive Cdk2 protected from both death pathways, but after activation by excess cyclin A, caspase-independent cell death predominated.  
MESH HEADINGS: Active Transport, Cell Nucleus  
MESH HEADINGS: Adenosine Triphosphate/metabolism  
MESH HEADINGS: Animals  
MESH HEADINGS: Antineoplastic Agents/\*toxicity  
MESH HEADINGS: Apoptosis/drug effects  
MESH HEADINGS: Binding Sites  
MESH HEADINGS: Caspase 3/metabolism  
MESH HEADINGS: Cell Nucleus/enzymology  
MESH HEADINGS: Cells, Cultured  
MESH HEADINGS: Cisplatin/\*toxicity  
MESH HEADINGS: Cyclin A/genetics/metabolism  
MESH HEADINGS: Cyclin-Dependent Kinase 2/genetics/\*metabolism  
MESH HEADINGS: Cytochromes c/metabolism  
MESH HEADINGS: Cytoplasm/enzymology  
MESH HEADINGS: Cytoprotection  
MESH HEADINGS: Endodeoxyribonucleases/metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Kidney Tubules, Proximal/\*drug effects/enzymology/pathology  
MESH HEADINGS: Mice  
MESH HEADINGS: Mitochondria/drug effects/enzymology  
MESH HEADINGS: Mutation  
MESH HEADINGS: Recombinant Fusion Proteins/metabolism  
MESH HEADINGS: Transfection eng

555. Hodgson, Ernest. Chapter 9 - Biotransformation of Individual Pesticides: Some Examples. Ernest Hodgson. Pesticide Biotransformation and Disposition. Boston: Academic Press; 2012: 195-208.   
Rec #: 3940  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ISSN/ISBN: 978-0-12-385481-0 This chapter is intended to show how the general features of pesticide metabolism are expressed in surrogate species and, in some cases, in humans, using individual, well-known pesticides from various chemical and use classes as examples. Of particular interest is the integration of several phase I and/or phase II enzymes to effect the overall metabolism of a single chemical entity. In several cases both detoxication and activation pathways are apparent. The pesticides are alachlor, atrazine, butachlor, carbaryl, chlorpyrifos, DDT, fipronil, imidacloprid, permethrin, and phorate.

556. Hoferkamp, Lisa; Hermanson, Mark H; Muir, Derek Cg, and Hoferkamp, Lisa. Current Use Pesticides in Arctic Media; 2000-2007. 2010 Jul 1; 408 , (15): 2985-2994.   
Rec #: 44059  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This review will summarize the levels of selected current use pesticides (CUPs) that have been identified and reported in Arctic media (i.e. air, water, sediment, and biota) since the year 2000. Almost all of the 10 CUPs (chlorothalonil, chlorpyrifos, dacthal, diazinon, dicofol, lindane, methoxychlor, pentachloronitrobenzene (PCNB), pentachlorophenol, and trifluralin) examined in the review currently are, or have been, high production volume chemicals i.e. >1M lbs/y in USA or >1000t/y globally. Characteristic travel distances for the 10 chemicals range from 55km (methoxychlor) to 12,100km (PCNB). Surveys and long-term monitoring studies have demonstrated the presence of 9 of the 10 CUPs included in this review in the Arctic environment. Only dicofol has not been reported. The presence of these chemicals has mainly been reported in high volume air samples and in snow from Arctic ice caps and lake catchments. There are many other CUPs registered for use which have not been determined in Arctic environments. The discovery of the CUPs currently measured in the Arctic has been mainly serendipitous, a result of analyzing some samples using the same suite of analytes as used for studies in mid-latitude locations. A more systematic approach is needed to assess whether other CUPs might be accumulating in the arctic and ultimately to assess whether their presence has any significance biologically or results in risks for human consumers.  
Keywords: Chemicals  
Keywords: Catchment area  
Keywords: Chlorophylls  
Keywords: Arctic ice  
Keywords: SW 3030:Effects of pollution  
Keywords: Arctic zone  
Keywords: Environmental Studies  
Keywords: Arctic environment  
Keywords: Lakes  
Keywords: Agricultural Chemicals  
Keywords: Catchment basins  
Keywords: Air sampling  
Keywords: Q5 01501:General  
Keywords: Consumers  
Keywords: R2 23050:Environment  
Keywords: Ice caps  
Keywords: Arctic  
Keywords: Sediment pollution  
Keywords: P 0000:AIR POLLUTION  
Keywords: Snow  
Keywords: Lindane  
Keywords: AQ 00003:Monitoring and Analysis of Water and Wastes  
Keywords: Polar environments  
Keywords: M2 551.324:Land Ice/Glaciers (551.324)  
Keywords: Chlorpyrifos  
Keywords: Risk Abstracts; Environment Abstracts; Meteorological & Geoastrophysical Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Pollution Abstracts; Aqualine Abstracts; Water Resources Abstracts  
Keywords: PN, Arctic  
Keywords: USA  
Keywords: Reviews  
Keywords: Pesticides  
Keywords: Methoxychlor  
Keywords: Trifluralin  
Keywords: Monitoring  
Keywords: ENA 01:Air Pollution  
Date revised - 2011-10-01  
Language of summary - English  
Location - PN, Arctic; USA  
Pages - 2985-2994  
ProQuest ID - 810750576  
SubjectsTermNotLitGenreText - Catchment area; Chlorophylls; Sediment pollution; Snow; Pesticides; Consumers; Arctic zone; Ice caps; Arctic environment; Catchment basins; Arctic ice; Chlorpyrifos; Chemicals; Lakes; Reviews; Air sampling; Trifluralin; Lindane; Polar environments; Agricultural Chemicals; Methoxychlor; Monitoring; Arctic; PN, Arctic; USA  
Last updated - 2012-08-02  
Corporate institution author - Hoferkamp, Lisa; Hermanson, Mark H; Muir, Derek CG  
DOI - OB-b961ee7a-b100-40ca-8282csaobj202; 13072081; CS1115550; 0048-9697 English

557. Hoffmann, T.; Boiangiu, C.; Moses, S., and Bremer, E. Responses of Bacillus Subtilis to Hypotonic Challenges: Physiological Contributions of Mechanosensitive Channels to Cellular Survival.   
Rec #: 51299  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Mechanosensitive channels are thought to function as safety valves for the release of cytoplasmic solutes from cells that have to manage a rapid transition from high- to low-osmolarity environments. Subsequent to an osmotic down-shock of cells grown at high osmolarity, Bacillus subtilis rapidly releases the previously accumulated compatible solute glycine betaine in accordance with the degree of the osmotic downshift. Database searches suggest that B. subtilis possesses one copy of a gene for a mechanosensitive channel of large conductance (mscL) and three copies of genes encoding proteins that putatively form mechanosensitive channels of small conductance (yhdY, yfkC, and ykuT). Detailed mutational analysis of all potential channel-forming genes revealed that a quadruple mutant (mscL yhdY yfkC ykuT) has no growth disadvantage in high-osmolarity media in comparison to the wild type. Osmotic down-shock experiments demonstrated that the MscL channel is the principal solute release system of B. subtilis, and strains with a gene disruption in mscL exhibited a severe survival defect upon an osmotic down-shock. We also detected a minor contribution of the SigB-controlled putative MscS-type channel-forming protein YkuT to cellular survival in an mscL mutant. Taken together, our data revealed that mechanosensitive channels of both the MscL and MscS types play pivotal roles in managing the transition of B. subtilis from hyper- to hypo-osmotic environments.  
MESH HEADINGS: Bacillus subtilis/\*physiology  
MESH HEADINGS: Bacterial Proteins/genetics/physiology  
MESH HEADINGS: Betaine/metabolism  
MESH HEADINGS: Gene Deletion  
MESH HEADINGS: Gene Order  
MESH HEADINGS: Ion Channels/genetics/physiology  
MESH HEADINGS: Mechanotransduction, Cellular  
MESH HEADINGS: \*Microbial Viability  
MESH HEADINGS: Mutagenesis, Insertional  
MESH HEADINGS: Osmotic Pressure eng

558. Hofmann, J. N.; Keifer, M. C.; De Roos, A. J.; Fenske, R. A.; Furlong, C. E.; van Belle, G., and Checkoway, H. Occupational determinants of serum cholinesterase inhibition among organophosphate-exposed agricultural pesticide handlers in Washington State. 2010; 67, (6): 375-386.   
Rec #: 61629  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Objective To identify potential risk factors for serum cholinesterase (BuChE) inhibition among agricultural pesticide handlers exposed to organophosphate (OP) and N-methyl-carbamate (CB) insecticides. Methods We conducted a longitudinal study among 154 agricultural pesticide handlers who participated in the Washington State cholinesterase monitoring program in 2006 and 2007. BuChE inhibition was analysed in relation to reported exposures before and after adjustment for potential confounders using linear regression. ORs estimating the risk of BuChE depression (>20% from baseline) were also calculated for selected exposures based on unconditional logistic regression analyses. Results An overall decrease in mean BuChE activity was observed among study participants at the time of followup testing during the OP/CB spray season relative to preseason baseline levels (mean decrease of 5.6%, p<0.001). Score for estimated cumulative exposure to OP/CB insecticides in the past 30 days was a significant predictor of BuChE inhibition (beta = -1.74, p<0.001). Several specific work practices and workplace conditions were associated with greater BuChE inhibition, including mixing/loading pesticides and cleaning spray equipment. Factors that were protective against BuChE inhibition included full-face respirator use, wearing chemical-resistant boots and storing personal protective equipment in a locker at work. Conclusions Despite existing regulations, agricultural pesticide handlers continue to be exposed to OP/CB insecticides at levels resulting in BuChE inhibition. These findings suggest that modifying certain work practices could potentially reduce BuChE inhibition. Replication from other studies will be valuable.  
Keywords: PROTECTIVE EQUIPMENT, DERMAL EXPOSURE, FARM-WORKERS, HEALTH,  
ISI Document Delivery No.: 605NI

559. Hofmann, J. N.; Keifer, M. C.; Furlong, C. E.; De Roos, A. J.; Farin, F. M.; Fenske, R. A.; van Belle, G., and Checkoway, H. Serum Cholinesterase Inhibition in Relation to Paraoxonase-1 (PON1) Status among Organophosphate-Exposed Agricultural Pesticide Handlers. 2009; 117, (9): 1402-1408.   
Rec #: 61639  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: Animal studies have demonstrated that low paraoxonase-1 (PON1) status (i.e., low catalytic efficiency and/or low plasma PON1 activity) is associated with neurotoxic effects after exposure to several organophosphate (OP) insecticides. However, few human studies have investigated associations between PON1 status and intermediate end points, such as serum cholinesterase [butyrylcholinesterase (BuChE)] inhibition, among OP-exposed individuals. OBJECTIVES: We evaluated the relation between plasma PON1 status and BuChE inhibition among OP-exposed agricultural pesticide handlers. METHODS: Agricultural pesticide handlers in Washington State were recruited during the 2006 and 2007 spray seasons when they were seen for follow-up ChE testing by collaborating medical providers as part of a statewide monitoring program. Blood samples were collected from 163 participants and tested for PON1 status based on plasma PON1 activity [arylesterase (AREase)] and PON1 Q192R genotype. We evaluated percent change in BuChE activity from baseline level in relation to PON1 status. RESULTS: We observed significantly greater BuChE inhibition among QQ homozygotes relative to RR homozygotes (p = 0.036). Lower levels of plasma PON1 activity were significantly associated with greater BuChE inhibition (p = 0.004). These associations remained after adjustment for year, days since baseline test, age, and OP exposure in the last 30 days. CONCLUSIONS: We found that both low PON1 catalytic efficiency (i.e., the Q192 alloform) and low plasma PON1 activity were associated with BuChE inhibition among OP-exposed agricultural pesticide handlers. Corroborative findings from future studies with prospective collection of blood samples for PON1 testing, more sensitive markers of OP-related effects, and larger sample sizes are needed.  
Keywords: agriculture, cholinesterase, farmworkers, gene-environment interaction,  
ISI Document Delivery No.: 490EE

560. Hofmann, Jonathan N. and Checkoway, Harvey. Determinants of Serum Cholinesterase Inhibition Among Organophosphate-Exposed Agricultural Pesticide Handlers in Washington State. 2008.  
Rec #: 51959  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The goal of this study was to identify determinants of serum cholinesterase (BuChE) inhibition among agricultural pesticide handlers exposed to organophosphate (OP) and N -methyl-carbamate (CB) insecticides. Risk of BuChE inhibition was evaluated in relation to workplace, behavioral, and genetic characteristics [i.e., paraoxonase (PON1) status]. Studies in animal models have demonstrated that low PON1 status is associated with an increased risk of neurotoxic effects resulting from exposure to several OPs. Agricultural pesticide handlers in Washington State were recruited cross-sectionally during the 2006 and 2007 spray seasons when they were seen for follow-up cholinesterase (ChE) testing by collaborating medical providers as part of a statewide monitoring program. We collected blood samples from 163 participants and self-reported exposure data from 154 participants. Blood samples were tested for PON1 status based on catalytic efficiency for chlorpyrifos-oxon metabolism (Q 192R genotype) and plasma activity levels of PON1 [arylesterase (AREase)]. BuChE inhibition was analyzed in relation to reported exposures and PON1 status before and after adjustment for potential confounders using linear regression. Odds ratios estimating the risk of 'BuChE depression' (>20% BuChE inhibition from baseline) were also calculated for selected exposures and PON1 status based on unconditional logistic regression. An overall decrease in BuChE activity from baseline levels was observed among study participants, and score for cumulative OP/CB exposure in the past 30 days was a significant predictor of BuChE inhibition (P=0.003). Several specific work activities were associated with BuChE inhibition, including mixing/loading pesticides and cleaning spray equipment. Factors that protected against BuChE inhibition included full-face respirator use, wearing chemical-resistant boots, and storing personal protective equipment in a locker at work. In terms of PON1 status, significantly greater BuChE inhibition was observed among QQ homozygotes relative to RR homozygotes (P=0.036). Lower levels of plasma PON1 activity were significantly associated with a greater degree of BuChE inhibition (P=0.004). These associations remained after adjustment for year, days since baseline ChE test, age, and recent OP/CB exposure. Despite existing regulations, agricultural pesticide handlers continue to be exposed to OP/CB insecticides at levels resulting in BuChE inhibition. These findings suggest that various modifiable work practices can reduce BuChE inhibition.  
Keywords: Agricultural pesticides  
Keywords: Washington  
Keywords: Organophosphate-exposed  
Keywords: Serum cholinesterase  
Keywords: 0573:Public health  
Keywords: 0354:Occupational health  
Keywords: Health and environmental sciences  
Keywords: 0766:Epidemiology  
Keywords: Cholinesterase inhibitors  
Keywords: Pesticide handlers  
2008  
Agricultural pesticides  
0821420  
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0573: Public health  
66569  
Pesticide handlers  
n/a  
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English  
0354: Occupational health  
2010-08-07  
Organophosphate-exposed  
1663093311  
Serum cholinesterase  
41358111  
Health and environmental sciences  
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Hofmann, Jonathan N.  
0766: Epidemiology English

561. Hogmire, H. W.; Winfield, T.; Cheves, R.; Day, M. L., and Grove, C. Insecticide Evaluation, 1992. 1993; 18, 19-24 (25A).   
Rec #: 130  
Keywords: MIXTURE  
Call Number: NO MIXTURE (AZ,AZD,BOR,CBL,CPY,Captan,DOD,EFV,FPP,MOM,MP,MYC,PSM,STRP,TDF)  
Notes: Chemical of Concern: AZ,AZD,BOR,CBL,CPY,Captan,DOD,EFV,FPP,MOM,MP,MYC,NAA,PSM,STRP,TDF,TPM

562. Hogmire, H. W. Jr.; Winfield, T., and Cheves, R. Insecticide Evaluation, 1990. SOIL; 1991; 16, 7-9 (10A).   
Rec #: 120  
Keywords: MIXTURE  
Call Number: NO MIXTURE (AZ,BMY,BOR,CPY,Captan,DMT,EFV,FPP,FRM,Folpet,MEM,MOM,MP,MYC,MZB,PMR,TDC)  
Notes: Chemical of Concern: AZ,BMY,BOR,CPY,Captan,DMT,EFV,FPP,FRM,Folpet,MEM,MOM,MP,MYC,MZB,NAA,PMR,PPHD,TDC,TPM,Zineb

563. Hohmann, C. L. Effect of Different Insecticides on the Emergence of Trichogramma pretiosum (Hymenoptera, Trichogrammatidae). 1991; 20, (1): 59-65(POR).   
Rec #: 880  
Keywords: NOT PURSUING,NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

564. Holmstrup, Martin; Bindesbal, Anne-Mette; Oostingh, Gertie Janneke; Duschl, Albert; Scheil, Volker; Koehler, Heinz-R; Loureiro, Susana; Soares, Amadeu Mvm; Ferreira, Abel Lg; Kienle, Cornelia; Gerhardt, Almut; Laskowski, Ryszard; Kramarz, Paulina E; Bayley, Mark; Svendsen, Claus; Spurgeon, David J, and Kienle, Cornelia. Interactions Between Effects of Environmental Chemicals and Natural Stressors: a Review. 2010 Aug 15; 408, (18): 3746-3762.   
Rec #: 47779  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Ecotoxicological effect studies often expose test organisms under optimal environmental conditions. However, organisms in their natural settings rarely experience optimal conditions. On the contrary, during most of their lifetime they are forced to cope with sub-optimal conditions and occasionally with severe environmental stress. Interactions between the effects of a natural stressor and a toxicant can sometimes result in greater effects than expected from either of the stress types alone. The aim of the present review is to provide a synthesis of existing knowledge on the interactions between effects of "natural" and chemical (anthropogenic) stressors. More than 150 studies were evaluated covering stressors including heat, cold, desiccation, oxygen depletion, pathogens and immunomodulatory factors combined with a variety of environmental pollutants. This evaluation revealed that synergistic interactions between the effects of various natural stressors and toxicants are not uncommon phenomena. Thus, synergistic interactions were reported in more than 50% of the available studies on these interactions. Antagonistic interactions were also detected, but in fewer cases. Interestingly, about 70% of the tested chemicals were found to compromise the immune system of humans as judged from studies on human cell lines. The challenge for future studies will therefore be to include aspects of combined stressors in effect and risk assessment of chemicals in the environment.  
Keywords: Chemicals  
Keywords: Risk assessment  
Keywords: test organisms  
Keywords: Toxicants  
Keywords: immune system  
Keywords: Risk Abstracts; Environment Abstracts; Pollution Abstracts  
Keywords: Stress  
Keywords: Pathogens  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Reviews  
Keywords: Oxygen depletion  
Keywords: R2 23010:General: Models, forecasting  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 3746-3762  
ProQuest ID - 814252345  
SubjectsTermNotLitGenreText - Risk assessment; Chemicals; test organisms; immune system; Toxicants; Reviews; Oxygen depletion; Stress; Pathogens  
Last updated - 2012-08-02  
Corporate institution author - Holmstrup, Martin; BindesbAl, Anne-Mette; Oostingh, Gertie Janneke; Duschl, Albert; Scheil, Volker; Koehler, Heinz-R; Loureiro, Susana; Soares, Amadeu MVM; Ferreira, Abel LG; Kienle, Cornelia; Gerhardt, Almut; Laskowski, Ryszard; Kramarz, Paulina E; Bayley, Mark; Svendsen, Claus; Spurgeon, David J  
DOI - OB-36c73453-ca36-4f4d-a9f4csaobj202; 13249915; 0048-9697 English

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Rec #: 77619  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Schizophr Bull. 2008 Sep;34(5):962-73 (medline /18544550)  
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COMMENTS: Cites: Neuropsychopharmacology. 1999 Feb;20(2):106-18 (medline /9885791)  
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COMMENTS: Cites: Clin Neurophysiol. 2000 Nov;111(11):2079-87 (medline /11068245)  
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COMMENTS: Cites: Biol Psychiatry. 2006 Dec 1;60(11):1206-14 (medline /16650831)  
COMMENTS: Cites: J Psychiatr Res. 2007 Oct;41(8):625-34 (medline /16949099)  
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COMMENTS: Cites: Psychophysiology. 2008 Mar;45(2):197-204 (medline /17995907)  
COMMENTS: Cites: Biol Psychiatry. 2008 Apr 15;63(8):730-5 (medline /18022604)  
COMMENTS: Cites: Schizophr Res. 2008 Feb;99(1-3):238-49 (medline /18160261)  
COMMENTS: Cites: Acta Psychiatr Scand. 2008 Apr;117(4):313-8 (medline /18241306)  
COMMENTS: Cites: J Neurophysiol. 2008 Aug;100(2):959-65 (medline /18525022)  
ABSTRACT: Several electrical neural oscillatory abnormalities have been associated with schizophrenia, although the underlying mechanisms of these oscillatory problems are unclear. Animal studies suggest that one of the key mechanisms of neural oscillations is through glutamatergic regulation; therefore, neural oscillations may provide a valuable animal-clinical interface on studying glutamatergic dysfunction in schizophrenia. To identify glutamatergic control of neural oscillation relevant to human subjects, we studied the effects of ketamine, an N-methyl-D-aspartate antagonist that can mimic some clinical aspects of schizophrenia, on auditory-evoked neural oscillations using a paired-click paradigm. This was a double-blind, placebo-controlled, crossover study of ketamine vs saline infusion on 10 healthy subjects. Clinically, infusion of ketamine in subanesthetic dose significantly increased thought disorder, withdrawal-retardation, and dissociative symptoms. Ketamine significantly augmented high-frequency oscillations (gamma band at 40-85 Hz, p=0.006) and reduced low-frequency oscillations (delta band at 1-5 Hz, p < 0.001) compared with placebo. Importantly, the combined effect of increased gamma and reduced delta frequency oscillations was significantly associated with more withdrawal-retardation symptoms experienced during ketamine administration (p=0.02). Ketamine also reduced gating of the theta-alpha (5-12 Hz) range oscillation, an effect that mimics previously described deficits in schizophrenia patients and their first-degree relatives. In conclusion, acute ketamine appeared to mimic some aspects of neural oscillatory deficits in schizophrenia, and showed an opposite effect on scalp-recorded gamma vs low-frequency oscillations. These electrical oscillatory indexes of subanesthetic ketamine can be potentially used to cross-examine glutamatergic pharmacological effects in translational animal and human studies.  
MESH HEADINGS: Adult  
MESH HEADINGS: Anesthetics, Dissociative/\*administration &amp  
MESH HEADINGS: dosage/adverse effects  
MESH HEADINGS: Biological Clocks/drug effects/\*physiology  
MESH HEADINGS: Cross-Over Studies  
MESH HEADINGS: Delta Rhythm/\*drug effects  
MESH HEADINGS: Dissociative Disorders/chemically induced/\*physiopathology  
MESH HEADINGS: Double-Blind Method  
MESH HEADINGS: Evoked Potentials, Auditory/drug effects/physiology  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: Ketamine/\*administration &amp  
MESH HEADINGS: dosage/adverse effects  
MESH HEADINGS: Male  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: Neurons/drug effects/\*physiology  
MESH HEADINGS: Young Adult eng

566. Hoogduijn, M. J.; Cheng, A. X., and Genever, P. G. Functional Nicotinic and Muscarinic Receptors on Mesenchymal Stem Cells. 2009; 18, (1): 103-112.   
Rec #: 61649  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Mesenchymal stem cells (MSCs) are under the control of a large number of signaling systems. In this study, the presence and functionality of the acetylcholine (ACh) signaling system in MSCs was examined. We detected the expression of choline acetyltransferase (ChAT), acetylcholinesterase (AChE), and the presence of ACh in MSCs. MSCs also expressed the nicotinic acetylcholine receptor subunits alpha 3, alpha 5, alpha 7, and the muscarinic acetylcholine receptor 2 (M2-receptor). The M2-receptor and the nicotinic alpha 7 receptor subunits were expressed on distinct subpopulations of cells, indicating differential regulation of cholinergic signaling between MSCs. Stimulation of MSCs with the nicotinic receptor agonist nicotine and the muscarinic receptor agonist muscarine induced immediate and transient increases in intracellular Ca(2+) concentration. Furthermore, muscarine had an inhibiting effect on the production of the intracellular signaling molecule cyclic adenosine 3',5'-monophosphate (cAMP). The AChE inhibitor chlorpyrifos, which is widely used as an agricultural insecticide, had similar effects on intracellular Ca(2+) and cAMP in MSCs. Nicotine, muscarine, and chlorpyrifos induced the phosphorylation of extracellular signal-regulated kinases 1 and 2. This study demonstrates that several components of a cholinergic signaling system are present and functional in MSCs. Environmental compounds such as nicotine and agricultural insecticides can interfere with this system and may affect cellular processes in the MSC.  
Keywords: CHOLINERGIC SYSTEM, OSTEOGENIC DIFFERENTIATION, ACETYLCHOLINE-RECEPTORS,  
ISI Document Delivery No.: 406RX

567. Hoppin, J. A.; Umbach, D. M.; London, S. J.; Henneberger, P. K.; Kullman, G. J.; Alavanja, M. C. R., and Sandler, D. P. Pesticides and atopic and nonatopic asthma among farm women in the agricultural health study. 2008; 177, (1): 11-18.   
Rec #: 61669  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Rationale: Risk factors for asthma among farm women are understudied. Objectives: We evaluated pesticide and other occupational exposures as risk factors for adult-onset asthma. Methods: Studying 25,814 farm women in the Agricultural Health Study, we used self-reported history of doctor-diagnosed asthma with or without eczema and/or hay fever to create two case groups: patients with atopic asthma and those with nonatopic asthma. We assessed disease-exposure associations with polytomous logistic regression. Measurements and Main Results: At enrollment (1993-1997), 702 women (2.7%) reported a doctor's diagnosis of asthma after age 19 years (282 atopic, 420 nonatopic). Growing upon a farm (61% of all farm women) was protective for atopic asthma (odds ratio [OR], 0.55; 95% confidence interval [CI], 0.43-0.70) and, to a lesser extent, for nonatopic asthma (OR, 0.83; 95%CI, 0.68-1.02; P value for difference = 0.008). Pesticide use was almost exclusively associated with atopic asthma. Any use of pesticides on the farm was associated only with atopic asthma (OR, 1.46; 95% CI, 1.14-1.87). This association with pesticides was strongest among women who had grown up on a farm. Women who grew up on farms and did not apply pesticides had the lowest overall risk of atopic asthma (OR, 0.41; 95% CI, 0.27-0.62) compared with women who neither grew upon farms nor applied pesticides. A total of 7 of 16 insecticides, 2 of 11 herbicides, and 1 of 4 fungicides were significantly associated with atopic asthma; only permethrin use on crops was associated with nonatopic asthma. Conclusions: These findings suggest that pesticides may contribute to atopic asthma, but not nonatopic asthma, among farm women.  
Keywords: agricultural workers, allergy, asthma, organophosphates, pesticides  
ISI Document Delivery No.: 246BN

568. Hoppin, Jane a; Long, Stuart; Umbach, David M; Lubin, Jay H; Starks, Sarah E; Gerr, Fred; Thomas, Kent; Hines, Cynthia J; Weichenthal, Scott; Kamel, Freya; Koutros, Stella; Alavanja, Michael; Beane Freeman, Laura E; Sandler, Dale P, and Hoppin, Jane A. Lifetime Organophosphorous Insecticide Use Among Private Pesticide Applicators in the Agricultural Health Study. 2012 Nov; 22, (6): 584-592.   
Rec #: 42459  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorous insecticides (OPs) are the most commonly used insecticides in US agriculture, but little information is available regarding specific OP use by individual farmers. We describe OP use for licensed private pesticide applicators from Iowa and North Carolina in the Agricultural Health Study (AHS) using lifetime pesticide use data from 701 randomly selected male participants collected at three time periods. Of 27 OPs studied, 20 were used by >1%. Overall, 95% had ever applied at least one OP. The median number of different OPs used was 4 (maximum=13). Malathion was the most commonly used OP (74%) followed by chlorpyrifos (54%). OP use declined over time. At the first interview (1993-1997), 68% of participants had applied OPs in the past year; by the last interview (2005-2007), only 42% had. Similarly, median annual application days of OPs declined from 13.5 to 6 days. Although OP use was common, the specific OPs used varied by state, time period, and individual. Much of the variability in OP use was associated with the choice of OP, rather than the frequency or duration of application. Information on farmers' OP use enhances our ability to characterize and understand the potential health effects of multiple OP exposures.  
Keywords: Chlorpyrifos  
Keywords: Agriculture  
Keywords: USA, North Carolina  
Keywords: Toxicology Abstracts; Health & Safety Science Abstracts  
Keywords: Insecticides  
Keywords: Data processing  
Keywords: USA, Iowa  
Keywords: H 5000:Pesticides  
Keywords: Pesticides  
Keywords: X 24330:Agrochemicals  
Keywords: Malathion  
Date revised - 2012-12-01  
Language of summary - English  
Location - USA, North Carolina; USA, Iowa  
Pages - 584-592  
ProQuest ID - 1257746552  
SubjectsTermNotLitGenreText - Chlorpyrifos; Agriculture; Data processing; Insecticides; Pesticides; Malathion; USA, North Carolina; USA, Iowa  
Last updated - 2013-01-11  
British nursing index edition - Journal of Exposure Science and Environmental Epidemiology [J. Exposure Sci. Environ. Epidemiol.]. Vol. 22, no. 6, pp. 584-592. Nov 2012.  
Corporate institution author - Hoppin, Jane A; Long, Stuart; Umbach, David M; Lubin, Jay H; Starks, Sarah E; Gerr, Fred; Thomas, Kent; Hines, Cynthia J; Weichenthal, Scott; Kamel, Freya; Koutros, Stella; Alavanja, Michael; Beane Freeman, Laura E; Sandler, Dale P  
DOI - 46e1b167-54cc-49ac-8412mfgefd107; 17410891; 1559-0631 English

569. Horton, Megan K; Jacobson, J Bryan; Mckelvey, Wendy; Holmes, Darrell; Fincher, Betty; Quantano, Audrey; Diaz, Beinvendida Paez; Shabbazz, Faye; Shepard, Peggy; Rundle, Andrew; Whyatt, Robin M, and Rundle, Andrew. Characterization of Residential Pest Control Products Used in Inner City Communities in New York City. 2011 May; 21, (3): 291-301.   
Rec #: 43409  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The Columbia Center for Children's Environmental Health (CCCEH) previously reported widespread residential insecticide use in urban communities in New York City. Research suggests that pyrethroids are replacing organophosphates (OPs) in response to 2000-2001 US EPA pesticide regulations restricting OP use. A systematic assessment of active ingredients used for residential pest control is lacking. We queried a database of pesticide applications reported by licensed applicators between 1999 and 2005 and surveyed pest control products available in 145 stores within 29 zip codes in the CCCEH catchment area including Northern Manhattan and the South Bronx. Pyrethroids, pyrethrins, piperonyl butoxide, and hydramethylnon were the most common insecticide active ingredients reported as used by licensed pesticide applicators within the 29 zip codes of the CCCEH catchment area between 1999 and 2005. Use of certain pyrethroids and some non-spray insecticides such as fipronil and boric acid increased significantly by year (logistic regression, OR>1.0, P<0.05), whereas use of OPs, including chlorpyrifos and diazinon decreased significantly by year (logistic regression, OR<1.0, P<0.05). Among pesticide applicators, the most commonly applied active ingredients were formulated as spray applications. With 145 stores in the catchment area, 120 (82.5%) carried at least one insecticide. Spray cans were most common (114/120 stores, 95%); gels were least common (31/120 stores, 25.8%). Among spray formulations, pyrethroid insecticides were the most common pesticide class and permethrin, a pyrethroid, was the most common individual active ingredient. In 2007, one store carried a product containing chlorpyrifos and one store carried a product containing diazinon. This survey suggests that certain pyrethroids and non-spray insecticides replaced OPs for pest control in this area. Chlorpyrifos and diazinon have nearly been eliminated from products marketed for residential pest control.  
Keywords: Piperonyl butoxide  
Keywords: Pesticide applications  
Keywords: Gels  
Keywords: Cans  
Keywords: USA, New York, New York City  
Keywords: Insecticides  
Keywords: Catchment areas  
Keywords: H 5000:Pesticides  
Keywords: boric acid  
Keywords: Pyrethroids  
Keywords: X 24330:Agrochemicals  
Keywords: pyrethrins  
Keywords: Urban areas  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Sprays  
Keywords: Permethrin  
Keywords: Pest control  
Keywords: organophosphates  
Keywords: Children  
Keywords: Chlorpyrifos  
Keywords: Databases  
Keywords: fipronil  
Keywords: Health & Safety Science Abstracts; Toxicology Abstracts; Pollution Abstracts  
Keywords: USA, New York, Manhattan  
Keywords: Pesticides  
Keywords: Catchments  
Keywords: Diazinon  
Date revised - 2011-07-01  
Language of summary - English  
Location - USA, New York, New York City; USA, New York, Manhattan  
Pages - 291-301  
ProQuest ID - 876243847  
SubjectsTermNotLitGenreText - Permethrin; Piperonyl butoxide; Pest control; organophosphates; Children; Pesticide applications; Gels; Chlorpyrifos; Databases; Cans; Insecticides; Catchment areas; fipronil; Pesticides; boric acid; Pyrethroids; Diazinon; pyrethrins; Sprays; Catchments; Urban areas; USA, New York, New York City; USA, New York, Manhattan  
Last updated - 2012-03-29  
British nursing index edition - Journal of Exposure Science and Environmental Epidemiology [J. Exposure Sci. Environ. Epidemiol.]. Vol. 21, no. 3, pp. 291-301. May 2011.  
Corporate institution author - Horton, Megan K; Jacobson, J Bryan; McKelvey, Wendy; Holmes, Darrell; Fincher, Betty; Quantano, Audrey; Diaz, Beinvendida Paez; Shabbazz, Faye; Shepard, Peggy; Rundle, Andrew; Whyatt, Robin M  
DOI - ede91b78-e69b-4880-9522mfgefd101; 14873877; 1559-0631 English

570. Horton, Megan K; Kahn, Linda G; Perera, Frederica; Barr, Dana Boyd; Rauh, Virginia, and Horton, Megan K. Does the Home Environment and the Sex of the Child Modify the Adverse Effects of Prenatal Exposure to Chlorpyrifos on Child Working Memory? 2012 Sep; 34, (5): 534-541.   
Rec #: 38589  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Prenatal exposure to chlorpyrifos (CPF), an organophosphorus insecticide, has long been associated with delayed neurocognitive development and most recently with decrements in working memory at age 7. In the current paper, we expanded the previous work on CPF to investigate how additional biological and social environmental factors might create or explain differential neurodevelopmental susceptibility, focusing on main and moderating effects of the quality of the home environment (HOME) and child sex. We evaluate how the quality of the home environment (specifically, parental nurturance and environmental stimulation) and child sex interact with the adverse effects of prenatal CPF exposure on working memory at child age 7years. We did not observe a remediating effect of a high quality home environment (either parental nurturance or environmental stimulation) on the adverse effects of prenatal CPF exposure on working memory. However, we detected a borderline significant interaction between prenatal exposure to CPF and child sex (B (95% CI) for interaction term=-1.714 (-3.753 to 0.326)) suggesting males experience a greater decrement in working memory than females following prenatal CPF exposure. In addition, we detected a borderline interaction between parental nurturance and child sex (B (95% CI) for interaction term=1.490 (-0.518 to 3.499)) suggesting that, in terms of working memory, males benefit more from a nurturing environment than females. To our knowledge, this is the first investigation into factors that may inform an intervention strategy to reduce or reverse the cognitive deficits resulting from prenatal CPF exposure.  
Keywords: Age  
Keywords: Environment Abstracts; CSA Neurosciences Abstracts; Toxicology Abstracts  
Keywords: Prenatal experience  
Keywords: N3 11003:Developmental neuroscience  
Keywords: Development  
Keywords: Short term memory  
Keywords: Environmental factors  
Keywords: Cognition  
Keywords: Chlorpyrifos  
Keywords: Insecticides  
Keywords: Cognitive ability  
Keywords: X 24330:Agrochemicals  
Keywords: Side effects  
Keywords: Sex  
Date revised - 2012-10-01  
Language of summary - English  
Pages - 534-541  
ProQuest ID - 1113218769  
SubjectsTermNotLitGenreText - Chlorpyrifos; Age; Insecticides; Prenatal experience; Cognitive ability; Development; Environmental factors; Short term memory; Cognition; Side effects; Sex  
Last updated - 2012-11-20  
British nursing index edition - Neurotoxicology and Teratology [Neurotoxicol. Teratol.]. Vol. 34, no. 5, pp. 534-541. Sep 2012.  
Corporate institution author - Horton, Megan K; Kahn, Linda G; Perera, Frederica; Barr, Dana Boyd; Rauh, Virginia  
DOI - 1fb988c7-3699-4111-8d0fcsamfg201; 17214094; 0892-0362 English

571. Horton, Megan K; Rundle, Andrew; Camann, David E; Boyd Barr, Dana; Rauh, Virginia a, and Whyatt, Robin M. Impact of Prenatal Exposure to Piperonyl Butoxide and Permethrin on 36-Month Neurodevelopment. 2011 Mar; 127, (3): e699-e706.   
Rec #: 47399  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Recent pesticide-monitoring results suggest that a shift in residential pesticide exposure from organophosphorus insecticides to pyrethroid insecticides has occurred. Pyrethroid insecticides are potential neurodevelopmental toxicants and have not been evaluated for developmental toxicity. Our objective was to explore the association between prenatal exposure to permethrin (a common pyrethroid) and piperonyl butoxide (a pyrethroid synergist) and 36-month neurodevelopment. Participants is this study were part of a prospective cohort of black and Dominican mothers and newborns living in low-income neighborhoods in New York City. We examined 36-month cognitive and motor development (using the Bayley Scales of Infant Development, second edition) as a function of permethrin levels measured in maternal and umbilical cord plasma collected on delivery and permethrin and piperonyl butoxide levels measured in personal air collected during pregnancy. All models were controlled for gender, gestational age, ethnicity, maternal education, maternal intelligence, quality of the home environment, and prenatal exposure to environmental tobacco smoke and chlorpyrifos. Prenatal exposure to permethrin in personal air and/or plasma was not associated with performance scores for the Bayley Mental Developmental Index or the Psychomotor Developmental Index. After data adjustment, children more highly exposed to piperonyl butoxide in personal air samples (>4.34 ng/m(3)) scored 3.9 points lower on the Mental Developmental Index than those with lower exposures (95% confidence interval: -0.25 to -7.49). Prenatal exposure to piperonyl butoxide was negatively associated with 36-month neurodevelopment.  
Keywords: Developmental Disabilities -- chemically induced  
Keywords: Developmental Disabilities -- physiopathology  
Keywords: Young Adult  
Keywords: Humans  
Keywords: Nervous System -- drug effects  
Keywords: Infant, Newborn  
Keywords: Child Development -- drug effects  
Keywords: Piperonyl Butoxide -- adverse effects  
Keywords: Pregnancy  
Keywords: Pesticide Synergists -- adverse effects  
Keywords: 0  
Keywords: Prospective Studies  
Keywords: Cognition -- drug effects  
Keywords: Pesticide Synergists  
Keywords: 51-03-6  
Keywords: Adult  
Keywords: Motor Activity -- drug effects  
Keywords: Nervous System -- growth & development  
Keywords: Follow-Up Studies  
Keywords: Adolescent  
Keywords: Piperonyl Butoxide  
Keywords: Female  
Keywords: Prenatal Exposure Delayed Effects  
Date completed - 2011-05-10  
Date created - 2011-03-02  
Date revised - 2012-12-20  
Language of summary - English  
Pages - e699-e706  
ProQuest ID - 855198977  
SuppNotes - Cites: Environ Health Perspect. 1976 Apr;14:29-37[789067]; Cites: Environ Sci Technol. 2009 Jun 15;43(12):4294-300[19603637]; Cites: Pediatrics. 1991 Feb;87(2):219-27[1987535]; Cites: Neurotoxicol Teratol. 1988 Nov-Dec;10(6):497-503[3244341]; Cites: Dev Psychopathol. 1997 Summer;9(3):473-89[9327234]; Cites: Environ Health Perspect. 2002 May;110(5):507-14[12003754]; Cites: Neurotoxicol Teratol. 2004 May-Jun;26(3):373-85[15113599]; Cites: Toxicol Appl Pharmacol. 2005 Aug 7;206(2):246-54[15967215]; Cites: Am J Epidemiol. 2007 Jun 15;165(12):1397-404[17406008]; Cites: J Med Toxicol. 2007 Sep;3(3):94-9[18072143]; Cites: Environ Health. 2008;7:50[18945337]; Cites: Sci Total Environ. 2010 Feb 1;408(5):1145-53[19896164]; Cites: J Dev Behav Pediatr. 1995 Feb;16(1):29-35[7730454]; Cites: Sci Total Environ. 1997 Jun 20;199(1-2):173-81[9200861]; Cites: Recent Results Cancer Res. 1998;154:39-46[10026992]; Cites: Environ Health Perspect. 1999 Jun;107 Suppl 3:409-19[10346990]; Cites: Environ Health Perspect. 1999 Jun;107 Suppl 3:451-60[10346993]; Cites: J Expo Anal Environ Epidemiol. 2000 Mar-Apr;10(2):159-67[10791597]; Cites: J Commun Disord. 2000 Nov-Dec;33(6):463-80; quiz 480-1[11141028]; Cites: Toxicology. 2002 Feb 1;171(1):3-59[11812616]; Cites: Rev Environ Contam Toxicol. 2002;174:49-170[12132343]; Cites: Environ Health Perspect. 2003 Jan;111(1):79-84[12515682]; Cites: Environ Health Perspect. 2003 Feb;111(2):201-5[12573906]; Cites: Food Addit Contam. 2003 Mar;20(3):207-14[12623643]; Cites: Environ Health Perspect. 2003 May;111(5):749-56[12727605]; Cites: Environ Health Perspect. 2004 Mar;112(3):388-91[14998758]; Cites: Environ Health Perspect. 2005 Feb;113(2):123-36[15687048]; Cites: Neurotoxicology. 2005 Mar;26(2):199-209[15713341]; Cites: Environ Health Perspect. 2007 Mar;115(3):383-9[17431487]; Cites: Toxicology. 2007 Jul 1;236(1-2):61-75[17498859]; Cites: Environ Health Perspect. 2008 Dec;116(12):1681-8[19079720]; Cites: Environ Health. 2009;8:18[19379510]; Cites: Dev Med Child Neurol. 1992 Jul;34(7):633-41[1380931]  
Last updated - 2013-01-19  
British nursing index edition - Pediatrics, March 2011, 127(3):e699-e706  
Corporate institution author - Horton, Megan K; Rundle, Andrew; Camann, David E; Boyd Barr, Dana; Rauh, Virginia A; Whyatt, Robin M  
DOI - MEDL-21300677; 21300677; PMC3065142; 1098-4275 eng

572. Horwood, M. A. Rapid degradation of termiticides under field conditions. 2007; 46, 75-78.   
Rec #: 61709  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Soil testing is used by regulatory agencies to determine the adequacy of termiticide application by pest controllers. Because tests may be carried out years after treatment, an accurate knowledge of termiticide degradation rates is crucial if determinations are to be valid. Degradation of exposed residues of bifenthrin, chlorfenapyr, chlorpyrifos, fipronil and imidacloprid was investigated in a field trial conducted near Narrandera (inland New South Wales) and in Sydney. Samples of soil 75 mm deep were collected immediately after treatment and after 12 months from plots treated with termiticides to a minimum depth of 350 mm and analysed for termiticide residues. Bifenthrin and chlorfenapyr were the most persistent termiticides. Losses of chlorpyrifos exceeded 99% at both locations. Losses of fipronil and imidacloprid were 96% and 94%, respectively, at Narrandera and 67% and 50%, respectively, in Sydney. To explore the fate of chlorpyrifos, fipronil and imidacloprid in the soil profile at Narrandera, samples were collected 15 months after treatment to a depth of 450 mm, in 150 mm increments, from plots treated to a depth of 700 mm. In soil below 150 mm, chlorpyrifos and fipronil content was little changed from time of application whereas major losses of imidacloprid had occurred at all depths. These findings have implications for termite treatment regulation in Australia. Regulatory agencies have relied upon degradation rates observed in laboratory experiments to determine in situ treatment adequacy. Results of this field study suggest that termiticides can degrade more rapidly in situ than indicated by laboratory experiments.  
Keywords: chemical half-lives, persistence, regulation, soil termiticides  
ISI Document Delivery No.: 122LX

573. Hua, Xiude; Qian, Guoliang; Yang, Jifei; Hu, Baishi; Fan, Jiaqin; Qin, Na; Li, Gang; Wang, Yuyan, and Liu, Fengquan. Development of an immunochromatographic assay for the rapid detection of chlorpyrifos-methyl in water samples . 2010 Sep 15-; 26, (1): 189-194.   
Rec #: 1270  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: A rapid (less than 10 min), qualitative and semi-quantitative immunochromatography using colloidal gold-antibody probe was successfully developed and applied in determination of chlorpyrifos-methyl (a wide-spectrum organophosphorus pesticide) in water samples. The qualitative detection limit of chlorpyrifos-methyl was determined as 0.6 ++g mlęĆ1 by using immunochromatography. In the semi-quantitative experiment, the detection results of chlorpyrifos-methyl were scanned by a membrane strip reader, and a detection curve representing the scanned data average was obtained. After conversion, it was observed that in the range of 50 Çô 12,150 ng mlęĆ1, the graph between logit(B/B0) and logarithm of concentration of chlorpyrifos-methyl was linear, from which, the regression equation (y = ęĆ2.5229x + 7.5951, R2 = 0.9889) and IC50 value (1024.39 ng mlęĆ1) was obtained, respectively. Meanwhile, the detection limit was calculated as 132.91 ng mlęĆ1 by the extrapolation of B0 ęĆ 2SD. In addition, the cross-reactivities were less than 1% with tested analog compounds and regarded as negligible. The recoveries obtained by standard chlorpyrifos-methyl addition to water samples were 102.5Çô107.6%. Overall, to our knowledge, this is the first report of qualitative and semi-quantitative detection of chlorpyrifos-methyl by immunochromatography. Chlorpyrifos-methyl/ Gold immunochromatographic assay/ Colloidal gold/ One-step strip test/ Pesticide residue

574. Hubal, E. A. C.; Nishioka, M. G.; Ivancic, W. A.; Morara, M., and Egeghy, P. P. Comparing surface residue transfer efficiencies to hands using polar and nonpolar fluorescent tracers. 2008; 42, (3): 934-939.   
Rec #: 61789  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Transfer of chemicals from contaminated surfaces such as foliage, floors, and furniture is a potentially significant source of both occupational exposure and children's residential exposure. Increased understanding of relevant factors influencing transfers from contaminated surfaces to skin and resulting dermal-loading will reduce uncertainty in exposure assessment. In a previously reported study, a fluorescence imaging system was developed, tested, and used to measure transfer of riboflavin residues from surfaces to hands. Parameters evaluated included surface type, surface loading, contact motion, pressure, duration, and skin condition. Results of the initial study indicated that contact duration and pressure were not significant for the range of values tested, but that there are potentially significant differences in transfer efficiencies of different compounds. In the study reported here, experimental methods were refined and additional transfer data were collected. A second fluorescent tracer, Uvitex OB, with very different physicochemical properties than riboflavin, was also evaluated to better characterize the range of transfers that may be expected for a variety of compounds. Fluorescent tracers were applied individually to surfaces and transfers to skin were measured after repeated hand contacts with the surface. Additional trials were conducted to compare transfer of tracers and coapplied pesticide residues. Results of this study indicate that dermal loadings of both tracers increase through the seventh brief contact. Dermal loading of Uvitex tends to increase at a higher rate than dermal loadings of riboflavin. Measurement of co-applied tracer and pesticide suggest results for these two tracers may provide reasonable bounding estimates of pesticide transfer.  
Keywords: CHILDRENS RESIDENTIAL EXPOSURE, IMAGING TECHNIQUE, DERMAL EXPOSURE,  
ISI Document Delivery No.: 257CU

575. Huen, K.; Harley, K.; Brooks, J.; Hubbard, A.; Bradman, A.; Eskenazi, B., and Holland, N. Developmental Changes in PON1 Enzyme Activity in Young Children and Effects of PON1 Polymorphisms. 2009; 117, (10): 1632-1638.   
Rec #: 61829  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: Paraoxonase 1 (PON1) is an enzyme that detoxifies activated organophosphorus pesticides (OPs) and is also involved in oxidative stress pathways. OBJECTIVES: PON1 activity in newborns is lower than in adults, but the ontogeny of PON1 activity is poorly characterized in young children. We examined the effects of age and PON1 genotype on enzyme activity in a birth cohort of Mexican-American children. METHODS: We determined three substrate-specific measures of PON1 activity in 1, 143 plasma samples collected longitudinally from 458 children at five time points from birth through 7 years of age, and genotyped PON1 polymorphisms at positions 192 and -108 in these children. RESULTS: Contrary to previous reports that PON1 activities plateau by 2 years of age, we observed an age-dependent increase in all three PON1 measures from birth through 7 years of age (p < 0.0001). The PON1(192) genotype significantly modified the effect of age on paraoxonase (POase) activity (p < 0.0001) such that increases in enzyme activity with age were influenced by the number of R alleles in a dose-dependent manner. Children with the PON1(-108CC192RR) diplotype had significantly higher mean PON1 activities and also experienced steeper increases of POase activity over time compared with children with the PON1(-108TT192QQ) diplotype. CONCLUSIONS: Lower levels of the PON1 enzyme, which is involved in protection against OPs and oxidative stress, persist in young children past 2 years of age through at least 7 years of age. Future policies addressing pesticide exposure in children should take into account that the window of vulnerability to OPs in young children may last beyond infancy.  
Keywords: age, children, enzymatic assay, longitudinal birth cohort,  
ISI Document Delivery No.: 503JI

576. Huen, Karen; Bradman, Asa; Harley, Kim; Yousefi, Paul; Boyd Barr, Dana; Eskenazi, Brenda, and Holland, Nina. Organophosphate pesticide levels in blood and urine of women and newborns living in an agricultural community. 2012 Aug; 117, (0): 8-16.   
Rec #: 5070  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Organophosphate pesticides are widely used and recent studies suggest associations of in utero exposures with adverse birth outcomes and neurodevelopment. Few studies have characterized organophosphate pesticides in human plasma or established how these levels correlate to urinary measurements. We measured organophosphate pesticide metabolites in maternal urine and chlorpyrifos and diazinon in maternal and cord plasma of subjects living in an agricultural area to compare levels in two different biological matrices. We also determined paraoxonase 1 (PON1) genotypes (PON1192 and PON1êÆ108) and PON1 substrate-specific activities in mothers and their newborns to examine whether PON1 may affect organophosphate pesticide measurements in blood and urine. Paraoxonase/ Organophosphate pesticides/ Biomarkers/ Cord blood/ Maternal blood/ Urinary metabolites

577. Huen, Karen; Harley, Kim; Bradman, Asa; Eskenazi, Brenda; Holland, Nina, and Huen, Karen. Longitudinal Changes in Pon1 Enzymatic Activities in Mexican-American Mothers and Children With Different Genotypes and Haplotypes. 2010 Apr 15; 244, (2): 181-189.   
Rec #: 47959  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The paraoxonase 1 (PON1) enzyme prevents low-density lipoprotein oxidation and also detoxifies the oxon derivatives of certain neurotoxic organophosphate (OP) pesticides. PON1 activity in infants is low compared to adults, rendering them with lower metabolic and antioxidant capacities. We made a longitudinal comparison of the role of genetic variability on control of PON1 phenotypes in Mexican-American mothers and their children at the time of delivery (n =388 and 338, respectively) and again 7 years later (n =280 and 281, respectively) using generalized estimating equations models. At age 7, children's mean PON1 activities were still lower than those of mothers. This difference was larger in children with genotypes associated with low PON1 activities (PON1 a108TT , PON1 192QQ , and PON1 a909CC ). In mothers, PON1 activities were elevated at delivery and during pregnancy compared to 7 years later when they were not pregnant (p <0.001). In non-pregnant mothers, PON1 polymorphisms and haplotypes accounted for almost 2-fold more variation of arylesterase (AREase) and chlorpyrifos-oxonase (CPOase) activity than in mothers at delivery. In both mothers and children, the five PON1 polymorphisms (192, 55, a108, a909, a162) explained a noticeably larger proportion of variance of paraoxonase activity (62-78%) than AREase activity (12.3-26.6%). Genetic control of PON1 enzymatic activity varies in children compared to adults and is also affected by pregnancy status. In addition to known PON1 polymorphisms, unidentified environmental, genetic, or epigenetic factors may also influence variability of PON1 expression and therefore susceptibility to OPs and oxidative stress.  
Keywords: Age  
Keywords: Antioxidants  
Keywords: Organophosphates  
Keywords: Gene polymorphism  
Keywords: paraoxonase 1  
Keywords: Aryldialkylphosphatase  
Keywords: enzymatic activity  
Keywords: Environment Abstracts; Toxicology Abstracts; CSA Neurosciences Abstracts  
Keywords: Genotypes  
Keywords: Haplotypes  
Keywords: epigenetics  
Keywords: Oxidative stress  
Keywords: Enzymatic activity  
Keywords: X 24330:Agrochemicals  
Keywords: Mathematical models  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: Arylesterase  
Keywords: haplotypes  
Keywords: organophosphates  
Keywords: Children  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Pregnancy  
Keywords: Lipoproteins  
Keywords: Neurotoxicity  
Keywords: Pesticides  
Keywords: Genetic control  
Keywords: Infants  
Date revised - 2010-10-01  
Language of summary - English  
Pages - 181-189  
ProQuest ID - 877573716  
SubjectsTermNotLitGenreText - Age; Mathematical models; Antioxidants; Gene polymorphism; Arylesterase; paraoxonase 1; Aryldialkylphosphatase; organophosphates; Children; Pregnancy; Haplotypes; epigenetics; Oxidative stress; Pesticides; Neurotoxicity; Lipoproteins; Genetic control; Enzymatic activity; Infants; Organophosphates; enzymatic activity; Genotypes; haplotypes  
Last updated - 2012-03-29  
British nursing index edition - Toxicology and Applied Pharmacology [Toxicol. Appl. Pharmacol.]. Vol. 244, no. 2, pp. 181-189. 15 Apr 2010.  
Corporate institution author - Huen, Karen; Harley, Kim; Bradman, Asa; Eskenazi, Brenda; Holland, Nina  
DOI - 2173183e-4e06-444b-a2b8csaobj201; 13023703; 0041-008X English

578. Huen, Karen; Richter, Rebecca; Furlong, Clement; Eskenazi, Brenda, and Holland, Nina. Validation of PON1 enzyme activity assays for longitudinal studies. 2009 Apr; 402, (1Çô2): 67-74.   
Rec #: 3120  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Background Paraoxonase/ Arylesterase/ PON1 activity/ Enzymatic assay/ Children/ Storage/ Technical variability/ Temperature/ Organophosphate/ Pesticides/ Oxidative stress/ FreezeÇôthaw/ Birth cohort

579. Huijbregts, M. A. J.; Thissen, U.; Guinee, J. B.; Jager, T.; Kalf, D.; Van de Meent, D.; Ragas, A. M. J.; Sleeswijk, A. W., and Reijnders, L. Priority Assessment of Toxic Substances in Life Cycle Assessment. Part I: Calculation of Toxicity Potentials for 181 Substances with the Nested Multi-media Fate, Exposure and Effects Model USES-LCA. M.A.J.Huijbregts, Interfaculty Department of Environmental Science, Faculty of Environmental Science, University of Amsterdam, Amsterdam, NL-1018 VZ, Neth//: 2000; 41, (4): 541-573.   
Rec #: 890  
Keywords: MODELING  
Call Number: NO MODELING (CPY)  
Notes: Chemical of Concern: CPY

580. Hull, L. A. Concentrate Airblast Insect Experiment, 2005. 2006; 31, 9 p. (A15).   
Rec #: 1740  
Keywords: MIXTURE  
Call Number: NO MIXTURE (ALSV,AZ,CPY,HTX,IMC,MFZ,PSM)  
Notes: Chemical of Concern: ABM,ACT,ALSV,AZ,CPY,CTD,HTX,IMC,MFZ,NVL,PSM,TAP

581. Hull, L. A. and Biddinger, D. J. Apple, Tufted Apple Bud Moth Control Tactics, 1992. 1993; 18, 44-46 (35A).   
Rec #: 140  
Keywords: BIOLOGICAL TOXICANT,MIXTURE  
Call Number: NO BIOLOGICAL TOXICANT (CPY,FPP,MOM,MP,PSM,TUZ), NO MIXTURE (CPY,FPP,MOM,MP,PSM,TUZ)  
Notes: Chemical of Concern: CPY,FPP,MOM,MP,PSM,TUZ

582. Hull, L. A. and Krawcyzk, G. Airblast Concentrate Insecticide Evaluation on Apple, 1997. 1998; 23, 18-21 (14A).   
Rec #: 150  
Keywords: MIXTURE  
Call Number: NO MIXTURE (AZ,CPY,ES,FYC,IMC,MOM,MP,PSM,TUZ)  
Notes: Chemical of Concern: ABM,AZ,CPY,ES,FYC,IMC,MOM,MP,PSM,TUZ

583. Hunt, J; Anderson, B; Phillips, B; Tjeerdema, R; Largay, B; Beretti, M; Bern, a, and Hunt, J. Use of Toxicity Identification Evaluations to Determine the Pesticide Mitigation Effectiveness of on-Farm Vegetated Treatment Systems. 2008 Nov; 156, (2): 348-358.   
Rec #: 45449  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Evidence of ecological impacts from pesticide runoff has prompted installation of vegetated treatment systems (VTS) along the central coast of California, USA. During five surveys of two on-farm VTS ponds, 88% of inlet and outlet water samples were toxic to Ceriodaphnia dubia. Toxicity identification evaluations (TIEs) indicated water toxicity was caused by diazinon at VTS-1, and chlorpyrifos at VTS-2. Diazinon levels in VTS-1 were variable, but high pulse inflow concentrations were reduced through dilution. At VTS-2, chlorpyrifos concentrations averaged 52% lower at the VTS outlet than at the inlet. Water concentrations of most other pesticides averaged 20-90% lower at VTS outlets. All VTS sediment samples were toxic to amphipods (Hyalella azteca). Sediment TIEs indicated toxicity was caused by cypermethrin and lambda-cyhalothrin at VTS-1, and chlorpyrifos and permethrin at VTS-2. As with water, sediment concentrations were lower at VTS outlets, indicating substantial reductions in farm runoff pesticide concentrations.  
Keywords: Outlets  
Keywords: Farms  
Keywords: Water sampling  
Keywords: permethrin  
Keywords: SW 3030:Effects of pollution  
Keywords: Ponds  
Keywords: Ceriodaphnia dubia  
Keywords: mitigation  
Keywords: Agricultural Chemicals  
Keywords: INE, USA, California  
Keywords: farms  
Keywords: Sediment Contamination  
Keywords: inflow  
Keywords: X 24330:Agrochemicals  
Keywords: Pollution  
Keywords: Coasts  
Keywords: Sediment pollution  
Keywords: Cypermethrin  
Keywords: Inlets  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Permethrin  
Keywords: Aqualine Abstracts; Water Resources Abstracts; Pollution Abstracts; Toxicology Abstracts  
Keywords: Toxicity  
Keywords: Sediments  
Keywords: Hyalella azteca  
Keywords: Chlorpyrifos  
Keywords: cypermethrin  
Keywords: Coastal zone  
Keywords: Water Pollution Effects  
Keywords: Pesticides  
Keywords: Diazinon  
Keywords: Runoff  
Date revised - 2008-12-01  
Language of summary - English  
Location - INE, USA, California  
Pages - 348-358  
ProQuest ID - 19497276  
SubjectsTermNotLitGenreText - Chlorpyrifos; Farms; Cypermethrin; Pesticides; Permethrin; Toxicity; Diazinon; Pollution; Ponds; Runoff; Sediments; Coasts; Sediment pollution; Water sampling; permethrin; cypermethrin; mitigation; Coastal zone; farms; inflow; Outlets; Agricultural Chemicals; Inlets; Water Pollution Effects; Sediment Contamination; Hyalella azteca; Ceriodaphnia dubia; INE, USA, California  
Last updated - 2011-12-14  
British nursing index edition - Environmental Pollution [Environ. Pollut.]. Vol. 156, no. 2, pp. 348-358. Nov 2008.  
Corporate institution author - Hunt, J; Anderson, B; Phillips, B; Tjeerdema, R; Largay, B; Beretti, M; Bern, A  
DOI - MD-0008874685; 8615654; 0269-7491 English

584. Huskova, R.; Matisova, E.; Svorc, L.; Mocak, J., and Kirchner, M. Comparison of negative chemical ionization and electron impact ionization in gas chromatography-mass spectrometry of endocrine disrupting pesticides. 2009; 1216, (24): 4927-4932.   
Rec #: 61859  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The study of pesticide residues belonging to endocrine disrupting chemicals (EDCs) (23 analytes of different chemical classes - organochlorines, organophosphates, pyrethroids, dicarboximides, phtalamides, dinitroanilines, pyrazole, triazinone) in apple matrix with conventional capillary GC-NCl-MS (with methane as reagent gas) in comparison to El ionization is presented. For sample preparation QuEChERS method was applied. The lowest calibration levels (LCLs) for all pesticides were determined in both modes. Calibration in the NCl mode was performed at the concentration levels from 0,11 to 500 mu g kg(-1) (R(2) > 0.999) and for El in the range from 5 to 500 mu g kg(-1) (R(2) > 0.99). From LCLs the instrumental limits of detection (LODs) and quantification (LOQs) were calculated. Chemometric Study of pesticide signals in two MS modes was performed. Repeatability of all measurements, expressed by the relative standard deviations of absolute peak areas was better than 10% for the majority of compounds. Significantly lower values were obtained for the NCl mode. (C) 2009 Elsevier B.V. All rights reserved.  
Keywords: Conventional capillary GC-MS, Negative chemical ionization, Electron  
ISI Document Delivery No.: 454GW

585. Hussain, S. ; Siddique, T.; Arshad, M., and Saleem, M. Bioremediation and Phytoremediation of Pesticides: Recent Advances. 2009; 39, (10): 843-907.   
Rec #: 61869  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The use of genetically modified or native microorganisms and plants to degrade or remove pollutants has emerged as a powerful technology for in situ remediation. An understanding of the genetic basis of the mechanisms of how microorganisms and plants biodegrade pollutants and how they interact with the environment is important for successful implementation of this technology. Recent studies have demonstrated that microbes and transgenic plants produce pesticide-degradaing enzymes that can mineralize different groups of pesticides and their metabolites with greater efficiency. **This review describes the most recent progress in biotechnological approaches for enhancing the capability of microorganisms and plants through the characterization and transfer of pesticide-degrading genes, induction of catabolic pathways, and display of cell surface enzymes.**  
Keywords: biodegradation, pesticides, phytoremediation, pesticide-degrading genes,  
ISI Document Delivery No.: 506WB

586. Ibrahim, H. A.; Abu-Egla, M. H.; El-Sayad, H. I., and El-Gammal, H. Effects of Chlorpyrifos, Methamidophos and Sulprofos on Myelin Sheath Development of Chicken Embryos. 1991; 2, 245-262.   
Rec #: 900  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY,MTM)  
Notes: Chemical of Concern: CPY,MTM

587. Iizuka, Toshiaki; Maeda, Satoshi, and Shimizu, Akio. Removal of Pesticide Residue in Cherry Tomato by Hydrostatic Pressure. (0).  
Rec #: 3360  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: The reduction of Chlorpyrifos (CP) in cherry tomatoes by High Hydrostatic Pressure (HHP) treatment was demonstrated and compared with other washing methods. CP is commonly used as a broad-spectrum insecticide in pest control, and high residual levels have been detected in vegetables. Samples were treated at several pressures (0.1-400 MPa) and at two temperatures (5 or 25-\_C) for 30 min. The optimum HHP conditions for reducing CP were around 75 MPa at 5-\_C, and the removal rate was about 75%. This removal rate is slightly higher than other treatments such as soaking in ethanol solution and ultrasonic, accompanied by no visual changes (color, size and shape) in appearance. Also, no toxic intermediates were identified in the extracts of the high-pressure treated cherry tomatoes under these experimental conditions. The present results indicate that HHP can be a useful choice for removing residual pesticides. High hydrostatic pressure (HHP)/ Pesticide residues/ Chlorpyrifos/ Cherry tomato

588. Ilyinskii, P. O.; Meriin, A. B.; Gabai, V. L.; Zhirnov, O. P.; Thoidis, G., and Shneider, A. M. Prime-Boost Vaccination With a Combination of Proteosome-Degradable and Wild-Type Forms of Two Influenza Proteins Leads to Augmented Ctl Response.   
Rec #: 51269  
Keywords: BENEFICIAL EFFECT  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Targeting viral antigens for proteosomal degradation has previously been proposed as a means for immunogenicity augmentation. However, utilization of modified unstable antigens may be insufficient for potent T-cell cross-presentation by APCs, a mechanism that requires high levels of the antigenic protein. Therefore, we hypothesized that a recombinant vaccine utilizing a combination of proteosome-sensitive and proteosome-resistant versions of an antigen in a prime-boost regimen may provide the most efficient CTL response. To address this hypothesis, we utilized conserved proteosome-resistant influenza A virus proteins M1 and NS1. Unstable versions of these polypeptides were constructed by destroying their 3D structure via truncations or short insertions into predicted alpha-helical structures. These modified polypeptides were stabilized in the presence of the proteosome inhibitor MG132, strongly suggesting that they are degraded via a ubiquitin-proteosome pathway. Importantly, with both M1 and NS1antigens, homologous DNA vaccination with a mixture of unstable and proteosome-resistant wt forms of these proteins resulted in significantly higher CTL activity than vaccination with either wt or degradable forms. The most dramatic effect was seen with NS1, where homologous immunization with a mixture of these two forms was the only regimen that produced a notable elevation of CTL response, compared to vaccination with the wt NS1. Additionally, for M1 protein, heterologous vaccination utilizing the unstable form as prime and wild-type form as boost, demonstrated significant augmentation of the CTL response. These data indicate that combining proteosome-sensitive and proteosome-resistant forms of an antigen during vaccination is advantageous.  
MESH HEADINGS: Animals  
MESH HEADINGS: Antigens, Viral/genetics/\*immunology/metabolism  
MESH HEADINGS: \*Cytotoxicity, Immunologic  
MESH HEADINGS: Immunization, Secondary  
MESH HEADINGS: Influenza Vaccines/\*immunology  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred BALB C  
MESH HEADINGS: Mutagenesis, Insertional  
MESH HEADINGS: Sequence Deletion  
MESH HEADINGS: Vaccines, Synthetic/genetics/immunology/metabolism  
MESH HEADINGS: Viral Matrix Proteins/genetics/\*immunology/metabolism  
MESH HEADINGS: Viral Nonstructural Proteins/genetics/\*immunology/metabolism eng

589. Ion, Alina C; Ion, Ion; Culetu, Alina; Gherase, Dragos; Moldovan, Carmen a; Iosub, Rodica; Dinescu, Adrian, and Ion, Alina C. Acetylcholinesterase Voltammetric Biosensors Based on Carbon Nanostructure-Chitosan Composite Material for Organophosphate Pesticides. 2010 Jul 20; 30, (6): 817-821.   
Rec #: 47799  
Keywords: METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A sensitive biosensor for chloropyrifos (CPF), an organophosphorus pesticide, was developed by immobilizing acetylcholinesterase (AChE) through covalent bonding to an oxidized exfoliated graphite nanoplatelet (xGnPs)-chitosan cross-linked composite. Because of the increased surface area and the conductive properties of the nanomaterial, AChE developed a high affinity for acetylthiocholine (ATCI) and formed thiocholine with a fast response. The response of the sensor was a linear function of ATCI concentration in two segments, one from 0.005 to 0.039mM and the second from 0.064mM to 0.258mM. The corresponding equation for the first range was i p(A)=2.26A-10a5 c +4.39A-10a7 (R 2 =0.992) and the equation for the second was ip(A)=6.80A-10a6 c +1.30A-10a6 (R 2 =1.000), with a detection limit of 1.58A-10a10 M. The fabrication of the sensor was simple, the response was fast and the stability acceptable. This sensor has many potential applications, the foremost being in organophosphorus pesticides.  
Keywords: Biosensors  
Keywords: Pesticides (organophosphorus)  
Keywords: composite materials  
Keywords: Graphite  
Keywords: Carbon  
Keywords: Mathematical models  
Keywords: Acetylcholinesterase  
Keywords: Surface area  
Keywords: Biotechnology and Bioengineering Abstracts  
Keywords: W 30920:Tissue Engineering  
Date revised - 2011-01-01  
Language of summary - English  
Pages - 817-821  
ProQuest ID - 787220863  
SubjectsTermNotLitGenreText - Biosensors; Pesticides (organophosphorus); composite materials; Graphite; Carbon; Mathematical models; Acetylcholinesterase; Surface area  
Last updated - 2012-03-29  
British nursing index edition - Materials Science and Engineering C: Biomimetic and Supramolecular Systems [Mater. Sci. Eng. C Biomimetic Supramol. Syst.]. Vol. 30, no. 6, pp. 817-821. 20 Jul 2010.  
Corporate institution author - Ion, Alina C; Ion, Ion; Culetu, Alina; Gherase, Dragos; Moldovan, Carmen A; Iosub, Rodica; Dinescu, Adrian  
DOI - 3d65a48e-c711-467b-b7a7csaobj202; 13663912; 0928-4931 English

590. Ippolito, a ; Carolli, M; Varolo, E; Villa, S; Vighi, M, and Ippolito, A. Evaluating Pesticide Effects on Freshwater Invertebrate Communities in Alpine Environment: a Model Ecosystem Experiment. 2012; 21, (7): 2051-2067.   
Rec #: 46469  
Keywords: MIXTURE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticide loads in streams are potentially one of the most relevant stressors for macroinvertebrate communities. Nevertheless, real effects provoked at the community level are still largely unknown. Model ecosystems are frequently used as tools for the risk assessment of pesticides, especially for their regulation, however, they can be also applied to site-specific risk assessment in order to gain better understanding of the responses of aquatic ecosystems to chemical stress. In the present work, an experimental system was composed of 5 artificial streams that reproduced a mountain lotic environment under controlled conditions. This study was aimed to better understand, whether (and how) the biological community was influenced by pesticides pulse exposures. **5 mixture load events were simulated over the productive season** (March-July 2010): biological community was regularly sampled and nominal concentrations of water were tested. The results were interpreted comparing the output of different metrics and statistical methodologies. The sensitivity of different metrics was analyzed considering single exposure events (maximum Toxic Units) as well as overall temporal trends. Results showed how some common taxonomic metrics (e.g. taxa richness, Shannon's index, total abundance of organisms, and the Extended Biotic Index) were not suitable to identify the effects of pesticides at community level. On the contrary EPT%, SPEAR sub(pesticide) and the Principal Response Curve methodology proved to be sensitive to this kind of stress, providing comparable results. Temporal trends of these metrics proved to be related to the concentration of chemicals. Remarkably, the first Principal Response Curve illustrates the trend followed by the most vulnerable species, while the second is more related to the trend of opportunistic species. A high potential risk for the invertebrate community was highlighted by a statistically significant decline of 40 points (comparison with the control) in both SPEAR sub(pesticide) and EPT%.  
Keywords: Risk assessment  
Keywords: Statistics  
Keywords: Ecology Abstracts; Toxicology Abstracts; Pollution Abstracts  
Keywords: Freshwater environments  
Keywords: Abundance  
Keywords: Statistical analysis  
Keywords: Stress  
Keywords: Aquatic ecosystems  
Keywords: Streams  
Keywords: Environmental Studies  
Keywords: Models  
Keywords: Mountains  
Keywords: Risk factors  
Keywords: Pesticides  
Keywords: Controlled conditions  
Keywords: Invertebrata  
Keywords: X 24330:Agrochemicals  
Keywords: Alpine environments  
Date revised - 2012-09-01  
Language of summary - English  
Pages - 2051-2067  
ProQuest ID - 1143574043  
SubjectsTermNotLitGenreText - Risk assessment; Statistics; Freshwater environments; Abundance; Statistical analysis; Stress; Aquatic ecosystems; Streams; Models; Mountains; Risk factors; Pesticides; Controlled conditions; Alpine environments; Invertebrata  
Last updated - 2012-11-08  
Corporate institution author - Ippolito, A; Carolli, M; Varolo, E; Villa, S; Vighi, M  
DOI - OB-944a4aee-08e7-4012-b10emfgefd101; 17187662; 0963-9292; 1573-3017 English

591. Ippolito, a ; Todeschini, R; Vighi, M, and Ippolito, A. Sensitivity Assessment of Freshwater Macroinvertebrates to Pesticides Using Biological Traits. 2012 Mar; 21, (2): 336-352.   
Rec #: 46829  
Keywords: REVIEW,MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Assessing the sensitivity of different species to chemicals is one of the key points in predicting the effects of toxic compounds in the environment. Trait-based predicting methods have proved to be extremely efficient for assessing the sensitivity of macroinvertebrates toward compounds with non specific toxicity (narcotics). Nevertheless, predicting the sensitivity of organisms toward compounds with specific toxicity is much more complex, since it depends on the mode of action of the chemical. **The aim of this work was to predict the sensitivity of several freshwater macroinvertebrates toward three classes of plant protection products: organophosphates, carbamates and pyrethroids.** Two databases were built: one with sensitivity data (retrieved, evaluated and selected from the **U.S. Environmental Protection Agency ECOTOX database**) and the other with biological traits. Aside from the "traditional" traits usually considered in ecological analysis (i.e. body size, respiration technique, feeding habits, etc.), multivariate analysis was used to relate the sensitivity of organisms to some other characteristics which may be involved in the process of intoxication. Results confirmed that, besides traditional biological traits, related to uptake capability (e.g. body size and body shape) some traits more related to particular metabolic characteristics or patterns have a good predictive capacity on the sensitivity to these kinds of toxic substances. For example, behavioral complexity, assumed as an indicator of nervous system complexity, proved to be an important predictor of sensitivity towards these compounds. These results confirm the need for more complex traits to predict effects of highly specific substances. One key point for achieving a complete mechanistic understanding of the process is the choice of traits, whose role in the discrimination of sensitivity should be clearly interpretable, and not only statistically significant.  
Keywords: Intoxication  
Keywords: Chemicals  
Keywords: D 04070:Pollution  
Keywords: Toxic substances  
Keywords: ENA 09:Land Use & Planning  
Keywords: Plant protection  
Keywords: Organophosphates  
Keywords: Respiration  
Keywords: Statistical analysis  
Keywords: body size  
Keywords: Environmental Studies  
Keywords: Nervous system  
Keywords: intoxication  
Keywords: Multivariate analysis  
Keywords: Body size  
Keywords: Pyrethroids  
Keywords: X 24330:Agrochemicals  
Keywords: Sensitivity  
Keywords: Feeding  
Keywords: Data processing  
Keywords: Freshwater environments  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Narcotics  
Keywords: Ecology Abstracts; Toxicology Abstracts; Environment Abstracts; Pollution Abstracts  
Keywords: organophosphates  
Keywords: Toxicity  
Keywords: Pesticides (carbamates)  
Keywords: EPA  
Keywords: Databases  
Keywords: USA  
Keywords: Pesticides  
Date revised - 2012-04-01  
Language of summary - English  
Location - USA  
Pages - 336-352  
ProQuest ID - 922902713  
SubjectsTermNotLitGenreText - Intoxication; Feeding; Data processing; Plant protection; Freshwater environments; Respiration; Statistical analysis; Narcotics; Toxicity; organophosphates; Pesticides (carbamates); Databases; Nervous system; Multivariate analysis; Pesticides; Body size; Pyrethroids; Chemicals; EPA; Sensitivity; intoxication; Toxic substances; Organophosphates; body size; USA  
Last updated - 2012-04-12  
Corporate institution author - Ippolito, A; Todeschini, R; Vighi, M  
DOI - OB-861b5eea-3f93-4053-9fe1mfgefd107; 16335286; 0963-9292; 1573-3017 English

592. Ishtiaq, M. and Saleem, M. A. Generating Susceptible Strain and Resistance Status of Field Populations of Spodoptera exigua (Lepidoptera: Noctuidae) Against Some Conventional and New Chemistry Insecticides in Pakistan. 2011; 104, (4): 1343-1348.   
Rec #: 2330  
Keywords: NO DURATION  
Call Number: NO DURATION (CPY,CYP,DM,MFZ,PFF)  
Notes: Chemical of Concern: ABM,CPY,CYP,DM,EMMB,IDC,LUF,MFZ,PFF,SS

593. Islam, S. M. A.; Math, R. K.; Cho, K. M.; Lim, W. J.; Hong, S. Y.; Kim, J. M.; Yun, M. G.; Cho, J. J., and Yun, H. D. Organophosphorus Hydrolase (OpdB) of Lactobacillus brevis WCP902 from Kimchi Is Able To Degrade Organophosphorus Pesticides. 2010; 58, (9): 5380-5386.   
Rec #: 61939  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Lactobacillus brevis WCP902 that is capable of biodegrading chlorpyrifos was isolated from kimchi. The opdB gene cloned from this strain revealed 825 bp, encoding 274 aa, and an enzyme molecular weight of about 27 kDa. OpdB contains the same Gly-X-Ser-X-Gly motif found in most bacterial and eukaryotic esterase, lipase, and serine hydrolases, yet it is a novel member of the GDSVG family of esterolytic enzymes. Its conserved serine residue, Ser82, is significantly involved with enzyme activity that may have application for removing some pesticides. Optimum organophosphorus hydrolase (OpdB) activity appeared at pH 6.0 and 35 degrees C and during degradation of chlorpyrifos, coumaphos, diazinon, methylparathion, and parathion.  
Keywords: Kimchi, pesticide-degrading bacterium, Lactobacillus brevis, opdB gene,  
ISI Document Delivery No.: 590OW

594. Ismail, A. A.; Bodner, T. E., and Rohlman, D. S. Neurobehavioral performance among agricultural workers and pesticide applicators: a meta-analytic study. 2012; 69, (7): 457-464.   
Rec #: 61949  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chronic low level exposure of agricultural workers and applicators to pesticides has been found to be associated with different degrees of decrement in cognitive and psychomotor functions. The goal of this study was to use meta-analysis to (1) identify and quantify neurobehavioral deficits among agricultural workers and pesticide applicators, and (2) analyse the potential confounders or moderators of these neurobehavioral deficits. Seventeen studies, reporting on 21 independent cohort groups, were included in the meta-analysis. These studies involved 16 neuropsychological tests providing 23 different performance measures that constitute the neurobehavioral constructs. All tests and measures of the neurobehavioral functions of attention, visuomotor integration, verbal abstraction and perception constructs showed significant decrements for exposed participants. One out of three tests of memory, two of five tests of sustained attention, and four of eight tests of motor speed constructs also showed significant decrements. Nine out of these 15 effect size distributions demonstrated significant heterogeneity across cohorts. A search for cohort-level variables (eg, agricultural workers vs applicators, duration of exposure, age and percentage of male participants) to explain this heterogeneity was largely unsuccessful. However, for one test, Block Design, the duration of exposure was positively associated with performance decrements. Furthermore, it was also found that performance decrements on this test were smaller for older participants. Increasing the number of studies and using more consistent methodologies in field studies are needed.  
Keywords: LONG-TERM EXPOSURE, CENTRAL-NERVOUS-SYSTEM, ORGANOPHOSPHATE PESTICIDES,  
ISI Document Delivery No.: 958AI

595. Ismail, B. S. and Ngan, C. K. Dissipation of Chlorothalonil, Chlorpyrifos, and Profenofos in a Malaysian Agricultural Soil: A Comparison Between the Field Experiment and Simulation by the PERSIST Model. School of Environmental and Natural Resource Sciences, Faculty of Science and Technology, Universiti Kebangsaan Malaysia, Bangi, Selangor, Malaysia. ismail@pkrisc.cc.ukm.my//: SOIL; 2005; 40, (2): 341-353.   
Rec #: 2230  
Keywords: FATE  
Call Number: NO FATE (CPY,CTN,PFF)  
Notes: Chemical of Concern: CPY,CTN,PFF

596. Istamboulie, Georges; Cortina-Puig, Montserrat; Marty, Jean-Louis, and Noguer, Thierry. The Use of Artificial Neural Networks for the Selective Detection of Two Organophosphate Insecticides: Chlorpyrifos and Chlorfenvinfos. 2009 Jul 15; 79, (2): 507-511.   
Rec #: 41109  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Amperometric acetylcholinesterase (AChE) biosensors have been developed to resolve mixtures of chlorpyrifos oxon (CPO) and chlorfenvinfos (CFV) pesticides. Three different biosensors were built using the wild type from **electric eel (EE**), the **genetically modified Drosophila melanogaster A**ChE B394 and B394 co-immobilized with a phosphotriesterase (PTE). Artificial Neural Networks (ANNs) were used to model the combined response of the two pesticides. Specifically two different ANNs were constructed. The first one was used to model the combined response of B394+PTE and EE biosensors and was applied when the concentration of CPO was high and the other, modelling the combined response of B394+PTE and B394 biosensors, was applied with low concentrations of CPO. In both cases, good prediction ability was obtained with correlation coefficients better than 0.986 when the obtained values were compared with those expected for a set of six external test samples not used for training.  
Keywords: 2921-88-2  
Keywords: Organophosphorus Compounds -- analysis  
Keywords: Animals  
Keywords: Enzymes, Immobilized  
Keywords: 470-90-6  
Keywords: Neural Networks (Computer)  
Keywords: Acetylcholinesterase  
Keywords: Chlorfenvinphos -- analysis  
Keywords: Chlorfenvinphos  
Keywords: EC 3.1.8.-  
Keywords: Biosensing Techniques -- methods  
Keywords: Insecticides -- analysis  
Keywords: Biosensing Techniques -- standards  
Keywords: Chlorpyrifos  
Keywords: Chlorpyrifos -- analysis  
Keywords: Organophosphorus Compounds  
Keywords: 0  
Keywords: Insecticides  
Keywords: Phosphoric Triester Hydrolases  
Keywords: EC 3.1.1.7  
Keywords: Models, Theoretical  
Date completed - 2009-09-09  
Date created - 2009-06-29  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 507-511  
ProQuest ID - 67437374  
Last updated - 2013-01-19  
British nursing index edition - Talanta, July 15, 2009, 79(2):507-511  
Corporate institution author - Istamboulie, Georges; Cortina-Puig, Montserrat; Marty, Jean-Louis; Noguer, Thierry  
DOI - MEDL-19559912; 19559912; 1873-3573 eng

597. Istamboulie, Georges; Durbiano, Romain; Fournier, Didier; Marty, Jean-Louis, and Noguer, Thierry. Biosensor-controlled degradation of chlorpyrifos and chlorfenvinfos using a phosphotriesterase-based detoxification column. 2010 Jan; 78, (1): 1-6.   
Rec #: 2080  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: This works presents the development of a detoxification system based on bacterial phosphotriesterase (PTE) for the degradation of organophosphate (OP) insecticides in water. PTE was immobilised on an activated agarose gel via covalent coupling. Two different OPs were studied, chlorpyrifos and chlorfenvinfos, due to their importance in the field of water policy. The efficiency of insecticide degradation was controlled using a highly sensitive biosensor allowing the detection of OP concentration as low as 0.004 ++g LęĆ1. Under optimum conditions, it was shown that a column incorporating 500 IU of PTE was suitable for the detoxification of solutions containing either isolated pesticides or pesticides mixtures, even at concentrations higher than authorized limits. Finally, the method was shown to be adapted to the decontamination of real samples of pesticides with concentrations up to 20 ++g LęĆ1. Decontamination/ Organophosphates/ Phosphotriesterase/ Acetylcholinesterase/ Biosensor

598. Istamboulie, Georges; Fournier, Didier; Marty, Jean-Louis, and Noguer, Thierry. Phosphotriesterase: a Complementary Tool for the Selective Detection of Two Organophosphate Insecticides: Chlorpyrifos and Chlorfenvinfos. 2009 Mar 15; 77, (5): 1627-1631.   
Rec #: 41339  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This work shows the possibility of combining the high sensitivity of genetically-modified Drosophila melanogaster acetylcholinesterase (B394) with the ability of phosphotriesterase (PTE) to hydrolyse organophosphate compounds, in the aim of developing a biosensor selective to two insecticides of interest: chlorpyrifos and chlorfenvinfos. The studies clearly demonstrate that chlorfenvinfos is a substrate that acts as competitive inhibitor of PTE, therefore preventing the efficient hydrolysis of other pesticides, including chlorpyrifos. A bi-enzymatic sensor was designed by immobilizing both B394 and PTE in a polyvinylalcohol matrix. The sensor was shown to be able to discriminate between chlorpyrifos and chlorfenvinfos inhibitions.  
Keywords: 2921-88-2  
Keywords: Organophosphorus Compounds -- analysis  
Keywords: Animals  
Keywords: 470-90-6  
Keywords: Genetic Engineering  
Keywords: Chlorfenvinphos -- analysis  
Keywords: Chlorfenvinphos  
Keywords: EC 3.1.8.-  
Keywords: Biosensing Techniques -- methods  
Keywords: Phosphoric Triester Hydrolases -- metabolism  
Keywords: Insecticides -- analysis  
Keywords: Drosophila melanogaster -- enzymology  
Keywords: Chlorpyrifos -- analysis  
Keywords: Chlorpyrifos  
Keywords: Cholinesterase Inhibitors  
Keywords: Organophosphorus Compounds  
Keywords: 0  
Keywords: Insecticides  
Keywords: Cholinesterase Inhibitors -- analysis  
Keywords: Phosphoric Triester Hydrolases  
Date completed - 2009-02-27  
Date created - 2009-01-22  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 1627-1631  
ProQuest ID - 66842906  
Last updated - 2013-01-19  
British nursing index edition - Talanta, March 15, 2009, 77(5):1627-1631  
Corporate institution author - Istamboulie, Georges; Fournier, Didier; Marty, Jean-Louis; Noguer, Thierry  
DOI - MEDL-19159775; 19159775; 1873-3573 eng

599. Istamboulie, Georges; Sikora, Tomasz; Jubete, Elena; Ochoteco, Estibalitz; Marty, Jean-Louis; Noguer, Thierry, and Istamboulie, Georges. Screen-Printed Poly(3,4-Ethylenedioxythiophene) (Pedot): a New Electrochemical Mediator for Acetylcholinesterase-Based Biosensors. 2010 Aug 15; 82, (3): 957-961.   
Rec #: 47789  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This work describes the use of a PEDOT:PSS-based conductive polymer for designing AChE-based biosensors. The transducers were obtained directly by screen-printing a PEDOT:PSS suspension on the surface of thick film carbon electrodes. The obtained working electrodes showed a high conductivity when compared with electrodes modified with conventional mediators like cobalt phthalocyanine or tetracyanoquinodimethane. The PEDOT:PSS polymer was shown to be suitable for thiocholine oxidation, allowing the measurement of AChE activity at 100 mV vs Ag/AgCl. The high conductivity of PEDOT:PSS allowed the accurate detection of the organophosphate insecticide chlorpyrifos-oxon at concentrations as low as 4 x 10 super(-9) M, corresponding to an inhibition ratio of 5%.  
Keywords: Biosensors  
Keywords: Insecticides  
Keywords: Carbon  
Keywords: Cobalt  
Keywords: Oxidation  
Keywords: Electrodes  
Keywords: Biotechnology and Bioengineering Abstracts  
Keywords: W 30955:Biosensors  
Keywords: organophosphates  
Date revised - 2010-09-01  
Language of summary - English  
Pages - 957-961  
ProQuest ID - 754896436  
SubjectsTermNotLitGenreText - Biosensors; Insecticides; Carbon; Cobalt; Oxidation; Electrodes; organophosphates  
Last updated - 2011-12-14  
British nursing index edition - Talanta [Talanta]. Vol. 82, no. 3, pp. 957-961. 15 Aug 2010.  
Corporate institution author - Istamboulie, Georges; Sikora, Tomasz; Jubete, Elena; Ochoteco, Estibalitz; Marty, Jean-Louis; Noguer, Thierry  
DOI - c47560ae-db14-42ee-a503csaobj202; 13525365; 0039-9140 English

600. Istarnboulie, G.; Andreescu, S.; Marty, J. L., and Noguer, T. Highly sensitive detection of organophosphorus insecticides using magnetic microbeads and genetically engineered acetylcholinesterase. 2007; 23, (4): 506-512.   
Rec #: 61969  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This work presents a biosensor for organophosphorus pesticides based on immobilisation of a highly sensitive genetically engineered acetylcholinesterase (B394) by affinity interactions on metal chelate-functionalised magnetic microbeads. The developed sensor has been compared with those based on the widely used Electric eel cholinesterase and a classical entrapment procedure in a polyvinylalcohol-based matrix. The use of the B394 enzyme allowed lowering both IC50 and LOD by a factor of 100 when compared with Electric eel enzyme sensor. The oriented and site-specific immobilisation combined with the high specificity of the B349 mutant allows a more sensitive detection of insecticides, concentrations as low as 1.3 x 10(-11) M (IC10) being detected for both pesticides chlorpyriphos-oxon and chlorfenvinphos. (c) 2007 Elsevier B.V. All rights reserved.  
Keywords: genetically engineered acetylcholinesterase, organophosphorus  
ISI Document Delivery No.: 233WE

601. Ito, Y. and Nakajima, T. Pparalpha- and Dehp-Induced Cancers.   
Rec #: 51129  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Di(2-ethylhexyl)phthalate (DEHP) is a widely used plasticizer and a potentially nongenotoxic carcinogen. Its mechanism had been earlier proposed based on peroxisome proliferator-activated receptor alpha (PPARalpha) because metabolites of DEHP are agonists. However, recent evidence also suggests the involvement of non-PPARalpha multiple pathway in DEHP-induced carcinogenesis. Since there are differences in the function and constitutive expression of PPARalpha among rodents and humans, species differences are also thought to exist in the carcinogenesis. However, species differences were also seen in the lipase activity involved in the first step of the DEHP metabolism, which should be considered in DEHP-induced carcinogenesis. Taken together, it is very difficult to extrapolate the results from rodents to humans in the case of DEHP carcinogenicity. However, PPARalpha-null mice or mice with human PPARalpha gene have been developed, which may lend support to make such a difficult extrapolation. Overall, further mechanical study on DEHP-induced carcinogenicity is warranted using these mice. eng

602. Ivashina, S. A. Interaction of Dursban with Soil Microorganisms. 1987; 3, 75-76(RUS).   
Rec #: 910  
Keywords: NOT PURSUING,NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

603. Iwai, C B; Noller, B N, and Iwai, C B. Ecotoxicological Assessment of Contaminated Land Using Biomonitoring Tools for Sustainable Land Use in Thailand. 2008 Sep; 14, (2-3): 143-153.   
Rec #: 49229  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: As a developing country, Thailand has a significant issue with contaminated land and its remediation. Increasing levels of industrial and urban pollution, indiscriminate use of agrichemicals and poorly regulated disposal of a wide variety of hazardous wastes are putting a significant level of pressure on Thailand's ecosystems. There is an urgent need for practical tools to assist with ecological risk assessment of contaminated land in Thailand. Reliance on soil criteria developed for overseas conditions and organisms may provide inadequate protection in Thailand where both soil and ecological receptors are, in many cases, unique to this country. Native soil organisms in Thailand may be more or less sensitive to contaminants compared to overseas test species. Therefore, standardised protocols for evaluating biodiversity and toxicity are being developed using native species with the aim of using locally generated data to better evaluate the ecological risks of contaminants in Thailand. **This paper describes a biological indicator approach for ecological risk assessment of contaminated land in Thailand.** This research found that ecotoxicological assessment provides a better basis for understanding the ecological impacts that contaminated sites cause under Thai environmental conditions. Thai soil invertebrate species were more sensitive to soil contaminants than similar species overseas. Different soil types from within Thailand also had an influence on the toxicity of contaminants to soil invertebrates. This study suggested that the collembolan, Cyphoderus sp. should be a useful alternative test species and more ecologically relevant to toxicity testing of Thai soils than the international test species, Folsomia candida. Soil biodiversity and functionality assessments also represent useful tools to assess contaminated land in Thailand. The data generated by this study will provide useful information for the pollution control authorities to assist with adequate protection and management of soil quality in Thailand.  
Keywords: Soil types  
Keywords: toxicity testing  
Keywords: Risk assessment  
Keywords: Z 05300:General  
Keywords: Bioremediation  
Keywords: Ecosystems  
Keywords: Entomology Abstracts; Toxicology Abstracts; Pollution Abstracts; Water Resources Abstracts  
Keywords: P 5000:LAND POLLUTION  
Keywords: Thailand  
Keywords: Biological diversity  
Keywords: Biodiversity  
Keywords: Invertebrates  
Keywords: Waste management  
Keywords: Assessments  
Keywords: Pollutants  
Keywords: Folsomia candida  
Keywords: biomonitoring  
Keywords: Waste disposal  
Keywords: X 24350:Industrial Chemicals  
Keywords: Pressure  
Keywords: Pollution  
Keywords: Urban areas  
Keywords: Bioindicators  
Keywords: Testing Procedures  
Keywords: soil types  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: Data processing  
Keywords: soil invertebrates  
Keywords: Wastes  
Keywords: Cyphoderus  
Keywords: Protection  
Keywords: Toxicity  
Keywords: Soil contamination  
Keywords: Land use  
Keywords: Soil pollution  
Keywords: Indigenous species  
Keywords: Risk  
Keywords: Water Pollution Effects  
Keywords: Soil Types  
Keywords: Environmental conditions  
Keywords: Contaminants  
Keywords: Toxicity testing  
Keywords: Developing countries  
Keywords: Hazardous wastes  
Keywords: Pollution control  
Date revised - 2010-02-01  
Language of summary - English  
Location - Thailand  
Pages - 143-153  
ProQuest ID - 813703635  
SubjectsTermNotLitGenreText - Risk assessment; Soil types; Data processing; Wastes; Biodiversity; Toxicity; Land use; Soil pollution; Indigenous species; biomonitoring; Pressure; Environmental conditions; Contaminants; Developing countries; Toxicity testing; Pollution; Pollution control; Bioindicators; toxicity testing; soil types; Bioremediation; Ecosystems; soil invertebrates; Biological diversity; Soil contamination; Waste management; Waste disposal; Hazardous wastes; Urban areas; Testing Procedures; Risk; Pollutants; Assessments; Water Pollution Effects; Soil Types; Protection; Invertebrates; Folsomia candida; Cyphoderus; Thailand  
Last updated - 2011-11-09  
Corporate institution author - Iwai, C B; Noller, B N  
DOI - OB-MD-0013560833; 12924619; 1323-3475 English

604. Iwakoshi, K.; Takano, I.; Kobayashi, M.; Ohtsuka, K.; Tamura, Y.; Tomizawa, S.; Kamijo, K.; Kageyama, Y., and Nagayama, T. [Transfer of Pesticide Residues to Crops Via Cardboard Boxes].   
Rec #: 77929  
Keywords: NON-ENGLISH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Cardboard boxes used to transport crops are often reused in the distribution process, and therefore transfer of pesticides between crops might occur. So, we designed model experiments to investigate whether or not transfer of pesticide residues from crops to other crops via cardboard boxes occurs. Under severe experimental conditions, 6.2% of the pesticide residues of grapefruit was found to be transferred to spinach via cardboard boxes. In the case of the mandarin orange, 0.57% was transferred. The actual amount of transferred pesticides in the market may be less than that in these model experiments, but it is clear that transfer of pesticide residues to other crops via cardboard boxes can occur. Therefore more attention must be given to reuse of cardboard boxes in the distribution process.  
MESH HEADINGS: Chlorpyrifos/analysis  
MESH HEADINGS: Citrus/chemistry  
MESH HEADINGS: Crops, Agricultural/\*chemistry  
MESH HEADINGS: \*Food Analysis  
MESH HEADINGS: Food Contamination/\*analysis  
MESH HEADINGS: \*Food Packaging  
MESH HEADINGS: Gas Chromatography-Mass Spectrometry  
MESH HEADINGS: Imidazoles/analysis  
MESH HEADINGS: Pesticide Residues/\*analysis  
MESH HEADINGS: Tandem Mass Spectrometry  
MESH HEADINGS: Thiabendazole/analysis jpn

605. ---. Transfer of the Pesticide Residues to Crops via Cardboard Boxes. 2009; 50, (5): 223-229.   
Rec #: 62009  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Cardboard boxes used to transport crops are often reused in the distribution process, and therefore transfer of pesticides between crops might occur. So, we designed model experiments to investigate whether or not transfer of pesticide residues from crops to other crops via cardboard boxes occurs. Under severe experimental conditions, 6.2% of the pesticide residues of grapefruit was found to be transferred to spinach via cardboard boxes. In the case of the mandarin orange, 0.57% was transferred. The actual amount of transferred pesticides in the market may be less than that in these model experiments, but it is clear that transfer of pesticide residues to other crops via cardboard boxes can occur. Therefore more attention must be given to reuse of cardbord boxes in the distribution process.  
Keywords: cardboard box, pesticide residue, transfer, citrus fruit, thiabendazole,  
ISI Document Delivery No.: 518CX

606. Jackson, K. S.; Inoue, K.; Davis, D. A.; Hilliard, T. S., and Burdette, J. E. Three-Dimensional Ovarian Organ Culture as a Tool to Study Normal Ovarian Surface Epithelial Wound Repair.   
Rec #: 51559  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: In Vitro. 1984 Oct;20(10):743-55 (medline /6083974)  
COMMENTS: Cites: J Natl Compr Canc Netw. 2008 Sep;6(8):795-802 (medline /18926090)  
COMMENTS: Cites: Biol Reprod. 1994 Feb;50(2):233-8 (medline /8142541)  
COMMENTS: Cites: Biomaterials. 1999 Jan;20(1):45-53 (medline /9916770)  
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COMMENTS: Cites: Cancer Res. 2006 Apr 1;66(7):3912-20 (medline /16585220)  
COMMENTS: Cites: Endocr Rev. 2007 Jun;28(4):440-61 (medline /17463396)  
COMMENTS: Cites: J Clin Oncol. 2007 Jul 10;25(20):2921-7 (medline /17617523)  
COMMENTS: Cites: Int J Cancer. 2007 Nov 15;121(10):2346-54 (medline /17657741)  
COMMENTS: Cites: J Cell Physiol. 2007 Dec;213(3):581-8 (medline /17708542)  
COMMENTS: Cites: Hum Reprod. 2008 Jan;23(1):129-38 (medline /18000169)  
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COMMENTS: Cites: Hum Reprod. 2009 Jan;24(1):132-8 (medline /18824470)  
COMMENTS: Cites: J Clin Oncol. 2008 Nov 10;26(32):5284-93 (medline /18854563)  
COMMENTS: Cites: Lab Invest. 1994 Oct;71(4):510-8 (medline /7967506)  
ABSTRACT: Ovarian cancers are primarily derived from a single layer of epithelial cells surrounding the ovary, the ovarian surface epithelium (OSE). Ovarian surface proliferation is associated with ovulation and has been suggested to play a role in ovarian surface transformation and cancer progression. Aspects of ovarian surface repair after ovulation include proliferation, migration, and surface regeneration. To study ovarian surface repair, an organ culture system was developed that supports the proliferation, encapsulation, and repair of an artificially wounded surface. Wounded mouse ovaries embedded into an alginate hydrogel matrix have normal OSE cells as demonstrated by expression of cytokeratin 8, vimentin, N-cadherin, and a lack of E-cadherin. Normal OSE cells began proliferating and migrating around wounded surfaces after 1 d of culture. Organ cultures were propagated in medium supplemented with BSA and fetal bovine serum to determine optimal growth conditions. BSA cultured organs had OSE that proliferated significantly more than controls until d 4, whereas fetal bovine serum cultured organs had significantly more surface area encapsulated by OSE. Overall, a three-dimensional ovarian organ culture supports the growth of normal OSE in response to artificial wounding and provides a novel system for investigating wound repair as it relates to the possible role of ovulation and ovarian cancer.  
MESH HEADINGS: Alginates/pharmacology  
MESH HEADINGS: Animals  
MESH HEADINGS: Cell Proliferation/drug effects  
MESH HEADINGS: Epithelial Cells/cytology/drug effects  
MESH HEADINGS: Female  
MESH HEADINGS: Glucuronic Acid/pharmacology  
MESH HEADINGS: Hemostatics/pharmacology  
MESH HEADINGS: Hexuronic Acids/pharmacology  
MESH HEADINGS: Immunohistochemistry  
MESH HEADINGS: Mice  
MESH HEADINGS: Organ Culture Techniques/\*methods  
MESH HEADINGS: Ovary/\*cytology/drug effects  
MESH HEADINGS: Wound Healing/physiology eng

607. Jackson, M. D. and Lewis, R. G. Insecticide Concentrations in Air After Application of Pest Control Strips. 1981; 27, 122-125.   
Rec #: 920  
Keywords: FATE  
Call Number: NO FATE (CPY,DZ,PPX)  
Notes: Chemical of Concern: CPY,DZ,PPX

608. Jacob, S. R.; Arunkumar, M. B.; Gopal, M.; Srivastava, C., and Sinha, S. N. An analysis of the persistence and potency of film-coated seed protectant as influenced by various storage parameters. 2009; 65, (7): 817-822.   
Rec #: 62019  
Keywords: METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: An efficient delivery system for seed-protectant chemicals is needed in light of several disadvantages of conventional seed treatment methods. This study evaluates the efficacy of film-coat application in maintaining the persistence and potency of imiclacloprid on Lycoperskon esculenturn (L.) Mill. seeds after simultaneous storage under ambient and regulated environment in paper and aluminium packages. RESULTS: High-performance liquid chromatography (HPLC) revealed 0.135 mg kg(-1) of herbage material to be the threshold value beyond which absolute control was obtained, and with film coating the latter was achieved even with half-dosage seed treatment, irrespective of the storage condition. The technique provided early protection to the crop and also nullified the deleterious effects of ambient storage on the persistence and potency of the pesticide. CONCLUSION: Film coating enabled superior pesticide dosage as well as higher biological efficacy to be achieved. Hence, in addition to being an ecofriendly alternative, the technique would be a more economically viable option for storage of treated seeds. (C) 2009 Society of Chemical Industry  
Keywords: seed dressings, film coating, persistence, potency, storage  
ISI Document Delivery No.: 465WH

609. Jain, A.; Wang, G., and Vasquez, K. M. Dna Triple Helices: Biological Consequences and Therapeutic Potential.   
Rec #: 51189  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Biochemistry. 2007 Sep 4;46(35):10222-33 (medline /17691818)  
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COMMENTS: Cites: EMBO J. 1986 May;5(5):905-11 (medline /3013623)  
COMMENTS: Cites: Science. 1987 Oct 30;238(4827):645-50 (medline /3118463)  
COMMENTS: Cites: Nucleic Acids Res. 1988 Mar 25;16(5):2077-85 (medline /3128772)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 1984 Feb;81(4):1159-63 (medline /6422467)  
COMMENTS: Cites: J Biol Chem. 1994 Mar 4;269(9):7019-23 (medline /7509814)  
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COMMENTS: Cites: Nucleic Acids Res. 1995 Jun 11;23(11):1977-83 (medline /7596826)  
COMMENTS: Cites: Genes Chromosomes Cancer. 1993 Sep;8(1):1-7 (medline /7691153)  
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COMMENTS: Cites: J Mol Biol. 1995 Apr 14;247(5):847-58 (medline /7723037)  
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COMMENTS: Cites: Cell Mol Biol Res. 1993;39(2):131-40 (medline /8220583)  
COMMENTS: Cites: Nucleic Acids Res. 1993 Dec 11;21(24):5630-5 (medline /8284208)  
COMMENTS: Cites: Nat Genet. 1993 Dec;5(4):359-62 (medline /8298643)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1993 Aug 15;90(16):7879-83 (medline /8356097)  
COMMENTS: Cites: Nucleic Acids Res. 1993 Jan 11;21(1):105-11 (medline /8382787)  
COMMENTS: Cites: Nucleic Acids Res. 1993 Jan 25;21(2):327-33 (medline /8441639)  
COMMENTS: Cites: J Mol Biol. 1993 Mar 20;230(2):379-83 (medline /8464052)  
COMMENTS: Cites: Science. 1996 Feb 9;271(5250):802-5 (medline /8628995)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1996 Apr 30;93(9):4365-9 (medline /8633072)  
COMMENTS: Cites: J Biol Chem. 1996 Jun 7;271(23):13441-7 (medline /8662935)  
COMMENTS: Cites: J Biol Chem. 1996 Jul 5;271(27):16008-19 (medline /8663263)  
COMMENTS: Cites: Biochem J. 1996 Jun 1;316 ( Pt 2):461-6 (medline /8687388)  
COMMENTS: Cites: Biochemistry. 1996 Aug 20;35(33):10712-9 (medline /8718860)  
COMMENTS: Cites: J Biol Chem. 1996 Oct 25;271(43):26543-6 (medline /8900124)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1997 Jan 7;94(1):79-84 (medline /8990164)  
COMMENTS: Cites: Nucleic Acids Res. 1997 May 15;25(10):1991-8 (medline /9115367)  
COMMENTS: Cites: Gene. 1997 Apr 29;190(1):17-26 (medline /9185844)  
COMMENTS: Cites: Nucleic Acids Res. 1997 Aug 15;25(16):3269-74 (medline /9241240)  
COMMENTS: Cites: Hum Mol Genet. 1997 Sep;6(9):1473-81 (medline /9285784)  
COMMENTS: Cites: Nucleic Acids Res. 1997 Oct 1;25(19):3787-94 (medline /9380499)  
COMMENTS: Cites: Oncogene. 1997 Nov 6;15(19):2369-77 (medline /9393881)  
ABSTRACT: DNA structure is a critical element in determining its function. The DNA molecule is capable of adopting a variety of non-canonical structures, including three-stranded (i.e. triplex) structures, which will be the focus of this review. The ability to selectively modulate the activity of genes is a long-standing goal in molecular medicine. DNA triplex structures, either intermolecular triplexes formed by binding of an exogenously applied oligonucleotide to a target duplex sequence, or naturally occurring intramolecular triplexes (H-DNA) formed at endogenous mirror repeat sequences, present exploitable features that permit site-specific alteration of the genome. These structures can induce transcriptional repression and site-specific mutagenesis or recombination. Triplex-forming oligonucleotides (TFOs) can bind to duplex DNA in a sequence-specific fashion with high affinity, and can be used to direct DNA-modifying agents to selected sequences. H-DNA plays important roles in vivo and is inherently mutagenic and recombinogenic, such that elements of the H-DNA structure may be pharmacologically exploitable. In this review we discuss the biological consequences and therapeutic potential of triple helical DNA structures. We anticipate that the information provided will stimulate further investigations aimed toward improving DNA triplex-related gene targeting strategies for biotechnological and potential clinical applications.  
MESH HEADINGS: Animals  
MESH HEADINGS: Antineoplastic Agents/metabolism/pharmacology  
MESH HEADINGS: Base Sequence  
MESH HEADINGS: DNA/chemistry/\*genetics/\*metabolism/\*therapeutic use  
MESH HEADINGS: Genome/genetics  
MESH HEADINGS: Humans  
MESH HEADINGS: Nucleic Acid Conformation  
MESH HEADINGS: Oligonucleotides/metabolism  
MESH HEADINGS: Transcription, Genetic eng

610. Jaipieam, S.; Visuthismajarn, P.; Siriwong, W.; Borjan, M., and Robson, M. G. Inhalation Exposure of Organophosphate Pesticides by Vegetable Growers in the Bang-Rieng Subdistrict in Thailand.   
Rec #: 77759  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Int J Occup Environ Health. 2004 Jul-Sep;10(3):289-95 (medline /15473083)  
ABSTRACT: This study investigated inhalation exposure to organophosphate pesticides (OPPs) and evaluated the associated health risks to vegetable growers living in the Bang-Rieng agricultural community. Air samples were collected by using personal sampling pumps with sorbent tubes placed in the vegetable growers' breathing zone. Samples were collected during both wet and dry seasons. Residues of organophosphate pesticides, that is, chlorpyrifos, dicrotofos, and profenofos, were analyzed from 33 vegetable growers and 17 reference subjects. Results showed that median concentrations of OPPs in air in farm areas were in the range of 0.022-0.056 mg/m(3) and air in nonfarm areas in the range of < 0.0016- < 0.005 mg/m(3). The concentration of the three pesticides in the vegetable growers was significantly higher than that of the references during both seasons. The results also indicate that the vegetable growers may be at risk for acute adverse effects via the inhalation of chlorpyrifos and dicrotofos during pesticide application, mixing, loading, and spraying. It is suggested that authorities and the community should implement appropriate strategies concerning risk reduction and risk management.  
MESH HEADINGS: Adult  
MESH HEADINGS: Agriculture  
MESH HEADINGS: Air  
MESH HEADINGS: Air Pollutants, Occupational/analysis/toxicity  
MESH HEADINGS: Chlorpyrifos/analysis/toxicity  
MESH HEADINGS: Cross-Sectional Studies  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: Inhalation Exposure/\*statistics &amp  
MESH HEADINGS: numerical data  
MESH HEADINGS: Male  
MESH HEADINGS: Occupational Exposure/\*statistics &amp  
MESH HEADINGS: numerical data  
MESH HEADINGS: Organophosphates/\*analysis/toxicity  
MESH HEADINGS: Organophosphorus Compounds/analysis/toxicity  
MESH HEADINGS: Organothiophosphates/analysis/toxicity  
MESH HEADINGS: Pesticides/\*analysis/toxicity  
MESH HEADINGS: Risk  
MESH HEADINGS: Vegetables eng

611. Jalalizand, Ali Reza; Fakhari, Hajar; Modaresi, Mehrdad; Shayeghi, Mansoureh, and Abtahi, Mohammad. The Amount of Dursban Pesticide Residues in Isfahan Sugar Beet: 2011 International Conference on Environment Science and Biotechnology (ICESB 2011). 2011; 8, (0): 235-239.   
Rec #: 1410  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Communities are concerned with the role of durable pesticides and their carry over effect in food chains. Accordingly, the recognition and measurement of chemical compounds in food, environment and living bodies is necessary. In this study, which dated from October 2010 to March 2011, dursban toxin residues in sugar beets were investigated in the cities of Isfahan province including: Isfahan, Borkhar, Semirom, Golpayegan and Fereidan using high performance thin layer chromatography (HPTLC). Maximum amount of dursban belonged to Borkhar region and the minimum amount was attributed to two regions of Isfahan and Golpayegan. The toxin residues in sugar beets in all investigated areas were higher than the maximum allowable residues of any pesticide MRL (0.01 mg in kg sugar). Residual insecticides/ Thin layer chromatography HPTLC method/ Sugar beet/ Dursban

612. Jamil, K.; Das, G. P.; Shaik, A. P.; Dharmi, S. S., and Murthy, S. Epidemiological studies of pesticide-exposed individuals and their clinical implications. 2007; 92, (3): 340-345.   
Rec #: 62049  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Epidemiological studies were conducted in pesticide-exposed agricultural workers along with an equal number of age- and sex-matched controls. All the 200 exposed volunteers were suffering from fever, nausea, headache and other abnormal symptoms and visited the hospital for general health check-up. These cases were taken up for more detailed studies. Five (2.5%) showed decrease in RBC, haemoglobin, and increase in WBC with a large number of immature cells. These volunteers were further diagnosed as Philadelphia-negative Chronic Myeloid Leukaemia (CML) cases based on clinical and pathological examinations. In similar environs, about 100 children (aged between 1 and 17 years) were studied for the above parameters. About 3% of the exposed children showed signs of mental retardation and delayed milestones; these were compared with healthy children (age- and sex-matched) from pristine environment. It is therefore concluded that clinical evaluations supported by occupational epidemiology could determine CML in exposed individuals (adults).  
Keywords: chronic myeloid leukaemia, hematological and neurological parameters,  
ISI Document Delivery No.: 139JZ

613. Jan, S.; Waqar, F.; Ali, S. W.; Malik, M. A.; Mohammad, B.; Khan, M., and Yawar, W. SYNTHESIS AND APPLICATION OF A BI-FUNCTIONAL SORBENT DERIVED FROM ETHYLACRYLATE-DIVINYLBENZENE COPOLYMER FOR THE SOLID-PHASE EXTRACTION OF PESTICIDES FROM WATER. 2012; 35, (5): 700-711.   
Rec #: 62059  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A bi-functional sorbent derived from ethylacrylate-divinylbenzene copolymer was synthesized in beaded form by a suspension polymerization technique. Unlike conventional alkaline hydrolysis of the copolymer, a novel hydrolysis technique was used in this study and the copolymer was treated with concentrated sulfuric acid. More than 70% of the ester groups were converted into -COOH groups and about 60% of the aromatic rings in the copolymer were introduced by -SO(3)H groups. The synthesized copolymer was used as a solid-phase material for extraction of pesticides from water samples. Recoveries of five pesticides, namely, chlorfenvinfos, endosulfan sulfate, chlorpyrifos, fenvalerate, and diuron, were compared to those using commercially available silica-based C-18 sorbent. The recoveries obtained with the synthesized sorbent were low compared to commercial C18 cartridge. However, the synthesized polymer is cost effective and can be reused. Three extraction cycles did not affect the % recoveries of the studied pesticides. The % recoveries, obtained for chlorfenvinphos, diuron, endosulfan sulfate, chlropyrifos, and fenvelerate, ranged from 28 to 62%; linear range, 0.035 to 22 mg L(-1); LOD, 37 to 118 mu g L(-1); and LOQ, 123 to 395 mu g L(-1).  
Keywords: chlorfenvinfos, chlorpyrifos, diuron, endosulfan sulphate,  
ISI Document Delivery No.: 916AX

614. Janis, C.; Bischof, D.; Gourgues, G.; Frey, J.; Blanchard, A., and Sirand-Pugnet, P. Unmarked Insertional Mutagenesis in the Bovine Pathogen Mycoplasma Mycoides Subsp. Mycoides Sc: Characterization of a Lppq Mutant.   
Rec #: 51149  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Mycoplasma mycoides subspecies mycoides small colony (SC) is the aetiologic agent of contagious bovine pleuropneumonia (CBPP), a respiratory disease causing important losses in cattle production. The publication of the genome sequence of M. mycoides subsp. mycoides SC should facilitate the identification of putative virulence factors. However, real progress in the study of molecular mechanisms of pathogenicity also requires efficient molecular tools for gene inactivation. In the present study, we have developed a transposon-based approach for the random mutagenesis of M. mycoides subsp. mycoides SC. A PCR-based screening assay enabled the characterization of several mutants with knockouts of genes potentially involved in pathogenicity. The initial transposon was further improved by combining it with the transposon gammadelta TnpR/res recombination system to allow the production of unmarked mutations. Using this approach, we isolated a mutant free of antibiotic-resistance genes, in which the gene encoding the main lipoprotein LppQ was disrupted. The mutant was found to express only residual amounts of the truncated N-terminal end of LppQ. This approach opens the way to study virulence factors and pathogen-host interactions of M. mycoides subsp. mycoides SC and to develop new, genetically defined vaccine strains.  
MESH HEADINGS: Animals  
MESH HEADINGS: Bacterial Proteins/genetics/metabolism  
MESH HEADINGS: Cattle  
MESH HEADINGS: Cattle Diseases/microbiology  
MESH HEADINGS: DNA Transposable Elements  
MESH HEADINGS: Female  
MESH HEADINGS: Genetic Vectors/genetics  
MESH HEADINGS: Lipoproteins/\*genetics/metabolism  
MESH HEADINGS: Male  
MESH HEADINGS: Mice  
MESH HEADINGS: \*Mutagenesis, Insertional  
MESH HEADINGS: \*Mutation  
MESH HEADINGS: Mycoplasma mycoides/\*genetics/metabolism  
MESH HEADINGS: Pleuropneumonia, Contagious/microbiology  
MESH HEADINGS: Polymerase Chain Reaction eng

615. Jardim, A. N. O. and Caldas, E. D. Brazilian monitoring programs for pesticide residues in food - Results from 2001 to 2010. 2012; 25, (2): 607-616.   
Rec #: 62099  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A total of 13,556 samples of 22 fruit and vegetable crops, rice, and beans were analyzed within two Brazilian pesticide residue monitoring programs between 2001 and 2010. Pesticide residues were found in 48.3% of the samples, and 13.2% presented some irregularity, mostly non-authorized active ingredient use. Less than 3% of the samples had residue levels above the MRL Apple, papaya, sweet pepper and strawberry were the crops with the higher percentages of positive samples (about 80%). Dithiocarbamates and organophosphorus compounds were found in 41.6% and 30.8% of the samples, respectively. Carbendazim and chlorpyrifos were the pesticides most found (26.7 and 16.1% of positive samples, respectively). Almost half of the samples analyzed had multiple residues (up to 10 residues), with multiple residues most common in samples of apple, sweet pepper and tomato. About 8% of positive samples contained up to four residues of the same chemical class, mainly organophosphorus compounds (18.6%, mostly in apple) and triazoles (16.1%, mostly in papaya and grape). In general, the scenario of pesticide residues in foods investigated within the Brazilian governmental monitoring programs in the last decade is similar to what has been found in other countries. However, the use of non-authorized active ingredients is a common practice among the farmers in the country, a problem that the government authorities have been trying to solve. A preliminary cumulative acute exposure assessment for organophosphates and carbamates in apple has shown that the intake by individuals >= 10 years old accounts for 100% of the acephate ARfD, indicating a need to further investigate the exposure through the consumptions of other crops and group of pesticides, mainly for children. (C) 2011 Elsevier Ltd. All rights reserved.  
Keywords: Pesticide residues, Food, Brazil  
ISI Document Delivery No.: 898JZ

616. Jarvi, K. J. and Echtenkamp, G. W. Black Cutworm Control in Field Corn at Planting Time, 1992. 1993; 18, 201-202 (20F).   
Rec #: 170  
Keywords: BENEFICIAL EFFECT  
Call Number: NO BENEFICIAL EFFECT (CPY,PMR)  
Notes: Chemical of Concern: CPY,PMR,TFT

617. ---. Claybacked Cutworm Control in Field Corn, 1991. SOIL; 1992; 17, 196-197 (34F).   
Rec #: 160  
Keywords: BENEFICIAL EFFECT  
Call Number: NO BENEFICIAL EFFECT (CEX,CPY,PMR)  
Notes: Chemical of Concern: CEX,CPY,PMR,TFT

618. Jarvinen, A. W. and Tanner, D. K. Toxicity/Time Relationships for Fathead Minnows (Pimephales promelas) Exposed to Pesticides. 1986; 1462, 224-226(ABS).   
Rec #: 930  
Keywords: ABSTRACT  
Call Number: NO ABSTRACT (CPY)  
Notes: Chemical of Concern: CPY

619. Jastrzebska, E. The Effect of Chlorpyrifos and Teflubenzuron on the Enzymatic Activity of Soil. 2011; 20, (4): 903-910.   
Rec #: 62109  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The aim of our study was to determine changes in soil quality, evaluated throughout the analysis of selected soil enzyme activities (dehydrogenases, urease, alkaline phosphatase, acid phosphatase, and catalase) after the application of the insecticides chlorpyrifos and teflubenzuron. Chlorpyrifos is a phosphoorganic insecticide and a cholinesterase inhibitor. Teflubenzuron is a benzoyl urea derivative that inhibits chitin synthesis. The pot experiment involved the two types of insecticides at different doses and sampling of two types of soil. The results of the experiment indicate that both insecticides modified the biochemical parameters of soil. Dehydrogenases proved to be most sensitive to the presence of xenobiotics in soil. Their activity decreased at increasing levels of soil contamination for each of the insecticides. In comparison with teflubenzuron, chlorpyrifos reduced the activity of dehydrogenases, urease, and alkaline phosphatase to a greater extent.  
Keywords: activity of soil enzymes, insecticides, soil contamination  
ISI Document Delivery No.: 802GL

620. Jayawardane, P.; Senanayake, N.; Buckley, N. A., and Dawson, A. H. Electrophysiological correlates of respiratory failure in acute organophosphate poisoning: Evidence for differential roles of muscarinic and nicotinic stimulation. 2012; 50, (4): 250-253.   
Rec #: 62119  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background. Respiratory failure in acute organophosphate (OP) poisoning can occur early and also relatively late in the clinical course, and the pathophysiology of respiratory failure at these different phases may have important clinical implications. Objective. To compare the electrophysiological findings in patients with early and late respiratory failure following acute OP poisoning. Methods. A prospective observational case series of consenting symptomatic patients with acute OP poisoning were assessed with daily physical examinations and repetitive nerve stimulation (RNS) studies. RNS was done on right and left median and ulnar nerves at 1, 3, 10, 15, 20, and 30 Hz. Outcomes such as need for ventilation and development of intermediate syndrome (IMS) were noted. Early respiratory failure was defined as occurring within 24 hours of ingestion. Results. Seventy-eight patients were recruited for the clinical and electrophysiological study and of those 59 (75.6%) patients had ingested chlorpyrifos. Seven patients developed respiratory failure within 24 hours of ingestion with overt muscarinic signs. They had no electrophysiological abnormalities at median and ulnar nerves before intubation. Three of them later developed "forme fruste" IMS. Five other patients developed late respiratory failure after 24 hours of ingestion, and all of them showed progressive RNS changes indicating severe IMS prior to intubation. Conclusion. The normal RNS in all patients developing early respiratory failure suggests that it is due to a central nervous system (CNS) and muscarinic effect. This emphasizes the need for early rapid atropinisation as a priority, combating the nicotinic effects being less urgent. This is in contrast with the late respiratory failure, which has been shown to be associated with neuromuscular dysfunction. Further studies are needed to quantify CNS and muscarinic dysfunction to assist in the development of better treatments for the severe and early OP poisoning.  
Keywords: Neurophysiology, Ventilation, Organophosphorous compounds  
ISI Document Delivery No.: 915KT

621. Jayawardane, Pradeepa; Dawson, Andrew H; Weerasinghe, Vajira; Karalliedde, Lakshman; Buckley, Nicholas a; Senanayake, Nimal; Bateman, Nick, and Jayawardane, Pradeepa. The Spectrum of Intermediate Syndrome Following Acute Organophosphate Poisoning: a Prospective Cohort Study From Sri Lanka. 2008 Jul; 5, (7): 1-e147.   
Rec #: 45799  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background Intermediate syndrome (IMS) is a major cause of death from respiratory failure following acute organophosphate poisoning. The objective of this study was to determine repetitive nerve stimulation (RNS) predictors of IMS that would assist in patient management and clinical research. Methods and Findings Seventy-eight consenting symptomatic patients with organophosphate poisoning were assessed prospectively with daily physical examination and RNS. RNS was done on the right and left median and ulnar nerves at 1, 3, 10, 15, 20, and 30 Hz. The study was conducted as a prospective observational cohort study in the Central Province, Sri Lanka. IMS was diagnosed in ten out of 78 patients using a priori clinical diagnostic criteria, and five of them developed respiratory failure. All ten patients showed progressive RNS changes correlating with the severity of IMS. A decrement-increment was observed at intermediate and high frequencies preceding the onset of clinical signs of IMS. As the patient developed clinical signs of IMS, decrement-increment was progressively noted at low and intermediate frequencies and a combination of decrement-increment and repetitive fade or severe decrement was noted at high frequencies. Severe decrement preceded respiratory failure in four patients. Thirty patients developed forme fruste IMS with less severe weakness not progressing to respiratory failure whose RNS was characterized by decrement-increment or a combination of decrement-increment and repetitive fade but never severe decrements. Conclusions Characteristic changes in RNS, preceding the development of IMS, help to identify a subgroup of patients at high risk of developing respiratory failure. The forme fruste IMS with the characteristic early changes on RNS indicates that IMS is a spectrum disorder. RNS changes are objective and precede the diagnosis and complications of IMS. Thus they may be useful in clinical management and research. Jayawardane and colleagues evaluate a cohort of 78 patients with organophosphate poisoning from Sri Lanka, and identify changes in repetitive nerve stimulation that precede, and may help predict, the onset of intermediate syndrome. Editors' Summary Background. Each year, many thousands of deaths around the world are caused by pesticide poisoning. Often, the pesticide involved is an organophosphate. These highly toxic compounds, which are widely used in agriculture, particularly in developing countries, disrupt the transmission of messages from the brain to the body in insect pests and in people. The brain controls body movements by sending electrical impulses along nerve cells (neurons). At the end of the neurons, these impulses are converted into chemical messengers (neurotransmitters), which cross the gap between neurons and muscle cells (the neuromuscular junction) and bind to proteins on the surface of the muscle cells to pass on the brain's message. One important neurotransmitter is acetylcholine. This is used in the part of the nervous system that controls breathing and other automatic vital functions, at neuromuscular junctions, and in parts of the central nervous system. Normally, acetylcholine is quickly broken down after it has delivered its message, but organophosphates disrupt this process and, consequently, affect nerve transmission to muscles. Organophosphate poisoning causes three syndromes. The cholinergic syndrome, which can be fatal, happens soon after organophosphates are swallowed, inhaled, or absorbed through the skin. The intermediate syndrome (IMS), which results in muscle weakness in the limbs, neck, and throat, develops in some patients 24-96 hours after poisoning. Finally, long-term nerve damage sometimes develops 2-3 weeks after poisoning. Why Was This Study Done? Although IMS is a major contributor to the illness caused by organophosphate poisoning and can result in respiratory (breathing) failure and death, the functional changes that are associated with IMS (its pathophysiology) are poorly understood. With a better understanding of these changes, it might be possible to find ways to prevent or treat IMS or to predict which patients with IMS are likely to develop respiratory failure. In this study, the researchers make a set of measurements of nerve transmission in a large group of organophosphate-poisoned patients in Sri Lanka to discover more about the pathophysiology of IMS. What Did the Researchers Do and Find? Seventy-eight patients with organophosphate poisoning were assessed several times a day for clinical signs of IMS. In addition, nerve transmission was measured daily in the patients using an electrophysiological technique called repetitive nerve stimulation (RNS). For this, a series of small electrical shocks was applied to the certain nerves in the arm and the responses in the muscles that these nerves control were recorded. In the ten study participants who developed IMS, the researchers observed several characteristic changes in their muscle responses to RNS, some of which were seen before the clinical signs of IMS. Other changes in muscle responses to RNS correlated with the development of clear IMS. Most importantly, in the four patients with IMS who developed respiratory failure, an RNS response pattern called severe decrement (a reduced response to the first electrical shock and then no response to the subsequent shocks) was seen before respiratory failure. Finally, there were other characteristic changes in muscle responses to RNS in 30 patients with muscle weakness not severe enough for a diagnosis of IMS (incomplete or 'forme fruste' IMS). What Do These Findings Mean? These findings indicate that changes in nerve transmission that can be objectively monitored using RNS evolve during the development of IMS. In other words, IMS is a 'spectrum' disorder in which the weakness and neuromuscular junction problems caused by organophosphate poisoning gradually progress over time through a series of electrophysiological changes that will sometimes resolve quickly and only in the most severe cases will result in respiratory failure. These findings need to be validated in further studies, particularly since most of the patients in this study had been exposed to a single organophosphate (chlorpyrifos). However, they suggest that the RNS tests might be useful in the clinical management of patients with organophosphate poisoning, particularly since such tests could provide an early warning of impending respiratory failure. Additional Information. Please access these Web sites via the online version of this summary at http://dx.doi.org/10.1371/journal.pmed.0050147 . This study is further discussed in a PLoS Medicine Perspective by Cynthia Aaron The US Environmental Protection Agency provides information about all aspects of pesticides (in English and Spanish) Toxtown , an interactive site from the US National Library of Science, provides information on environmental health concerns including exposure to pesticides (in English and Spanish) The US National Pesticide Information Center provides objective, science-based information about pesticides MedlinePlus also provides links to information on pesticides (in English and Spanish) The International Programme on Chemical Safety has information on poisoning prevention and management ; its INTOX databank has a description of the cholinergic syndrome WikiTox is a clinical toxicology resource  
Keywords: Agriculture  
Keywords: Central nervous system  
Keywords: Pharynx  
Keywords: Organophosphates  
Keywords: Respiration  
Keywords: Environmental health  
Keywords: Arm  
Keywords: insects  
Keywords: Sri Lanka  
Keywords: Nerves  
Keywords: pests  
Keywords: Neurotransmission  
Keywords: Risk factors  
Keywords: H 14000:Toxicology  
Keywords: prevention  
Keywords: Pests  
Keywords: Neurotransmitters  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology  
Keywords: Mortality  
Keywords: Skin  
Keywords: Brain  
Keywords: agriculture  
Keywords: Muscles  
Keywords: Poisoning  
Keywords: organophosphates  
Keywords: Neck  
Keywords: Chlorpyrifos  
Keywords: EPA  
Keywords: Limbs  
Keywords: Shock  
Keywords: Neurons  
Keywords: Pesticides  
Keywords: Neuromuscular junctions  
Keywords: Information centers  
Keywords: Proteins  
Keywords: Acetylcholine  
Keywords: Health & Safety Science Abstracts; Toxicology Abstracts  
Keywords: Developing countries  
Date revised - 2008-12-01  
Language of summary - English  
Location - Sri Lanka  
Pages - e147  
ProQuest ID - 19384965  
SubjectsTermNotLitGenreText - Sri Lanka; Organophosphates; Poisoning; Muscles; Pesticides; Mortality; Brain; prevention; EPA; insects; Central nervous system; Chlorpyrifos; Developing countries; agriculture; Environmental health; pests; Proteins; Toxicology; Skin; organophosphates; Neurotransmission; Respiration; Neuromuscular junctions; Shock; Neurons; Nerves; Neurotransmitters; Acetylcholine; Information centers; Pests; Arm; Agriculture; Pharynx; Limbs; Risk factors; Neck  
Last updated - 2011-12-14  
British nursing index edition - PLOS Medicine [PLOS Med.]. Vol. 5, no. 7, e147 p. Jul 2008.  
Corporate institution author - Jayawardane, Pradeepa; Dawson, Andrew H; Weerasinghe, Vajira; Karalliedde, Lakshman; Buckley, Nicholas A; Senanayake, Nimal; Bateman, Nick  
DOI - MD-0008412870; 8519480; 1549-1277; 1549-1676 English

622. Jensen, B H; Petersen, a, and Christensen, T. Probabilistic Assessment of the Cumulative Dietary Acute Exposure of the Population of Denmark to Organophosphorus and Carbamate Pesticides. 2009 Jul; 26, (7): 1038-1048.   
Rec #: 44729  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorus and carbamate pesticides are acetylcholinesterase-inhibiting pesticides and as such have a common mode of action. We assessed the cumulative acute exposure of the population of Denmark to 25 organophosphorus and carbamate pesticide residues from the consumption of fruit, vegetables and cereals. The probabilistic approach was used in the assessments. Residue data obtained from the Danish monitoring programme carried out in the period 2004-2007, which included 6704 samples of fruit, vegetables and cereals, were used in the calculations. Food consumption data were obtained from the nationwide dietary survey conducted in 2000-2002. Contributions from 43 commodities were included in the calculations. We used the relative potency factor (RPF) approach to normalize the toxicity of the various organophosphorus and carbamate pesticides to the two index compounds chlorpyriphos and methamidophos. RPF values derived from the literature were used in the calculations. We calculated the cumulative acute exposure to 1.8% and 0.8% of the acute reference dose (ARfD) of 100 microg kg(-1) body weight (bw) day(-1) of chlorpyrifos as an index compound at the 99.9th percentile (P99.5) for children and adults, respectively. When we used methamidophos as the index compound, the cumulative acute intakes were calculated to 31.3% and 13.8% of the ARfD of 3 microg kg(-1) bw day(-1) at P99.9 for children and adults, respectively. With both index compounds, the greatest contributor to the cumulative acute exposure was apple. The results show that there is no cumulative acute risk for Danish consumers to acetylcholinesterase-inhibiting pesticides.  
Keywords: Cereals -- chemistry  
Keywords: Young Adult  
Keywords: Organophosphorus Compounds -- analysis  
Keywords: Humans  
Keywords: Aged  
Keywords: Child  
Keywords: Models, Statistical  
Keywords: Organophosphorus Compounds  
Keywords: Vegetables -- chemistry  
Keywords: Maximum Allowable Concentration  
Keywords: Adult  
Keywords: Denmark  
Keywords: Adolescent  
Keywords: Time Factors  
Keywords: Male  
Keywords: Food Contamination -- analysis  
Keywords: Diet Surveys  
Keywords: Pesticide Residues  
Keywords: Child, Preschool  
Keywords: Carbamates -- analysis  
Keywords: 0  
Keywords: Carbamates  
Keywords: Pesticide Residues -- analysis  
Keywords: Middle Aged  
Keywords: Diet  
Keywords: Fruit -- chemistry  
Keywords: Female  
Date completed - 2010-05-12  
Date created - 2009-08-14  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 1038-1048  
ProQuest ID - 733328788  
Last updated - 2013-01-19  
British nursing index edition - Food additives & contaminants. Part A, Chemistry, analysis, control, exposure & risk assessment, July 2009, 26(7):1038-1048  
Corporate institution author - Jensen, B H; Petersen, A; Christensen, T  
DOI - MEDL-19680979; 19680979; 1944-0057 eng

623. Jessup, D. A.; Johnson, C. K.; Estes, J.; Carlson-Bremer, D.; Jarman, W. M.; Reese, S.; Dodd, E.; Tinker, M. T., and Ziccardi, M. H. PERSISTENT ORGANIC POLLUTANTS IN THE BLOOD OF FREE-RANGING SEA OTTERS (ENHYDRA LUTRIS SSP.) IN ALASKA AND CALIFORNIA. 2010; 46, (4): 1214-1233.   
Rec #: 62149  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: As part of tagging and ecologic research efforts in 1997 and 1998, apparently healthy sea otters of four age-sex classes in six locations in Alaska and three in California were sampled for persistent organic pollutants (POPs) and other chemicals of ecologic or environmental concern (COECs). Published techniques for the detection of POPs (specifically Sigma polychlorinated biphenyls [PCBs], Sigma DDTs, Sigma hexachlorocyclohexanes [HCHs], Sigma polycyclic aromatic hydrocarbons [PAHs], Sigma chlordanes [CHLs], hexachlorobenzene [HCB], dieldrin, and mirex) in the tissue of dead otters were modified for use with serum from live sea otters. Toxic equivalencies (TEQs) were calculated for POPs with proven bioactivity. Strong location effects were seen for most POPs and COECs; sea otters in California generally showed higher mean concentrations than those in Alaska. Differences in contaminant concentrations were detected among age and sex classes, with high levels frequently, observed in subadults. Very high levels of Sigma DDT were detected in male sea otters in Elkhorn Slough, California, where strong freshwater outflow from agricultural areas occurs seasonally. All contaminants except mirex differed among Alaskan locations; only Sigma DDT, HCB, and chlorpyrifos differed within California. High levels of Sigma PCB (particularly larger, more persistent congeners) were detected at two locations in Alaska where associations between elevated PCBs and military activity have been established, while higher PCB levels were found at all three locations in California where no point source of PCBs has been identified. Although POP and COEC concentrations in blood may be less likely to reflect total body burden, concentrations in blood of healthy animals may be more biologically relevant and less influenced by state of nutrition or perimortem factors than other tissues routinely sampled.  
Keywords: Blood, DDT, Enhydra lutris, PCB, persistent organic pollutants, sea  
ISI Document Delivery No.: 676FP

624. Jett, D. A. Cholinesterase research at the National Institutes of Health, USA. 2008; 175, (1-3): 22-25.   
Rec #: 62159  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Presented below is a brief description of research supported by the National Institutes of Health (NIH) on cholinesterases that was discussed at the IXth International Meeting on Cholinesterases in Suzhou, China. It is a partial description of the research conducted by researchers at academic and other institutions Supported by the NIH, and by some of the researchers in NIH intramural laboratories. It does not represent a comprehensive survey of all research Supported by the NIH related to cholinesterases, but rather a brief discussion of some of the Studies discussed at the IXth International Meeting on Cholinesterases. The article describes exciting basic, translational and clinical research on therapies for neurological and other diseases. In addition, cholinesterases that may treat substance abuse are discussed, and pesticide and chemical warfare agents that inhibit cholinesterases are highlighted as part of the NIH portfolio. It is the intent of this article to share with the international community some of the research being supported by the NIH on cholinesterases that complements many of the studies being conducted elsewhere. The information was obtained only from published articles or from abstracts available to the public within the NIH CRISP database (http://crisp.cit.nih.gov/). Published by Elsevier Ireland Ltd  
Keywords: Cholinesterases, National Institutes of Health, Description of research  
ISI Document Delivery No.: 361EO

625. Ji, J.; Xiao, B.; Li, Y.; Yu, W. L., and Liu, F. Toxicity Assessment of Two Different Formulations of Chlorpyrifos to Four Environmental Organisms. Key Laboratory of Pesticide Toxicology & Application Technique, Shandong Agricultural University, Tai'an 271018, China,//: 2010; 29, (9): 1681-1686(CHI) (ENG ABS).   
Rec #: 2530  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

626. Ji, W.; Panus, D.; Palumbo, R. N.; Tang, R., and Wang, C. Poly(2-Aminoethyl Methacrylate) With Well-Defined Chain Length for Dna Vaccine Delivery to Dendritic Cells.   
Rec #: 49919  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Gene Ther. 1999 Apr;6(4):643-50 (medline /10476224)  
COMMENTS: Cites: Mol Ther. 2009 Mar;17(3):480-90 (medline /19142180)  
COMMENTS: Cites: J Control Release. 2001 Nov 9;77(1-2):131-8 (medline /11689266)  
COMMENTS: Cites: Chem Rev. 2001 Sep;101(9):2921-90 (medline /11749397)  
COMMENTS: Cites: Biotechnol Appl Biochem. 2003 Jun;37(Pt 3):267-71 (medline /12597775)  
COMMENTS: Cites: Mol Ther. 2003 Feb;7(2):254-61 (medline /12597914)  
COMMENTS: Cites: Immunol Lett. 2003 Dec 15;90(2-3):67-70 (medline /14687705)  
COMMENTS: Cites: Biomacromolecules. 2004 Jan-Feb;5(1):32-9 (medline /14715005)  
COMMENTS: Cites: Pharm Res. 2004 Jan;21(1):160-9 (medline /14984271)  
COMMENTS: Cites: Biomacromolecules. 2004 Mar-Apr;5(2):379-88 (medline /15002997)  
COMMENTS: Cites: Mol Ther. 2004 Mar;9(3):443-51 (medline /15006612)  
COMMENTS: Cites: J Invest Dermatol. 2005 Jan;124(1):160-9 (medline /15654970)  
COMMENTS: Cites: J Am Chem Soc. 2005 Mar 30;127(12):4128-9 (medline /15783168)  
COMMENTS: Cites: J Gene Med. 2005 Oct;7(10):1287-98 (medline /15906395)  
COMMENTS: Cites: Biomacromolecules. 2009 May 11;10(5):1244-52 (medline /19331402)  
COMMENTS: Cites: J Immunol Methods. 1983 Dec 16;65(1-2):55-63 (medline /6606682)  
COMMENTS: Cites: Nat Med. 1999 Apr;5(4):387-91 (medline /10202926)  
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COMMENTS: Cites: Immunol Rev. 2005 Oct;207:166-83 (medline /16181335)  
COMMENTS: Cites: Biomaterials. 2007 Jun;28(18):2885-98 (medline /17367850)  
COMMENTS: Cites: Eur J Immunol. 2008 May;38(5):1404-13 (medline /18389478)  
COMMENTS: Cites: Pharm Res. 2008 Sep;25(9):2083-93 (medline /18452054)  
COMMENTS: Cites: J Control Release. 2010 Mar 3;142(2):229-37 (medline /19874858)  
COMMENTS: Cites: Biomacromolecules. 2010 Dec 13;11(12):3432-9 (medline /21067136)  
COMMENTS: Cites: Int Rev Immunol. 2006 May-Aug;25(3-4):99-123 (medline /16818367)  
COMMENTS: Cites: Chem Rev. 2009 Feb;109(2):259-302 (medline /19053809)  
COMMENTS: Cites: Cell. 2001 Aug 10;106(3):255-8 (medline /11509172)  
ABSTRACT: Poly(2-aminoethyl methacrylate) (PAEM) homopolymers with defined chain length and narrow molecular weight distribution were synthesized using atom transfer radical polymerization (ATRP), and a comprehensive study was conducted to evaluate the colloidal properties of PAEM/plasmid DNA polyplexes, the uptake and subcellular trafficking of polyplexes in antigen-presenting dendritic cells (DCs), and the biological performance of PAEM as a potential DNA vaccine carrier. PAEM of different chain length (45, 75, and 150 repeating units) showed varying strength in condensing plasmid DNA into narrowly dispersed nanoparticles with very low cytotoxicity. Longer polymer chain length resulted in higher levels of overall cellular uptake and nuclear uptake of plasmid DNA, but shorter polymer chains favored intracellular and intranuclear release of free plasmid from the polyplexes. Despite its simple chemical structure, PAEM transfected DCs very efficiently in vitro in media with or without serum and led to phenotypic maturation of DCs. When a model antigen-encoding ovalbumin plasmid was used, transfected DCs stimulated the activation of na‹ve CD8(+) T cells to produce high levels of interferon-&gamma;. The efficiency of transfection, DC maturation, and CD8(+) T cell activation showed varying degrees of polymer chain-length dependence. These structurally defined cationic polymers may have much potential as efficient DNA vaccine carriers and immunostimulatory adjuvants. They may also serve as a model material system for elucidating structural and intracellular mechanisms of polymer-mediated DNA vaccine delivery.  
MESH HEADINGS: Biological Transport/physiology  
MESH HEADINGS: CD8-Positive T-Lymphocytes/metabolism  
MESH HEADINGS: DNA/chemistry/genetics  
MESH HEADINGS: Dendritic Cells/cytology/\*drug effects/metabolism  
MESH HEADINGS: Drug Delivery Systems/\*methods  
MESH HEADINGS: Interferon-gamma/biosynthesis  
MESH HEADINGS: Lymphocyte Activation  
MESH HEADINGS: Methacrylates/\*chemical synthesis/chemistry  
MESH HEADINGS: Nanoparticles  
MESH HEADINGS: Plasmids  
MESH HEADINGS: Polymers/chemical synthesis/chemistry  
MESH HEADINGS: Transfection/methods  
MESH HEADINGS: Vaccines, DNA/\*administration &amp  
MESH HEADINGS: dosage/pharmacology eng

627. Jiang, D; Yue, L; Ma, D; Zhu, Y; Yin, D, and Jiang, D. Ecological Risk Assessment of Water in Taihu Lake and Tianmu Lake Using Species Sensitivity Distribution Model. 2012 Mar; 31, (3): 301-306.   
Rec #: 42819  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Ecological risk assessment on the pollutants in lakes can enable appropriate monitoring and management work, which is important for the protection and recovery of aquatic ecosystem, the prevention of algae bloom and lake degradation. Ecological risk assessment on the typical pollutants in Taihu Lake and Tianmu Lake was performed using species sensitivity distributions (SSDs). The predicted no-effect concentration for water and sediment (PNEC sub(ater)) for all compounds, PNEC sub(sed) for hydrophobical ones) for 31 compounds was derived from the acute and chronic toxicity data of aquatic organisms. **Environment concentrations of 16 pollutants were collected from published documents. Then the risk ratios (PEC/PNEC ratio) of these 16 pollutants were calculated and arranged.** Among the 16 pollutants, anthracene, phenanthrene, naphthalene, fluoranthene, atrazine and malathion are likely to pose ecological risk to the environment of Liangmei Bay and Tianmu Lake in Taihu Lake, and Wuli Lake. Moreover, chlorpyrifos, tributyltin oxide and tricyclohexylhydroxytin have great potential of causing ecological risk, though no concentration data were reported.  
Keywords: Risk assessment  
Keywords: Anthracene  
Keywords: Aquatic organisms  
Keywords: Microbiology Abstracts C: Algology, Mycology & Protozoology; Ecology Abstracts; Aqualine Abstracts; Water Resources Abstracts; Pollution Abstracts; Risk Abstracts; Environment Abstracts  
Keywords: SW 3040:Wastewater treatment processes  
Keywords: Degradation  
Keywords: ENA 12:Oceans & Estuaries  
Keywords: Malathion  
Keywords: Models  
Keywords: Lakes  
Keywords: tributyltin oxide  
Keywords: K 03330:Biochemistry  
Keywords: Assessments  
Keywords: Pollutants  
Keywords: Chronic toxicity  
Keywords: China, People's Rep., Tai Hu L.  
Keywords: R2 23050:Environment  
Keywords: D 04060:Management and Conservation  
Keywords: Algae  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: Sensitivity  
Keywords: Fluoranthene  
Keywords: Data processing  
Keywords: Naphthalene  
Keywords: Toxicity  
Keywords: Aquatic ecosystems  
Keywords: Ecological Distribution  
Keywords: Sediments  
Keywords: Model Studies  
Keywords: Chlorpyrifos  
Keywords: Risk  
Keywords: Phenanthrene  
Keywords: Prevention  
Keywords: Water Pollution Effects  
Keywords: P 1000:MARINE POLLUTION  
Keywords: Atrazine  
Keywords: China, People's Rep., Jiangsu Prov., Wuli L.  
Date revised - 2012-05-01  
Language of summary - English  
Location - China, People's Rep., Tai Hu L.; China, People's Rep., Jiangsu Prov., Wuli L.  
Pages - 301-306  
ProQuest ID - 1014106539  
SubjectsTermNotLitGenreText - Risk assessment; Anthracene; Aquatic organisms; Fluoranthene; Data processing; Naphthalene; Aquatic ecosystems; Malathion; Sediments; Models; Chlorpyrifos; tributyltin oxide; Lakes; Phenanthrene; Pollutants; Chronic toxicity; Atrazine; Algae; Sensitivity; Prevention; Degradation; Toxicity; Risk; Assessments; Water Pollution Effects; Ecological Distribution; Model Studies; China, People's Rep., Tai Hu L.; China, People's Rep., Jiangsu Prov., Wuli L.  
Last updated - 2012-12-03  
British nursing index edition - Environmental Chemistry - Huanjing Huaxue. Vol. 31, no. 3, pp. 301-306. Mar 2012.  
Corporate institution author - Jiang, D; Yue, L; Zhu, Y; Yin, D  
DOI - MD-0018706668; 16671733; 0254-6108 English

628. Jiao, L. F.; Yan, C. H.; Zhao, J.; Jia, L.; He, J., and Peng, S. Q. Reproductive Toxicity of Low-Level Chlorpyrifos Repeated Exposure and Its Mechanisms in Male Rats. Research and Evaluation Center for Toxicology, Institute of Disease Control and Prevention, Academy of Military Medical Sciences, Beijing 100071, China,//: 2011; 25, (6): 568-575(CHI) (ENG ABS).   
Rec #: 2500  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

629. Jimenez, J. J.; Bernal, J. L.; del Nozal, M. J.; Bernal, J., and Toribio, L. Persistence and degradation of metalaxyl, lindane, fenvalerate and deltamethrin during the wine making process. 2007; 104, (1): 216-223.   
Rec #: 62189  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The persistence and degradation of four acaricides (metalaxyl, lindane, fenvalerate and deltamethrin), used to control pests in vineyards, in experimental must and wine samples, have been studied. Commercial formulations of the pesticides were added to non-settled must and their fate during a common vinification method for white and red wines was investigated. Analytes in the extracts were determined by GC/EIMS after a solid-phase extraction on polymeric cartridges to isolate them from the must and wine samples. It was verified that white wines generally contained higher amounts of residues. Moreover, some degradation products, not reported until now, have been observed in the samples in addition to some compounds - byproducts from the manufacturing and excipients - initially present in the commercial formulations. (c) 2006 Elsevier Ltd. All rights reserved.  
Keywords: pesticides, impurities, degradation products, wine, fate  
ISI Document Delivery No.: 169ZL

630. Jin, B-H; Xiao, F; Chen, B; Chen, P-J; Xie, L-Q, and Jin, B-H. Simultaneous Determination of 42 Organic Chemicals in Bottled Water by Combining C18 Extraction Disk With Gc-Ms and Lc/Ms/Ms Technique. 2010 Mar; 8, (1): 116-125.   
Rec #: 48059  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A method for the determination of 42 hazard residues required by 'Japan Positive List System' in bottled water was described. Hazard compounds in bottled water were extracted with a solid phase extraction step using C18 disks. Determination was carried out by gas chromatography/mass spectrometry (GC/MS) and liquid chromatography-tandem mass spectrometry (LC/MS/MS). The disk extraction has high throughput which is well adapted to isolate and enrich these compounds from large volumes of water. For the water sample spiked at three concentration levels (LOQ, 4 times LOQ and 8 times LOQ), the recoveries of all analytes ranged between 65% and 120% with a relative standard deviation < 24% (n = 8).  
Keywords: Chemicals  
Keywords: Bottled water  
Keywords: Pollution Abstracts; Environment Abstracts; Water Resources Abstracts; Aqualine Abstracts  
Keywords: Residues  
Keywords: Water sampling  
Keywords: Gas chromatography  
Keywords: Water wells  
Keywords: Mass spectrometry  
Keywords: Drinking water  
Keywords: Japan  
Keywords: Public Health And Safety  
Date revised - 2011-02-01  
Language of summary - English  
Location - Japan  
Pages - 116-125  
ProQuest ID - 809065245  
SubjectsTermNotLitGenreText - Japan; Bottled water; Drinking water; Mass spectrometry; Residues; Water sampling; Water wells; Gas chromatography; Chemicals  
Last updated - 2011-11-09  
Corporate institution author - Jin, B-H; Xiao, F; Chen, B; Chen, P-J; Xie, L-Q  
DOI - OB-MD-0012925361; 12536992; 1477-8920 English

631. Jin, H.; Oyoshi, M. K.; Le, Y.; Bianchi, T.; Koduru, S.; Mathias, C. B.; Kumar, L.; Le Bras, S.; Young, D.; Collins, M.; Grusby, M. J.; Wenzel, J.; Bieber, T.; Boes, M.; Silberstein, L. E.; Oettgen, H. C., and Geha, R. S. Il-21r Is Essential for Epicutaneous Sensitization and Allergic Skin Inflammation in Humans and Mice.   
Rec #: 50969  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Annu Rev Immunol. 2008;26:57-79 (medline /17953510)  
COMMENTS: Cites: J Immunol. 1999 Dec 1;163(11):5989-93 (medline /10570286)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 2007 Oct 2;104(40):15817-22 (medline /17893340)  
COMMENTS: Cites: J Immunol. 2007 Oct 1;179(7):4535-41 (medline /17878350)  
COMMENTS: Cites: Nat Immunol. 2007 Sep;8(9):967-74 (medline /17581537)  
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COMMENTS: Cites: Curr Opin Pediatr. 2007 Feb;19(1):89-93 (medline /17224668)  
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COMMENTS: Cites: J Immunol. 2006 Sep 15;177(6):3721-7 (medline /16951332)  
COMMENTS: Cites: J Clin Invest. 2006 Jul;116(7):2044-55 (medline /16778988)  
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COMMENTS: Cites: Nat Genet. 2006 Apr;38(4):441-6 (medline /16550169)  
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COMMENTS: Cites: J Exp Med. 2005 Jan 3;201(1):139-48 (medline /15630141)  
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COMMENTS: Cites: J Clin Invest. 1998 Apr 15;101(8):1614-22 (medline /9541491)  
COMMENTS: Cites: Lancet. 1988 Jan 16;1(8577):127-9 (medline /2891976)  
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COMMENTS: Cites: J Immunol. 2004 Feb 15;172(4):2048-58 (medline /14764669)  
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COMMENTS: Cites: J Invest Dermatol. 2003 Dec;121(6):1379-82 (medline /14675186)  
COMMENTS: Cites: Blood. 2003 Dec 1;102(12):4090-8 (medline /12893770)  
COMMENTS: Cites: J Immunol. 2003 Jun 1;170(11):5464-9 (medline /12759422)  
COMMENTS: Cites: Nat Immunol. 2002 Dec;3(12):1135-41 (medline /12415265)  
COMMENTS: Cites: Cytokine. 2002 Oct 21;20(2):49-55 (medline /12445798)  
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COMMENTS: Cites: N Engl J Med. 1999 Dec 9;341(24):1817-28 (medline /10588968)  
COMMENTS: Cites: Immunity. 2007 Nov;27(5):811-23 (medline /18031698)  
ABSTRACT: Atopic dermatitis (AD) is a common allergic inflammatory skin disease caused by a combination of intense pruritus, scratching, and epicutaneous (e.c.) sensitization with allergens. To explore the roles of IL-21 and IL-21 receptor (IL-21R) in AD, we examined skin lesions from patients with AD and used a mouse model of allergic skin inflammation. IL-21 and IL-21R expression was upregulated in acute skin lesions of AD patients and in mouse skin subjected to tape stripping, a surrogate for scratching. The importance of this finding was highlighted by the fact that both Il21r-/- mice and WT mice treated with soluble IL-21R-IgG2aFc fusion protein failed to develop skin inflammation after e.c. sensitization of tape-stripped skin. Adoptively transferred OVA-specific WT CD4+ T cells accumulated poorly in draining LNs (DLNs) of e.c. sensitized Il21r-/- mice. This was likely caused by both DC-intrinsic and nonintrinsic effects, because trafficking of skin DCs to DLNs was defective in Il21r-/- mice and, to a lesser extent, in WT mice reconstituted with Il21r-/- BM. More insight into this defect was provided by the observation that skin DCs from tape-stripped WT mice, but not Il21r-/- mice, upregulated CCR7 and migrated toward CCR7 ligands. Treatment of epidermal and dermal cells with IL-21 activated MMP2, which has been implicated in trafficking of skin DCs. These results suggest an important role for IL-21R in the mobilization of skin DCs to DLNs and the subsequent allergic response to e.c. introduced antigen.  
MESH HEADINGS: Adoptive Transfer  
MESH HEADINGS: Animals  
MESH HEADINGS: Cells, Cultured  
MESH HEADINGS: \*Dermatitis, Atopic/immunology/pathology  
MESH HEADINGS: Disease Models, Animal  
MESH HEADINGS: Enzyme Activation  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: \*Immunization  
MESH HEADINGS: Inflammation/chemically induced/\*immunology/pathology  
MESH HEADINGS: Interleukins/genetics/immunology  
MESH HEADINGS: Matrix Metalloproteinase 2/genetics/metabolism  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred BALB C  
MESH HEADINGS: Mice, Knockout  
MESH HEADINGS: Ovalbumin/immunology/pharmacology  
MESH HEADINGS: Receptors, CCR7/genetics/immunology  
MESH HEADINGS: Receptors, Interleukin-21/genetics/\*immunology  
MESH HEADINGS: Recombinant Fusion Proteins/genetics/immunology  
MESH HEADINGS: \*Skin/immunology/pathology  
MESH HEADINGS: Spleen/cytology/immunology eng

632. Jin, Qiang Shao and Li, Shao Nan. Dissipation of Chlorpyrifos and Bifenthr in Soil and Their Period of Validity for Termite Control. 2008.  
Rec #: 51879  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Termite is a group of socialized insect pest that causes serious damage in area south of the Yangtze River in China. Termite control nowadays relys largely on chemical insecticides. Both chlorpyrifos and bifenthrin belong to insecticide candidates recommended by Chinese Association of Property Management for prevention of termite infestation in frames. Chlorpyrifos is the most widely used one in China among the 6 recommended insecticides, and bifenthrin has also been widely applied in recent years. In present study biological activity of chlorpyrifos and bifenthrin to a subground termite, Reticulitermes flaviceps, were assessed by topical application and by soil penetration test. Five cities within area of termite infestation in south of the Yangtze River, i.e., Wuhan, Hefei, Hangzhou Quanzhou, and Chengdu, were selected to performed the field trails. Parallel dissipation studies were conducted in laboratory with soil collected from the 5 trial sites. One of the aims of present studies is to help managers in terms of selecteion of insecticides for termite prevention. Meanwhile the present studies intend to lay a scientific foundation for establishment of criteria for evaluating of chemical barrier for termite prevention, especially the criteria for evaluating of validity period of insecticides in barriers. . The biological testing with Reticulitermes flaviceps indicated that, as the topical application method was used, LC50 was 0.34 mg/L for chlorpyrifos, and the value was 2.32 mg/L for bifenthrin. The soil penetration test conducted with the same species indicated that for chlorpyrifos, 4 mg/kg can be regard as critical concentration that determind whether or not the termite could drill through the 5cm length barriers spiked with chlorpyrifos and and bifenthrin. The soil penetration test also indicated that the minimum lethal concentration for chlorpyrifos was 12 mg/kg, and the value was 16 mg/kg for bifenthrin. This suggested that both chlorpyrifos and bifenthrin held contact toxicity and repellent effect towards termites in field situation, and the repellent effect seemed more outstanding for bifenthrin. The indoor dissipation studies indicated that half lifes of chorpyrifos connecting the 5 soils were in range of 41.3d to 51.9d. In outdoor dissipation studies the half lifes of chorpyrifos were in range of 35.2d to 66.6d. As for bifenthrin the half lifes were in range of 22.1d to 35.9d in indoor studies, whereas in outdoor studies they were in range of 65.8d to 152.3d. Based on data from bioassays the period of validity of chlorpyrifos in terms of termite prevention fell in range of 167~309d, with the longest period in Chengdu and the shortest one in Wuhan. As for bifenthrin the period of validity was in range of 49 to 222, with the longest period in Quanzhou and the shortest one in Wuhan. Groundwater contamination by chlorpyrifos and bifenthrin was monitored along with the soil dissipation study conducted in Hangzhou. Residue of both the 2 insecticides was detected in water samples collected 30cm beneath the top soil, and the levels were detected to be 0.01 mg/L and above. According to previously published toxicity data, the residue concentration of chlorpyrifos and bifenthrin in leachate exceeded limit of tolarence of many aquqtic species which belongs to zooplankton, crustacean, aquatic insect, fish, and so on. It is reasonable to expect, therefore, that if interchange exists between surface water and groundwater at site where the termite-prevention inasecticides are applied, aquatic communites might be obviously impacted.  
Keywords: 0285:Agronomy  
Keywords: Biological sciences  
Keywords: (UMI)AAIH433121  
2008  
0285: Agronomy  
Jin, Qiang Shao  
2012-07-19  
H433121  
Chinese  
n/a  
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70619972  
169031  
2715036421  
Biological sciences  
1026923256  
(UMI)AAIH433121 ZH

633. Jin, Yan; Hein, Misty J; Deddens, James a; Hines, Cynthia J, and Jin, Yan. Analysis of Lognormally Distributed Exposure Data With Repeated Measures and Values Below the Limit of Detection Using Sas. 2011 Jan; 55, (1): 97-112.   
Rec #: 43589  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Studies of determinants of occupational exposure frequently involve left-censored lognormally distributed data, often with repeated measures. Left censoring occurs when observations are below the analytical limit of detection (LOD); repeated measures data results from taking multiple measurements on the same worker. A common method of dealing with this type of data has been to substitute a value (such as LOD/2) for the censored data followed by statistical analysis using the 'usual' methods. Recently, maximum likelihood estimation (MLE) methods have been employed to reduce bias associated with the substitution method. We compared substitution and MLE methods using simulated lognormally distributed exposure data subjected to varying amounts of censoring using two procedures available in SAS: LIFEREG and NLMIXED. In these simulations, the MLE method resulted in less bias and performed well even for censoring up to 80%, whereas the substitution method resulted in considerable bias. We illustrate the NLMIXED procedure using a dataset of chlorpyrifos air measurements collected from termiticide applicators on consecutive days over a 5-day workweek. We provide sample SAS code for several situations including one and two groups, with and without repeated measures, random slopes, and nested random effects.  
Keywords: Chlorpyrifos  
Keywords: Workers  
Keywords: Toxicology Abstracts; Health & Safety Science Abstracts  
Keywords: Data processing  
Keywords: Pesticides  
Keywords: Statistical analysis  
Keywords: Simulation  
Keywords: H 1000:Occupational Safety and Health  
Keywords: X 24330:Agrochemicals  
Keywords: Occupational exposure  
Keywords: Occupational health  
Date revised - 2011-11-01  
Language of summary - English  
Pages - 97-112  
ProQuest ID - 904463898  
SubjectsTermNotLitGenreText - Chlorpyrifos; Workers; Data processing; Statistical analysis; Occupational exposure; Pesticides; Simulation; Occupational health  
Last updated - 2012-06-18  
British nursing index edition - Annals of Occupational Hygiene [Ann. Occup. Hyg.]. Vol. 55, no. 1, pp. 97-112. Jan 2011.  
Corporate institution author - Jin, Yan; Hein, Misty J; Deddens, James A; Hines, Cynthia J  
DOI - 26300389-3fcc-46b6-8171csaobj201; 14219590; 0003-4878 English

634. John, Harald; Breyer, Felicitas; Thumfart, JÃƒÂ rg Oliver; HÃƒÂ¶chstetter, Hans, and Thiermann, Horst. Matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS) for detection and identification of albumin phosphylation by organophosphorus pesticides and G- and V-type nerve agents. 2010; 398, (6): 2677-2691.   
Rec #: 53179  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Toxic organophosphorus compounds (OPC), e.g., pesticides and nerve agents (NA), are known to phosphylate distinct endogenous proteins in vivo and in vitro. OPC adducts of butyrylcholinesterase and albumin are considered to be valuable biomarkers for retrospective verification of OPC exposure. Therefore, we have detected and identified novel adducts of human serum albumin (HSA) by means of matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS). Pure albumin and plasma were incubated with numerous pesticides and NA of the V- and G-type in different molar ratios. Samples were prepared either by sodium dodecyl sulfate-polyacrylamide gel electrophoresis followed by in-gel enzymatic cleavage using endoproteinase Glu-C (Glu-C) or by combining highly albumin-selective affinity extraction with ultrafiltration followed by reduction, carbamidomethylation, and enzymatic cleavage (Glu-C) prior to MALDI-TOF MS analysis. Characteristic mass shifts for phosphylation revealed tyrosine adducts at YÃ¢ÂÂ´Ã‚Â¹Ã‚Â¹ (YÃ¢ÂÂ´Ã¢ÂÂ°Ã‚Â¹KFQNALLVRYÃ¢ÂÂ´Ã‚Â¹Ã‚Â¹TKKVPQVSTPTLVEÃ¢ÂÂ´Ã‚Â²Ã¢ÂÂµ), YÃ‚Â¹Ã¢ÂÂ´Ã¢ÂÂ¸ and YÃ‚Â¹Ã¢ÂÂµÃ¢ÂÂ° (IÃ‚Â¹Ã¢ÂÂ´Ã‚Â²ARRHPYÃ‚Â¹Ã¢ÂÂ´Ã¢ÂÂ¸FYÃ‚Â¹Ã¢ÂÂµÃ¢ÂÂ°APEÃ‚Â¹Ã¢ÂÂµÃ‚Â³, single and double labeled), and YÃ‚Â¹Ã¢ÂÂ¶Ã‚Â¹ (LÃ‚Â¹Ã¢ÂÂµÃ¢ÂÂ´LFFAKRYÃ‚Â¹Ã¢ÂÂ¶Ã‚Â¹KAAFTEÃ‚Â¹Ã¢ÂÂ¶Ã¢ÂÂ·) produced by original NA (tabun, sarin, soman, cyclosarin, VX, Chinese VX, and Russian VX) as well as by chlorpyrifos-oxon, diisopropyl fluorophosphate (DFP), paraoxon-ethyl (POE), and profenofos. MALDI-MS/MS of the single-labeled IÃ‚Â¹Ã¢ÂÂ´Ã‚Â²-EÃ‚Â¹Ã¢ÂÂµÃ‚Â³ peptide demonstrated that YÃ‚Â¹Ã¢ÂÂµÃ¢ÂÂ° was phosphylated with preference to YÃ‚Â¹Ã¢ÂÂ´Ã¢ÂÂ¸. Aged albumin adducts were not detected. The procedure described was reproducible and feasible for detection of adducts at the most reactive YÃ¢ÂÂ´Ã‚Â¹Ã‚Â¹-residue (S/NÃ¢â‚¬â€°Ã¢â€°Â¥Ã¢â‚¬â€°3) when at least 1% of total albumin was labeled. This was achieved by incubating plasma with molar HSA/OPC ratios ranging from approximately 1:0.03 (all G-type NA, DFP, and POE) to 1:3 (V-type NA, profenofos). Relative signal intensity of the YÃ¢ÂÂ´Ã‚Â¹Ã‚Â¹ adduct correlated well with the spotted relative molar amount underlining the usefulness for quantitative adduct determination. In conclusion, the current analytical design exhibits potential as a verification tool for high-dose exposure. [graphic removed]  
Keywords: Albumin adducts  
Berlin/Heidelberg : Springer-Verlag

635. Johnson, H. M.; Domagalski, J. L., and Saleh, D. K. Trends in Pesticide Concentrations in Streamsof the Western United States, 1993-2005. 2011; 47, (2): 265-286.   
Rec #: 62239  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Trends in pesticide concentrations for 15 streams in California, Oregon, Washington, and Idaho were determined for the organophosphate insecticides chlorpyrifos and diazinon and the herbicides atrazine, s-ethyl diproplythiocarbamate (EPTC), metolachlor, simazine, and trifluralin. A parametric regression model was used to account for flow, seasonality, and antecedent hydrologic conditions and thereby estimate trends in pesticide concentrations in streams arising from changes in use amount and application method in their associated catchments. Decreasing trends most often were observed for diazinon, and reflect the shift to alternative pesticides by farmers, commercial applicators, and homeowners because of use restrictions and product cancelation. Consistent trends were observed for several herbicides, including upward trends in simazine at urban-influenced sites from 2000 to 2005, and downward trends in atrazine and EPTC at agricultural sites from the mid-1990s to 2005. The model provided additional information about pesticide occurrence and transport in the modeled streams. Two examples are presented and briefly discussed: (1) timing of peak concentrations for individual compounds varied greatly across this geographic gradient because of different application periods and the effects of local rain patterns, irrigation, and soil drainage and (2) reconstructions of continuous diazinon concentrations at sites in California are used to evaluate compliance with total maximum daily load targets.  
Keywords: pesticides, monitoring, time series analysis, watershed management,  
ISI Document Delivery No.: 741LL

636. Johnson, K. E. and Wilgus, T. A. Multiple Roles for Vegf in Non-Melanoma Skin Cancer: Angiogenesis and Beyond.   
Rec #: 49869  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Vascular endothelial growth factor (VEGF) is known to play a critical role in the development of non-melanoma skin cancers. VEGF is a potent pro-angiogenic factor and it is elevated in mouse and human skin tumors. The use of transgenic and knockout mice has shown that VEGF is essential for tumor development in multiple models of skin carcinogenesis and, until recently, the mechanism of action has been primarily attributed to the induction of angiogenesis. However, additional roles for VEGF have now been discovered. Keratinocytes can respond directly to VEGF, which could influence skin carcinogenesis by altering proliferation, survival, and stemness. In vivo studies have shown that loss of epidermal VEGFR-1 or neuropillin-1 inhibits carcinogenesis, indicating that VEGF can directly affect tumor cells. Additionally, VEGF has been shown to promote tumor growth by recruiting macrophages to skin tumors, which likely occurs through VEGFR-1. Overall, these new studies show that VEGF carries out functions beyond its well-established effects on angiogenesis and highlight the need to consider these alternative activities when developing new treatments for non-melanoma skin cancer. eng

637. Jokanovic, M. Current understanding of the mechanisms involved in metabolic detoxification of warfare nerve agents. 2009; 188, (1): 1-10.   
Rec #: 62249  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: This study reviews current understanding of chemical, biochemical and toxicological aspects and mechanisms of metabolism of warfare nerve agents. Among enzymes participating in metabolism of nerve agents the role of A-esterases, serum cholinesterase and carboxylesterases is discussed. This article also discusses other aspects of metabolism of the agents such as protein binding and the role of tissue depots for these compounds. (C) 2009 Elsevier Ireland Ltd. All rights reserved.  
Keywords: Organophosphorus, Nerve agents, Soman, Sarin, Tabun, VX  
ISI Document Delivery No.: 455CN

638. Joshi, Suresh C; Sharma, Preeti, and Joshi, Suresh C. Male Reproductive Toxicity of Organophosphorous Compounds: a Review. 2011 Aug; 93, (7): 1486-1507.   
Rec #: 43229  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Fertility is declining in many countries and there has been substantial interest in the potential adverse effects of exposure to environmental hazardous chemicals, including pesticides on male reproduction. Organophosphorous compounds (organophosphates, OP) constitute a heterogeneous category of chemicals specifically designed for the control of pests or plant diseases. OP are known to produce reproductive toxicity, resulting in a decrease in the fertility levels of humans and animals. This review article mainly focused on toxicity of some OP such as acephate, chlorpyrifos, diazinon, dimethoate, fenitrothion, malathion, and monocrotophos especially dealing with reproductive toxicity in males. Furthermore, this review deals with mode of action and clinical syndromes of OP. Considerable lab studies on animals concluded that OP produce adverse effects on male reproductive system.  
Keywords: Chemicals  
Keywords: Fertility  
Keywords: Plant diseases  
Keywords: Organophosphates  
Keywords: monocrotophos  
Keywords: Toxicology Abstracts; Pollution Abstracts  
Keywords: Fenitrothion  
Keywords: organophosphates  
Keywords: Toxicity  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Malathion  
Keywords: Reproductive system  
Keywords: Chlorpyrifos  
Keywords: Reviews  
Keywords: Pesticides  
Keywords: Reproduction  
Keywords: Dimethoate  
Keywords: Pests  
Keywords: X 24330:Agrochemicals  
Keywords: Diazinon  
Keywords: Side effects  
Date revised - 2011-09-01  
Language of summary - English  
Pages - 1486-1507  
ProQuest ID - 888097650  
SubjectsTermNotLitGenreText - Fertility; Plant diseases; monocrotophos; Toxicity; organophosphates; Fenitrothion; Reproductive system; Malathion; Chlorpyrifos; Reviews; Pesticides; Reproduction; Pests; Dimethoate; Diazinon; Side effects; Chemicals; Organophosphates  
Last updated - 2012-03-29  
British nursing index edition - Toxicological and Environmental Chemistry [Toxicol. Environ. Chem.]. Vol. 93, no. 7, pp. 1486-1507. Aug 2011.  
Corporate institution author - Joshi, Suresh C; Sharma, Preeti  
DOI - cb38c0f4-9803-48c4-87e5mfgefd108; 15525825; 0277-2248; 1029-0486 English

639. Juberg, D. R. Differentiating experimental animal doses from human exposures to chlorpyrifos. 2012; 109, (33): E2195-E2195.   
Rec #: 62339  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ISI Document Delivery No.: 992VC

640. Juberg, D. R. and Burns, C. J. **RE:** Middlemore-Risher et al., repeated exposures to low-level chlorpyrifos results in impairments in sustained attention and increased impulsivity in rats. 2010; 32, (6): 648-648.   
Rec #: 62349  
Keywords: NO SOURCE  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: Chlorpyrifos  
ISI Document Delivery No.: 692BY

641. Jun, D.; Musilova, L.; Kuca, K.; Kassa, J., and Bajgar, J. Potency of several oximes to reactivate human acetylcholinesterase and butyrylcholinesterase inhibited by paraoxon in vitro: Proceedings of the IX International Meeting on Cholinesterases. 2008 Sep 25-; 175, (1Çô3): 421-424.   
Rec #: 5930  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Organophosphorus pesticides (e.g. chlorpyrifos, malathion, and parathion) and nerve agents (sarin, tabun, and VX) are highly toxic organophosphorus compounds with strong inhibition potency against two key enzymes in the human bodyÇöacetylcholinesterase (AChE; EC 3.1.1.7) and butyrylcholinesterase (BuChE; EC 3.1.1.8). Subsequent accumulation of acetylcholine at synaptic clefts can result in cholinergic crisis and possible death of intoxicated organism. For the recovery of inhibited AChE, derivatives from the group of pyridinium or bispyridinium aldoximes (called oximes) are used. Their efficacy depends on their chemical structure and also type of organophosphorus inhibitor. In this study, we have tested potency of selected cholinesterase reactivators (pralidoxime, obidoxime, trimedoxime, methoxime and H-oxime HI-6) to reactivate human erythrocyte AChE and human plasma BuChE inhibited by pesticide paraoxon. For this purpose, modified Ellman's method was used and two different concentrations of oximes (10 and 100 ++M), attainable in the plasma within antidotal treatment of pesticide intoxication were tested. Results demonstrated that obidoxime (96.8%) and trimedoxime (86%) only reached sufficient reactivation efficacy in case of paraoxon-inhibited AChE. Other oximes evaluated did not surpassed more than 25% of reactivation. In the case of BuChE reactivation, none of tested oximes surpassed 12.5% of reactivation. The highest reactivation efficacy was achieved for trimedoxime (12.4%) at the concentration 100 ++M. From the data obtained, it is clear that only two from currently available oximes (obidoxime and trimedoxime) are good reactivators of paraoxon-inhibited AChE. In the case of BuChE, none of these reactivators could be used for its reactivation. Acetylcholinesterase/ Butyrylcholinesterase/ Pesticide/ Organophosphate/ Reactivator/ Oxime/ Bioscavenger

642. Jung, K; Seo, I; Nam, H; Shin, H-S, and Jung, K. Effects of Ozonated Water Treatment on Pesticide Residues and Catechin Content in Green Tea Leaves. 2008; 40, (3): 265-270.   
Rec #: 46309  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study examined the effects of treating green tea leaves with ozonated water by evaluating pesticide residue levels and catechin content The pesticide residue levels of tea leaves treated with carbendazim, captain, diazinon, fenthim, dichlorvos, and chlorpyrifos ranged from 43.2 to 48.2 ppm. For leaves treated by soaking or watering with tap water, or with 0.25 ppm of ozone water for 30 min. Pesticide residue levels were reduced by 24.0-30.2%, 30.3-33.6%, 52.4-70.5%, and 65.5-80.2%, respectively. No major differences in catechin content were observed in the leaves according to the soaking and rinsing treatments using ozonated or tap water.  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: Pesticide residues  
Keywords: green tea  
Keywords: Leaves  
Keywords: dichlorvos  
Keywords: X 24320:Food Additives & Contaminants  
Keywords: Pesticide Residues  
Keywords: Catechin  
Keywords: tea  
Keywords: Chlorpyrifos  
Keywords: H 3000:Environment and Ecology  
Keywords: Toxicology Abstracts; Aqualine Abstracts; Water Resources Abstracts; Health & Safety Science Abstracts  
Keywords: Drinking Water  
Keywords: Water treatment  
Keywords: Soaking  
Keywords: Pesticides  
Keywords: SW 3060:Water treatment and distribution  
Keywords: Water Treatment  
Keywords: Carbendazim  
Keywords: Drinking water  
Keywords: Diazinon  
Keywords: Dichlorvos  
Keywords: Ozonation  
Keywords: Ozone  
Date revised - 2008-08-01  
Language of summary - English  
Pages - 265-270  
ProQuest ID - 21061976  
SubjectsTermNotLitGenreText - Chlorpyrifos; Water treatment; green tea; Pesticide residues; Leaves; Catechin; Carbendazim; Diazinon; Dichlorvos; Ozone; Pesticides; dichlorvos; Drinking water; tea; Ozonation; Drinking Water; Soaking; Water Treatment; Pesticide Residues  
Last updated - 2011-12-14  
British nursing index edition - Korean Journal of Food Science and Technology [Korean J. Food Sci. Technol.]. Vol. 40, no. 3, pp. 265-270. 2008.  
Corporate institution author - Jung, K; Seo, I; Nam, H; Shin, H-S  
DOI - MD-0008349390; 8370061; 0367-6293 English

643. Junod, Julio; Zagal, Erick; Sandoval, Marco; Barra, Ricardo; Vidal, Gladys, and Villarroel, Mario. Effect of Irrigation Levels on Dissolved Organic Carbon Soil Distribution and the Depth Mobility of Chlorpyrifos. 2009; 69, (3): 435-444.   
Rec #: 53199  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Water flows provided by irrigation systems may be associated with dissolved organic carbon (DOC) content in the soil solution and may modify the mobility of pesticides, such as chlorpyrifos (CHP). These compounds were analyzed under field conditions, evaluating their distribution in the soil profile under excessive irrigation in a Humic Haploxerand soil. The trial was carried out in soil columns located under the canopy of apple trees (Malus domestica Borkh.) in an orchard located in the BĂÂ­o-BĂÂ­o Region, Chile. The insecticide CHP was applied 120 g hL-1, and later the natural run off was collected from the foliage to the columns. Surface irrigation was used as a control, the equivalent to 4 L h-1 weekly, plus two treatments over the columns of 6 and 8 L h-1 per pulse, respectively. Samples were obtained at three column depths: 0-5, 5-20 and 20-30 cm. The results showed that in spite of the fact there was no interaction between depth and irrigation, a greater concentration of CHP was observed in the samples with greater water flow, with significant differences between the treatments at a depth of 20-30 cm, which suggests some level of influence on vertical mobility. DOC shows stratification with greater concentrations at the surface and lower concentrations at depth, with significant differences between the superficial stratum (0-5 cm) and the lower strata (5-20, 20-30 cm). These results are discussed in relation to explaining the movement of CHP in the soil profile.  
Keywords: Internet resource  
Includes references Summary in Spanish. 1022771619

644. Juraske, Ronnie; Sanjuan, Neus, and Juraske, Ronnie. Life Cycle Toxicity Assessment of Pesticides Used in Integrated and Organic Production of Oranges in the Comunidad Valenciana, Spain. 2011 Feb; 82, (7): 956-962.   
Rec #: 47419  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The relative impacts of 25 pesticides including acaricides, fungicides, herbicides, insecticides, and post-harvest fungicides, used in the production of oranges in Spain were assessed with current life cycle impact assessment (LCIA) tools. Chemical specific concentrations were combined with pesticide emission data and information on chemical toxicity to assess human toxicity and freshwater ecotoxicity impacts. As a case study, the relative impacts of two orange production systems in the region of Valencia, integrated pest management (IP) and organic production (OP), were assessed. The evaluation of active ingredients showed that on average acaricides have the highest human toxicity impact scores, while for freshwater ecotoxicity insecticides show the highest impact. In both impact categories the lowest impact scores were calculated for herbicides. In the production of 1kg of orange fruits, where several kinds of pesticides are combined, results show that post-harvest fungicides can contribute more than 95% to the aggregate human toxicity impacts. More than 85% of aquatic ecotoxicity is generated by fungicides applied before harvest. The potential to reduce impacts on freshwater ecosystems is seven orders of magnitude, while impacts on human health can be reduced by two orders of magnitude. Hence, this stresses the importance of a careful pre-selection of active ingredients. In both impact categories, organic production represents the least toxic pest-control method.  
Keywords: ENA 09:Land Use & Planning  
Keywords: Spain  
Keywords: fruits  
Keywords: Herbicides  
Keywords: Toxicity  
Keywords: acaricides  
Keywords: Environmental Studies  
Keywords: Insecticides  
Keywords: life cycle  
Keywords: Fungicides  
Keywords: Pesticides  
Keywords: Emissions  
Keywords: Environment Abstracts  
Date revised - 2011-10-01  
Language of summary - English  
Location - Spain  
Pages - 956-962  
ProQuest ID - 855487607  
SubjectsTermNotLitGenreText - Insecticides; life cycle; fruits; Pesticides; Fungicides; Emissions; Herbicides; Toxicity; acaricides; Spain  
Last updated - 2011-12-17  
Corporate institution author - Juraske, Ronnie; Sanjuan, Neus  
DOI - OB-c90cf72f-3936-46eb-aeeccsamfg201; 14362132; 0045-6535 English

645. Kadian, N.; Malik, A.; Satya, S., and Dureja, P. Effect of organic amendments on microbial activity in chlorpyrifos contaminated soil. 2012; 95, S199-S202.   
Rec #: 62399  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The aim of this research was to study the inhibitory effect of chlorpyrifos (CPF) on soil microbial activity and to evaluate the efficacy of different organic amendments as a biostimulation agent for sustaining the microbial activity and thereby assisting in the remediation of CPF (10 ppm) contaminated soil. Experiments were carried out under controlled conditions (37 degrees C) up to 74 days; CPF was analyzed by GC-ECD while dehydrogenase activity (DHA) was measured as one of the indices of soil microbial activity. Throughout the experiment, there was higher microbial activity in uncontaminated soil (S) as compared to CPF contaminated soil (SP) and overall a considerably high reduction (63.51%) in average DHA was noticed in CPF contaminated soil. Organic amendments enhanced the microbial activity over unamended CPF contaminated soil. The trend of DHA on 24th day was MS (SP + 1% Mushroom Spent) >VC (SP + 1% Vermicompost) >BS (SP + 1% Biogas Slurry) >SP (Soil spiked with 10 ppm CPF) >FM (SP + 1% Farmyard Manure). The enhancement in pesticide dissipation over the unamended soil showed the following trend VC (37%)>MS (24%) >FM (1.9%). In spite of sufficient DHA, BS could not enhance pesticide dissipation over the unamended soil (SP). These results indicate the potential of vermicompost and mushroom spent compost as suitable biostimulation agents to sustain the microbial activity in CPF contaminated soil. (C) 2010 Elsevier Ltd. All rights reserved.  
Keywords: Chlorpyrifos, Biostimulation, DNA, Organic amendments (Biogas slurry  
ISI Document Delivery No.: 897JS

646. Kagan, Y. S.; Ershova, E. A.; Leonenko, O. B.; Klisenko, M. A.; Zhmin'ko, P. G., and Zeinalova, T. A. Role of the Hepatic Monooxygenase System in the Metabolism and Mechanism of Action of Pesticides. Y.S.Kagan, Vses. NII Gig. Toksikol. Pestits., Polim. Plast. Mass, Kiev, USSR//: 1988(1): 70-76(RUS).   
Rec #: 940  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

647. Kambiranda, Devaiah M.; Asraful-Islam, Shah Md.; Cho, Kye Man; Math, Renukaradhya K.; Lee, Young Han; Kim, Hoon, and Yun, Han Dae. Expression of esterase gene in yeast for organophosphates biodegradation. 2009 May; 94, (1): 15-20.   
Rec #: 3860  
Keywords: YEAST  
Notes: Chemical of Concern: CPY   
Abstract: Organophosphates are esters of phosphoric acid and can be hydrolyzed and detoxified by carboxylesterase and phosphotriesterase. In this work esterase enzyme (Est5S) was expressed in yeast to demonstrate the organophosphorus hydrolytic activity from a metagenomic library of cow rumen bacteria. The esterase gene (est5S) is 1098 bp in length, encoding a protein of 366 amino acid residues with a molecular weight of 40 kDa. Est5S enzyme was successfully produced by Pichia pastoris at a high expression level of approximately 4.0 g LęĆ1. With p-nitrophenol butyrate as the substrate, the optimal temperature and pH for enzyme activity were determined to be 40 -\_C and pH 7.0, respectively. The esterase enzyme was tested for degradation of chlorpyrifos (CP). TLC results obtained inferred that CP could be degraded by esterase enzyme (Est5S) and HPLC results revealed that CP could be efficiently degraded up to 100 ppm. Cadusafos (CS), coumaphos (CM), diazinon (DZ) dyfonate (DF), ethoprophos (EP), fenamiphos (FM), methylparathion (MPT), and parathion (PT) were also degraded up to 68, 60, 80, 40, 45, 60, 95, and 100%, respectively, when used as a substrate with Est5S protein. The results highlight the potential use of this enzyme in the cleanup of contaminated insecticides. Rumen metagenome/ est5S gene/ Esterase/ Yeast expression/ OP degradation

648. Kamble, G. B. and Muley, D. V. Effect of Acute Exposure of Endosulfan and Chlorpyriphos on the Biochemical Composition of the Fresh Water Fish Sarotherodon mossambicus. Dept of Zoology, Shivaji Univ. Kolhapur-416004, India//: 2000; 4, (1): 97-102.   
Rec #: 950  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY,ES)  
Notes: Chemical of Concern: CPY,ES

649. Kamel, A.; Byrne, C.; Vigo, C.; Ferrario, J.; Stafford, C.; Verdin, G.; Siegelman, F.; Knizner, S., and Hetrick, J. Oxidation of selected organophosphate pesticides during chlorination of simulated drinking water. 2009; 43, (2): 522-534.   
Rec #: 62439  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Ten organophosphate (OP) pesticides: phorate, disulfoton, terbufos, methidathion, bensulide, chlorethoxyfos, phosmet, methyl parathion, phostebupirim, and temephos were evaluated for their potential to undergo oxidation to their respective oxons and/or other oxidation analogues in laboratory water. Samples were collected at time intervals up to 72 h of chlorination and analyzed by both gas chromatography-mass selective detection (GC-MSD) and liquid chromatography-tandem mass spectrometry (LC-MS/MS). The results show that methidathion and methyl parathion were stable in unchlorinated water, while all other OP pesticides were not stable over the 72 h exposure period. In chlorinated water, phorate and disulfoton formed stable sulfone oxons. Temephos formed stable dioxon sulfoxide and dioxon sulfone. Methidathion, bensulide, chlorethyoxyfos, methyl parathion, and phostebupirim formed stable oxons over the 72 IT exposure period. Terbufos, phorate, disulfoton and temephos oxon sulfoxides; temephos sulfoxide; and phosmet oxon were initially formed but were not detected after 24 h. The data illustrate that organothiophosphate pesticides may form oxons and/or other oxidation analogues during chlorination in water treatment plants, which are persistent for at least 72 h. Published by Elsevier Ltd.  
Keywords: Organophosphate pesticides, Water chlorination, Oxidation products,  
ISI Document Delivery No.: 410RJ

650. Kamijo, K.; Kobayashi, M.; Otsuka, K.; Tamura, Y.; Tomizawa, S.; Sakai, N.; Kageyama, Y.; Takano, I., and Nagayama, T. Survey of Pesticide Residues in Imported Vegetable Products (1992.4-2006.3). 2009; 50, (3): 146-152.   
Rec #: 62449  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticide residues in 165 imported vegetable products on the Tokyo market from Apr. 1992 to Mar. 2006 were investigated. Seven kinds of pesticides were detected at levels between Tr (below 0.01 ppm) and 1.0 ppm from 16 samples. There was no sample in which pesticide residues exceeded the MRLs. The salt leaf of grape imported from Greece contained chlorpyrifos and quinalphos, and there was some doubt as to whether the residue levels exceeded the MRLs when the Japanese positive list system for pesticide residues in food was applied. Pesticides were detected from pickles and dehydrated vegetable, but not from products that had been treated with heat and water, such as boiled vegetables and purees. Many samples of products from Asia, and North America area contained detectable levels of pesticides. Residue levels of these pesticides were calculated as between 0.006 and 20.3% of their ADI values according to the daily intake of vegetable products. Therefore, these vegetable products should be safe when eaten in a normal manner.  
Keywords: pesticide residue, vegetable product, pickle, dried vegetable, boiled  
ISI Document Delivery No.: 466OK

651. Kang, Soyoung; Lee, Hye Jung; Kim, Young Ho; Kwon, Deok Ho; Oh, Jung Hun; Kim, Bum Jun; Lim, Kook Jin; Lee, Seunghwan; Hwang, Seung Yong, and Lee, Si Hyeock. Proteomics-based identification and characterization of biotype-specific carboxylesterase 2 putatively associated with insecticide resistance in Bemisia tabaci: From gene to ecosystem: identification, behavior and modeling in insect science. 2012 Sep; 15, (3): 389-396.   
Rec #: 4970  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Proteomic differences between **Bemisia tabaci** biotypes (B and Q) were investigated by two-dimensional gel electrophoresis in conjunction with mass spectroscopic analysis. Among several protein spots specific to biotype B, carboxylesterase 2 (Coe2) was significantly more expressed in biotype B. Phylogenetic analysis demonstrated the close relationship of Coe2 with **Myzus persicae** esterase E4. Comparison of full-length cDNA sequences of Coe2 revealed no amino acid differences in functionally important conserved regions between biotypes B and Q. The transcription level of the Coe2 gene (coe2) was 5.8-fold higher in biotype B than in biotype Q, but the coe2 copy number was not different between biotypes, suggesting that the overexpression of Coe2 was due to transcriptional up-regulation. Native isoelectric focusing followed by mass spectrophotometric analysis confirmed that the overexpressed pI 5.7 esterase in biotype B was Coe2. In-gel inhibition of Coe2 by three insecticides indicated the interaction of Coe2 with chlorpyrifos-methyl oxon and permethrin, but not with imidacloprid. These findings suggest that overexpression of Coe2 in biotype B can confer chemical defense against pyrethroid and organophosphate insecticides, perhaps by sequestration and hydrolysis, as seen in M. persicae E4. Finally, utility of Coe2 as a potential biotype-specific protein marker is discussed. Bemisia tabaci/ Biotypes/ Proteomic analysis/ Carboxylesterase/ Overexpression

652. Kanzari, Fehmi; Syakti, Agung Dhamar; Asia, Laurence; Malleret, Laure; Mille, Gilbert; Jamoussi, Bassem; Abderrabba, Manef; Doumenq, Pierre, and Kanzari, Fehmi. Aliphatic Hydrocarbons, Polycyclic Aromatic Hydrocarbons, Polychlorinated Biphenyls, Organochlorine, and Organophosphorous Pesticides in Surface Sediments From the Arc River and the Berre Lagoon, France. 2012 Feb; 19, (2): 559-576.   
Rec #: 46889  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Introduction: The Arc River and Berre lagoon are one of important river basin hydrosystem in the South of France that receives industrial and municipal wastewaters from the adjacent area. Materials and methods: Due to its social and economic impact as well as ecological function of basin, an assessment of environmental risk due to mobilization of contaminants is necessary. Thus, the study aims to determine the spatial distribution of n-alkanes, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), organochlorine and organophosphorous pesticides in surface sediments and their potential origins by using gas chromatography coupled to mass spectrometry. Results and discussion: Total alkanes concentrations ranged from 563 to 5,068 mu g kg super(-1) sediment dry weight (dw), the sum of 17 PAHs ranged from 153 to 1,311 mu g kg super(-1) dw, the sum of seven PCBs concentrations ranged from 0.3 to 466.8 mu g kg super(-1) dw, and the total pesticides concentrations ranged from 0.02 to 7.15 mu g kg super(-1) dw. Ratios of specific n-alcanes (carbon preference index, natural n-alkanes ratio, and terrigenous/aquatic ratio) and ratios of selected PAH (anthracene (Ant)/(Ant+Phe), fluoranthene (Fl)/(Fl+pyrene (Pyr)), BaA/(BaA+chrysene (Chry)), indeno[1,2,3,c,d]pyrene (IPyr)/(IPyr+BghiP)) were calculated to evaluate the possible sources of hydrocarbons. Conclusions: The evaluations suggest the sources of hydrocarbons in the sediments were generally biogenic and markedly more pyrolytic rather than petrogenic. In the perspectives of environmental risk assessment, all contaminants levels were also compared with sediments quality guidelines (SQG) resulting that the contamination levels in all stations were most of the time lower than their respective SQG. While, for PCBs concentrations, three stations (A8, B1, and B2) were higher than their effect range median values which may indicate high potential toxicity of the sediment with probable adverse effects to the living biota.  
Keywords: Organochlorine compounds  
Keywords: Spatial distribution  
Keywords: Meteorological & Geoastrophysical Abstracts; Environment Abstracts  
Keywords: Formicidae  
Keywords: Environmental sciences  
Keywords: Mass spectrometry  
Keywords: River basins  
Keywords: Toxicity  
Keywords: Lagoons  
Keywords: Sediments  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: France  
Keywords: France, Provence-Alpes-Cote d'Azur, Arc R.  
Keywords: M2 551.510.42:Air Pollution (551.510.42)  
Keywords: Bioaccumulation  
Keywords: Environmental Studies--Pollution  
Keywords: Gas chromatography  
Keywords: Pesticides  
Keywords: Pesticides in river water  
Keywords: polycyclic aromatic hydrocarbons  
Keywords: MED, France, Languedoc-Roussillon, Berre Lagoon  
Keywords: PCB compounds  
Date revised - 2012-04-01  
Language of summary - English  
Location - France; France, Provence-Alpes-Cote d'Azur, Arc R.; MED, France, Languedoc-Roussillon, Berre Lagoon  
Pages - 559-576  
ProQuest ID - 926732488  
SubjectsTermNotLitGenreText - Spatial distribution; Gas chromatography; Environmental sciences; Pesticides in river water; Mass spectrometry; River basins; Organochlorine compounds; Bioaccumulation; Pesticides; polycyclic aromatic hydrocarbons; Toxicity; Lagoons; PCB compounds; Sediments; Formicidae; France; France, Provence-Alpes-Cote d'Azur, Arc R.; MED, France, Languedoc-Roussillon, Berre Lagoon  
Last updated - 2012-04-12  
Corporate institution author - Kanzari, Fehmi; Syakti, Agung Dhamar; Asia, Laurence; Malleret, Laure; Mille, Gilbert; Jamoussi, Bassem; Abderrabba, Manef; Doumenq, Pierre  
DOI - OB-a2420e1e-2f9a-4b31-93b9mfgefd107; 16378134; 0944-1344; 1614-7499 English

653. Karabasanavar, N. S.; Singh, S. P., and Singh, M. K. Monitoring for chlorpyrifos residues in animal feed and fodder of Tarai region of Uttarakhand, India. 2012; 94, (2): 275-280.   
Rec #: 62499  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In this study, residual concentrations of chlorpyrifos (CPF) were determined in feed (40) and fodder (25) samples collected from various locations of Tarai region of Uttarakhand. For extracting residues, liquid-liquid partition followed by alumina column clean up was used and the detection and quantification of residues was undertaken with the help of high-performance liquid chromatography using C18 column and diode array detector at 220 nm. Of the total 40 feed samples analyzed, 7 (17.5%) samples were found positive for CPF with the mean residual concentration of 0.058 mu g g(-1); while out of 25 fodder samples, CPF residues were detected in a single (4%) sample with residual concentration of 0.39 mu g g(-1). However, none of the feed or fodder samples contained CPF residues above the prescribed limit.  
Keywords: pesticide, residue, chlorpyrifos, feed, fodder, HPLC  
ISI Document Delivery No.: 923CV

654. Karanasios, E.; Karpouzas, D. G., and Tsiropoulos, N. G. Key parameters and practices controlling pesticide degradation efficiency of biobed substrates. 2012; 47, (6): 589-598.   
Rec #: 62509  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We studied the contribution of each of the components of a compost-based biomixture (BX), commonly used in Europe, on pesticide degradation. The impact of other key parameters including pesticide dose, temperature and repeated applications on the degradation of eight pesticides, applied as a mixture, in a BX and a peat-based biomixture (OBX) was compared and contrasted to their degradation in soil. Incubation studies showed that straw was essential in maintaining a high pesticide degradation capacity of the biomixture, whereas compost, when mixed with soil, retarded pesticide degradation. The highest rates of degradation were shown in the biomixture composed of soil/compost/straw suggesting that all three components are essential for maximum biobed performance. Increasing doses prolonged the persistence of most pesticides with biomixtures showing a higher tolerance to high pesticide dose levels compared to soil. Increasing the incubation temperature from 15 degrees C to 25 degrees C resulted in lower t(1/2) values, with biomixtures performing better than soil at the lower temperature. Repeated applications led to a decrease in the degradation rates of most pesticides in all the substrates, with the exception of iprodione and metalaxyl. Overall, our results stress the ability of biomixtures to perform better than soil under unfavorable conditions and extreme pesticide dose levels.  
Keywords: Biobeds, biomixture composition, temperature, pesticide dose, repeated  
ISI Document Delivery No.: 936GT

655. Karanasios, E.; Papadi-Psyllou, A.; Karpouzas, D. G., and Tsiropoulos, N. G. Optimization of Biomixture Composition and Water Management for Maximum Pesticide Dissipation in Peat-Free Biobeds. 2012; 41, (6): 1787-1795.   
Rec #: 62519  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Biomixture composition and water management are key factors controlling biobeds performance. Although compost-biomixtures (BXs) possess high degradation efficiency, their low water-holding capacity compared with peat-biomixtures (OBX) limits their use. Thus, appropriate water management is required to optimize their performance. The dissipation capacity of selected BXs compared with OBXs was assessed in a column study under two water managements not differing in their total water load but in the intensity and frequency of water addition. Results showed that the less frequent application of large water volumes (water management scenario I) facilitated pesticide leaching (0.001-10.4% of initially applied), compared with the frequent application of low water volumes (water management scenario II) where leaching losses were always <1%. Water management affected differently the dissipation performance of substrates: OBX outperformed BXs under water management scenario I, whereas the grape marc compost-biomixture (BX1) was superior at water management scenario II. Substitution of grape marc compost (Cl) with olive leaves compost (C2) or of straw with corn cobs or grape stalks reduced the dissipation capacity of BX1. Mass balance analysis revealed that the high dissipation capacity of OBX was mostly attributable to its high ability to retain rather than degrade pesticides, whereas the exact opposite was seen for BX1. Overall, our findings suggest that BXs-biobeds could treat large wastewater volumes under appropriate water management that extends the contact period between pesticides and BXs, thus exploiting their high biodegradation capacity.  
Keywords: DEGRADATION, SYSTEMS, CHLORPYRIFOS, CONTAMINATION, SUBSTRATE, RESIDUES,  
ISI Document Delivery No.: 039QU

656. Karanasios, Evangelos; Tsiropoulos, Nikolaos G; Karpouzas, Dimitrios G, and Karanasios, Evangelos. On-Farm Biopurification Systems for the Depuration of Pesticide Wastewaters: Recent Biotechnological Advances and Future Perspectives. 2012 Nov; 23, (6): 787-802.   
Rec #: 46439  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Point source contamination of natural water resources by pesticides constitutes a serious problem and on-farm biopurification systems (BPS) were introduced to resolve it. This paper reviews the processes and parameters controlling BPS depuration efficiency and reports on recent biotechnological advances which have been used for enhancing BPS performance. Biomixture composition and water management are the two factors which either individually or through their interactions control the depuration performance of BPS. Which process (biodegradation or adsorption) will dominate pesticides dissipation in BPS depends on biomixture composition and the physicochemical properties of the pesticides. Biotechnological interventions such as augmentation with pesticide-degrading microbes or pesticide-primed matrices have resulted in enhanced biodegradation performance of BPS. Despite all these advancement in BPS research, there are still several issues which should be resolved to facilitate their full implementation. Safe handling and disposal of the spent biomixture is a key practical issue which needs further research. The use of BPS for the depuration of wastewaters from post-farm activities such as postharvest treatment of fruits should be a priority research issue considering the lack of alternative treatment systems. However, the key point hampering optimization of BPS is the lack of fundamental knowledge on BPS microbiology. The use of advanced molecular and biochemical methods in BPS would shed light into this issue in the future.  
Keywords: A 01380:Plant Protection, Fungicides & Seed Treatments  
Keywords: Fruits  
Keywords: Biodegradation  
Keywords: Biochemistry  
Keywords: Contamination  
Keywords: M3 1010:Issues in Sustainable Development  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Depuration  
Keywords: Physicochemical properties  
Keywords: Intervention  
Keywords: Water resources  
Keywords: Environmental Studies  
Keywords: W 30950:Waste Treatment & Pollution Clean-up  
Keywords: Sustainability Science Abstracts; Microbiology Abstracts A: Industrial & Applied Microbiology; Pollution Abstracts; Biotechnology and Bioengineering Abstracts  
Keywords: Water management  
Keywords: Reviews  
Keywords: Pesticides  
Keywords: Adsorption  
Keywords: Waste water  
Date revised - 2012-11-01  
Language of summary - English  
Pages - 787-802  
ProQuest ID - 1222713134  
SubjectsTermNotLitGenreText - Fruits; Biodegradation; Contamination; Water management; Physicochemical properties; Pesticides; Depuration; Adsorption; Water resources; Waste water; Biochemistry; Reviews; Intervention  
Last updated - 2012-12-06  
Corporate institution author - Karanasios, Evangelos; Tsiropoulos, Nikolaos G; Karpouzas, Dimitrios G  
DOI - OB-128fe69e-21a2-4fc3-ae9dmfgefd108; 17219401; 0923-9820; 1572-9729 English

657. Karanasios, Evangelos; Tsiropoulos, Nikolaos G; Karpouzas, Dimitrios G; Menkissoglu-Spiroudi, Urania, and Karanasios, Evangelos. Novel Biomixtures Based on Local Mediterranean Lignocellulosic Materials: Evaluation for Use in Biobed Systems. 2010 Aug; 80, (8): 914-921.   
Rec #: 43949  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The composition of biomixtures strongly affect the efficacy of biobeds. Typically, biomixture consists of peat (or compost), straw (STR) and topsoil (1:2:1 by volume). Straw guarantees a continuous supply of nutrients and high microbial activity. However, in south Europe other lignocellulosic materials including sunflower crop residues (SFR), olive leaves, grape stalks (GS), orange peels, corn cobs (CC) and spent mushroom substrate (SMS) are also readily available at no cost. Their potential utilization in biomixtures instead of STR was tested in pesticide degradation and adsorption studies. The microbial activity in these biomixtures was also assessed. The GS-biomixture was the most efficient in pesticide degradation, while CC- and SFR-biomixtures showed comparable degrading efficacy with the STR-biomixture. The SMS-biomixture was also highly efficient in degrading the pesticide mixture with degradation rates being correlated with the proportion of SMS in the biomixture. Microbial respiration was positively correlated with the degradation rates of metalaxyl, azoxystrobin and chlorpyrifos, compared to phenoloxidase which showed no correlation. Biomixtures containing alternative lignocellulosic materials showed a higher adsorption affinity for terbuthylazine and metribuzin compared to the STR-biomixture. We provide first evidence that STR can be substituted in biomixtures by other lignocellulosic materials which are readily available in south Europe.  
Keywords: A 01380:Plant Protection, Fungicides & Seed Treatments  
Keywords: Olea  
Keywords: Degradation  
Keywords: Respiration  
Keywords: Nutrients  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: corn  
Keywords: Environmental Studies  
Keywords: azoxystrobin  
Keywords: Evaluation  
Keywords: Metalaxyl  
Keywords: Agricultural Chemicals  
Keywords: ANE, Europe  
Keywords: Corn  
Keywords: AQ 00002:Water Quality  
Keywords: Straw  
Keywords: crop residues  
Keywords: Phenoloxidase  
Keywords: Composts  
Keywords: Leaves  
Keywords: Microbial activity  
Keywords: Crop residues  
Keywords: Basidiocarps  
Keywords: Peat  
Keywords: ENA 06:Food & Drugs  
Keywords: Chlorpyrifos  
Keywords: metribuzin  
Keywords: MED  
Keywords: Pesticides  
Keywords: Adsorption  
Keywords: Microorganisms  
Keywords: Environment Abstracts; Aqualine Abstracts; Pollution Abstracts  
Keywords: Vitaceae  
Keywords: Helianthus  
Date revised - 2011-10-01  
Language of summary - English  
Location - MED; ANE, Europe  
Pages - 914-921  
ProQuest ID - 814326662  
SubjectsTermNotLitGenreText - Phenoloxidase; Composts; Respiration; Leaves; Nutrients; Crop residues; Basidiocarps; Peat; Chlorpyrifos; azoxystrobin; Metalaxyl; metribuzin; Pesticides; Adsorption; Straw; crop residues; Degradation; Microbial activity; corn; Evaluation; Agricultural Chemicals; Corn; Microorganisms; Olea; Vitaceae; Helianthus; MED; ANE, Europe  
Last updated - 2011-12-08  
Corporate institution author - Karanasios, Evangelos; Tsiropoulos, Nikolaos G; Karpouzas, Dimitrios G; Menkissoglu-Spiroudi, Urania  
DOI - OB-39c6de36-8d25-407c-88adcsaobj202; 13249246; 0045-6535 English

658. Karas, Panagiotis A.; Perruchon, Chiara; Exarhou, Katerina; Ehaliotis, Constantinos, and Karpouzas, Dimitrios G. Potential for bioremediation of agro-industrial effluents with high loads of pesticides by selected fungi. 2011; 22, (1): 215-228.   
Rec #: 53229  
Keywords: MIXTURE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Wastewaters from the fruit packaging industry contain a high pesticide load and require treatment before their environmental discharge. We provide first evidence for the potential bioremediation of these wastewaters. Three white rot fungi (WRF) (Phanerochaete chrysosporium, Trametes versicolor, Pleurotus ostreatus) and an Aspergillus niger strain were tested in straw extract medium (StEM) and soil extract medium (SEM) for degrading the pesticides thiabendazole (TBZ), imazalil (IMZ), thiophanate methyl (TM), ortho-phenylphenol (OPP), diphenylamine (DPA) and chlorpyrifos (CHL). Peroxidase (LiP, MnP) and laccase (Lac) activity was also determined to investigate their involvement in pesticide degradation. T. versicolor and P. ostreatus were the most efficient degraders and degraded all pesticides (10 mg lĂ˘ÂÂ»Ă‚Âą) except TBZ, with maximum efficiency in StEM. The phenolic pesticides OPP and DPA were rapidly degraded by these two fungi with a concurrent increase in MnP and Lac activity. In contrast, these enzymes were not associated with the degradation of CHL, IMZ and TM implying the involvement of other enzymes. T. versicolor degraded spillage-level pesticide concentrations (50 mg lĂ˘ÂÂ»Ă‚Âą) either fully (DPA, OPP) or partially (TBZ, IMZ). The fungus was also able to rapidly degrade a mixture of TM/DPA (50 mg lĂ˘ÂÂ»Ă‚Âą), whereas it failed to degrade IMZ and TBZ when supplied in a mixture with OPP. Overall, T. versicolor and P. ostreatus showed great potential for the bioremediation of wastewaters from the fruit packaging industry. However, degradation of TBZ should be also achieved before further scaling up.  
Keywords: Fruit packaging industrial effluents  
Dordrecht : Springer Netherlands

659. Karczmar, A. G. Cholinesterases (ChEs) and the cholinergic system in ontogenesis and phylogenesis, and non-classical roles of cholinesterases-A review. 2010; 187, (1-3): 34-43.   
Rec #: 62569  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The enigma of the cholinergic function concerns the role of ChEs and other components of the cholinergic system in non-transmittive, non-synaptic phenomena. The notion that such unorthodox, non-classical phenomena must exist is clearly supported by several lines of evidence, such as the presence of ChEs and other cholinergic components early before neurogenesis, and indeed in unfertilized and fertilized eggs and in the sperm of many species, and their presence throughout phylogenesis, including non-motile, monocellular organisms, fungi and plants and many anervous and ephemeral tissues. The "flexibility" of ChEs, expressed in their polymorphism and their changeability during ontogenesis also speaks for the notion of non-classical functions of ChEs. Today, there is direct evidence that such functions do indeed exist, as for example, the evidence as to the role of ChEs and other cholinergic components in processes of cell proliferation and differentiation of synaptic and myoneural structures. Also, ChEs participate in cell communications as examplified by immunity processes, as well as pathological states, including Alzheimer's disease and states induced by "insults" such as stress and exposure to agents such as antiChEs. Finally, consistent with the non-classical roles of ChEs and cholinergic components are the morphogenetic and teratologic effects of antiChEs, including OP compounds and cholinergic agonists and antagonists. The structural homology between ChEs on the one hand, and adhesion molecules and protohormones on the other may explain some of this phenomenology. **It is proposed that the phylogenetic ubiquity of ChEs and their basic capacities that are important for evolutionary phylogenesis, such as the capacity to promote cell adhesion and cell communication speaks for ChEs as "Ur" proteins.** (C) 2010 Elsevier Ireland Ltd. All rights reserved.  
Keywords: Cholinesterases, Cholinergic system  
ISI Document Delivery No.: 641EW

660. Karimullina, E.; Li, Y.; Ginjupalli, G. K., and Baldwin, W. S. Daphnia HR96 is a Promiscuous Xenobiotic and Endobiotic Nuclear Receptor. 2012; 116-117, 69-78.   
Rec #: 2350  
Keywords: IN VITRO  
Call Number: NO IN VITRO (24D,24DXY,ATZ,CAC,CPY,CYP,IGS)  
Notes: EcoReference No.: 158135  
Chemical of Concern: 24D,24DXY,ATZ,BPA,CAC,CPY,CYP,EPRN,FXT,HCCH,IGS,MSMA,MXC,OLEA,PPCP,PPCP2011,PRN,PYX

661. Karpuzcu, M. Ekrem; Sedlak, David L., and Stringfellow, William T. Biotransformation of chlorpyrifos in riparian wetlands in agricultural watersheds: Implications for wetland management. 2013 Jan 15-; 244Çô245, (0): 111-120.   
Rec #: 1030  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Biodegradation of the organophosphate insecticide chlorpyrifos (O,O-diethyl O-(3,5,6-trichloropyridin-2-yl) phosphorothioate) in sediments from wetlands and agricultural drains in San Joaquin Valley, CA was investigated. Sediments were collected monthly, spiked with chlorpyrifos, and rates of chlorpyrifos degradation were measured using a standardized aerobic biodegradation assay. Phosphoesterase enzyme activities were measured and phosphotriesterase activity was related to observed biodegradation kinetics. First-order biodegradation rates varied between 0.02 and 0.69 dayêÆ1, after accounting for abiotic losses. The average rate of abiotic chlorpyrifos hydrolysis was 0.02 dêÆ1 at pH 7.2 and 30 -\_C. Sediments from the site exhibiting the highest chlorpyrifos degradation capacity were incubated under anaerobic conditions to assess the effect of redox conditions on degradation rates. Half-lives were 5 and 92 days under aerobic and anaerobic conditions, respectively. There was a consistent decrease in observed biodegradation rates at one site due to permanently flooded conditions prevailing during one sampling year. These results suggest that wetland management strategies such as allowing a wet-dry cycle could enhance degradation rates. There was significant correlation between phosphotriesterase (PTE) activity and the chlorpyrifos biotransformation rates, with this relationship varying among sites. PTE activities may be useful as an indicator of biodegradation potential with reference to the previously established site-specific correlations. Chlorpyrifos/ Organophosphate insecticides/ Wetlands/ Agricultural drainage/ Biodegradation

662. Karunanayake, Chandima P; Spinelli, John J; Mclaughlin, John R; Dosman, James a; Pahwa, Punam; Mcduffie, Helen H, and Karunanayake, Chandima P. Hodgkin Lymphoma and Pesticides Exposure in Men: a Canadian Case-Control Study. 2012 Jan; 17, (1): 30-39.   
Rec #: 42959  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The objective of this study was to investigate the putative associations of specific pesticides with Hodgkin lymphoma. A population-based, case-control study of Hodgkin lymphoma was conducted among males in six regions of Canada. Data were collected by a mailed questionnaire followed by a telephone interview to obtain detailed exposures data for those reporting greater than or equal to 10 hours per year of pesticide exposure. Conditional logistic regression was used to fit statisticalmodels. Comparisons of 316 Hodgkin lymphoma cases and 1506 controls identified several factors as predictors for increased Hodgkin lymphoma risk: family history of cancer, exposure to the insecticide chlorpyrifos [OR (95% CI) = 1.19 (1.03, 1.37)], and previous diagnosis of acne or shingles. The increased risk of developing Hodgkin lymphoma detected among Canadian men who used chlorpyrifos must be interpreted cautiously; however the strength of its association indicates that it requires investigation in other populations.  
Keywords: Chlorpyrifos  
Keywords: Genetics  
Keywords: Insecticides  
Keywords: H 5000:Pesticides  
Keywords: Males  
Keywords: Pesticides  
Keywords: Risk Abstracts; Health & Safety Science Abstracts; Environment Abstracts  
Keywords: R2 23060:Medical and environmental health  
Keywords: lymphoma  
Keywords: Cancer  
Keywords: ENA 02:Toxicology & Environmental Safety  
Date revised - 2012-09-01  
Language of summary - English  
Pages - 30-39  
ProQuest ID - 1038606658  
SubjectsTermNotLitGenreText - Chlorpyrifos; Genetics; Insecticides; Males; Pesticides; lymphoma; Cancer  
Last updated - 2012-10-08  
British nursing index edition - Journal of Agromedicine [J. Agromed.]. Vol. 17, no. 1, pp. 30-39. Jan 2012.  
Corporate institution author - Karunanayake, Chandima P; Spinelli, John J; McLaughlin, John R; Dosman, James A; Pahwa, Punam; McDuffie, Helen H  
DOI - 778959a7-c3f4-403e-b728mfgefd107; 17033049; 1059-924X; 1545-0813 English

663. Kashanian, S.; Shariati, Z.; Roshanfekr, H., and Ghobadi, S. DNA Binding Studies of 3, 5, 6-Trichloro-2-Pyridinol Pesticide Metabolite. 2012; 31, (7): 1341-1348.   
Rec #: 62599  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: 3, 5, 6-Trichloro-2-pyridinol (TCP) is a stable metabolite of two major pesticides, Chlopyrifos insecticide and Triclopyr herbicide, which are widely used in the world. The potential health hazard associated with TCP is identified due to its high affinity to the DNA molecule. Therefore, in this study, the interaction of native calf thymus DNA with TCP has been investigated using spectrophotometric, circular dichroism (CD), spectrofluorometric, viscometric and voltametric techniques. It was found that TCP molecules could interact with DNA via a groove-binding mode, as evidenced by hyperchromism, with no red shift in the UV absorption band of TCP, no changes in K(b) values in the presence of salt, no significant changes in the specific viscosity and CD spectra of DNA, and a decrease in peak currents with no shift in the voltamogram. In addition, TCP is able to release Hoechst 33258, a strong groove binder, in the DNA solutions. The results are indicative of the groove-binding mode of TCP to DNA.  
Keywords: CALF THYMUS DNA, MIXED-POLYPYRIDYL COMPLEXES, CLEAVAGE ACTIVITY,  
ISI Document Delivery No.: 973JU

664. Katagi, T. Surfactant Effects on Environmental Behavior of Pesticides. SOIL; 2008: 71-177.   
Rec #: 2060  
Keywords: REVIEW  
Call Number: NO REVIEW (ATZ,AZ,CPY,CTN,DM,DMT,FNT,FPN,OXF,PCZ,PHMD,PPCP,PPCP2011,PPG,PSM,TFN,TMP,VCZ)  
Notes: EcoReference No.: 151853  
Chemical of Concern: ATZ,AZ,BTC,CPY,CTN,DDT,DFPM,DLD,DM,DMT,FNT,FPN,HCCH,HPT,OXF,PCZ,PHMD,PPCP,PPCP2011,PPG,PSM,TFN,TMP,VCZ

665. Kayampilly, P. P.; Wanamaker, B. L.; Stewart, J. A.; Wagner, C. L., and Menon, K. M. Stimulatory Effect of Insulin on 5alpha-Reductase Type 1 (Srd5a1) Expression Through an Akt-Dependent Pathway in Ovarian Granulosa Cells.   
Rec #: 50439  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Mol Endocrinol. 1999 Jun;13(6):946-57 (medline /10379893)  
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COMMENTS: Cites: Methods. 2001 Dec;25(4):402-8 (medline /11846609)  
COMMENTS: Cites: Int J Cancer. 2005 Mar 20;114(2):190-4 (medline /15543614)  
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COMMENTS: Cites: Mol Endocrinol. 1996 Apr;10(4):380-92 (medline /8721983)  
COMMENTS: Cites: J Clin Endocrinol Metab. 1996 Oct;81(10):3686-91 (medline /8855823)  
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COMMENTS: Cites: Annu Rev Biochem. 1994;63:25-61 (medline /7979239)  
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COMMENTS: Cites: J Clin Endocrinol Metab. 2003 Jun;88(6):2760-6 (medline /12788885)  
COMMENTS: Cites: J Clin Invest. 1992 Jan;89(1):293-300 (medline /1345916)  
COMMENTS: Cites: Endocrinology. 2004 Jan;145(1):175-83 (medline /14512432)  
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COMMENTS: Cites: Fertil Steril. 2006 Jul;86 Suppl 1:S9-S11 (medline /16798289)  
COMMENTS: Cites: Endocrinology. 2007 Aug;148(8):3950-7 (medline /17510244)  
COMMENTS: Cites: J Clin Endocrinol Metab. 2009 Sep;94(9):3558-66 (medline /19567518)  
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COMMENTS: Cites: Endocrinology. 1982 Aug;111(2):614-24 (medline /6284486)  
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COMMENTS: Cites: J Endocrinol. 1980 Mar;84(3):409-19 (medline /7190181)  
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ABSTRACT: Elevated levels of 5&alpha;-reduced androgens have been shown to be associated with hyperandrogenism and hyperinsulinemia, the leading causes of ovulatory dysfunction in women. 5&alpha;-Dihydrotestosterone reduces ovarian granulosa cell proliferation by inhibiting FSH-mediated mitogenic signaling pathways. The present study examined the effect of insulin on 5&alpha;-reductase, the enzyme that catalyses the conversion of androgens to their 5&alpha;-derivatives. Granulosa cells isolated from immature rat ovaries were cultured in serum-free, phenol red-free DMEM-F12 media and treated with different doses of insulin (0, 0.1, 1.0, and 10.0 &mu;g/ml) for different time intervals up to 12 h. The expression of 5&alpha;-reductase type 1 mRNA, the predominant isoform found in granulosa cells, showed a significant (P < 0.05) increase in response to the insulin treatment up to 12 h compared with control. The catalytic activity of 5&alpha;-reductase enzyme was also stimulated in a dose-depended manner (P < 0.05). Inhibiting the Akt-dependent signaling pathway abolished the insulin-mediated increase in 5&alpha;-reductase mRNA expression, whereas inhibition of the ERK-dependent pathway had no effect. The dose-dependent increase in 5&alpha;-reductase mRNA expression as well as catalytic activity seen in response to insulin treatment was also demonstrated in the human granulosa cell line (KGN). In addition to increased mRNA expression, a dose-dependent increase in 5&alpha;-reductase protein expression in response to insulin was also seen in KGN cells, which corroborated well with that of mRNA expression. These results suggest that elevated levels of 5&alpha;-reduced androgens seen in hyperinsulinemic conditions might be explained on the basis of a stimulatory effect of insulin on 5&alpha;-reductase in granulosa cells. The elevated levels of these metabolites, in turn, might adversely affect growth and proliferation of granulosa cells, thereby impairing follicle growth and ovulation.  
MESH HEADINGS: 3-Oxo-5-alpha-Steroid 4-Dehydrogenase/\*genetics/metabolism  
MESH HEADINGS: Animals  
MESH HEADINGS: Cells, Cultured  
MESH HEADINGS: Dose-Response Relationship, Drug  
MESH HEADINGS: Enzyme Activation/drug effects  
MESH HEADINGS: Female  
MESH HEADINGS: Gene Expression Regulation, Enzymologic/drug effects  
MESH HEADINGS: Granulosa Cells/\*drug effects/enzymology/metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Insulin/\*pharmacology  
MESH HEADINGS: Membrane Proteins/\*genetics/metabolism  
MESH HEADINGS: Oncogene Protein v-akt/metabolism/\*physiology  
MESH HEADINGS: Ovary/drug effects/metabolism  
MESH HEADINGS: RNA, Messenger/metabolism  
MESH HEADINGS: Rats  
MESH HEADINGS: Rats, Sprague-Dawley  
MESH HEADINGS: Signal Transduction/drug effects/genetics  
MESH HEADINGS: Up-Regulation/drug effects eng

666. Kazmierczak, R. F. Jr.; Norton, G. W.; Knight, A. L.; Rajotte, E. G., and Hull, L. A. Economic Effects of Resistance and Withdrawal of Organophosphate Pesticides on an Apple Production System. 5570//: SOIL; 1993; 86, (3): 684-696.   
Rec #: 960  
Keywords: MODELING,REFS CHECKED  
Call Number: NO MODELING (CPY,MP), NO REFS CHECKED (CPY,MP)  
Notes: Chemical of Concern: CPY,MP

667. Kazos, E. A.; Nanos, C. G.; Stalikas, C. D., and Konidari, C. N. Simultaneous determination of chlorothalonil and its metabolite 4-hydroxychlorothalonil in greenhouse air: Dissipation process of chlorothalonil. 2008; 72, (10): 1413-1419.   
Rec #: 62679  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An analytical method was developed and tested for the simultaneous determination of chlorothalonil and its main metabolite 4-hydroxychlorothalonil, in airborne samples. High performance liquid chromatography equipped with Ultra-violet detector was used to separate and quantify the analytes. Glass microfibre filters for the collection of the analytes' particles were tested. Solid sorbents, such as Tenax, Florisil, XAD-2 and silica gel, were studied to find out the most suitable material for the collection of the analytes in the gas phase. The results have shown that only chlorothalonil was trapped in the vapor phase with highest results obtained when silica gel was the sorbent of choice. Linearity was demonstrated in a wide concentration range 0.01-10.00 mg L(-1). Recoveries from spiked glass microfibre filters and silica gel cartridges for chlorothalonil and 4-hydroxychlorothalonil were almost quantitative. The quantification limits were calculated to be 8.4 and 19.6 ng m(-3) in air for chlorothalonil and 4-hydroxychlorothalonil, respectively. The two analytes spiked on the GF/A filters and silica gel cartridges were proven to be stable for more than 15 days, at 4 degrees C and ambient temperature. The applicability of the present method was demonstrated by the analysis of the chlorothalonil and its metabolite in greenhouse air. (C) 2008 Elsevier Ltd. All rights reserved.  
Keywords: fungicides, chlorothalonil, 4-hydroxychlorothalonil, air sampling, HPLC  
ISI Document Delivery No.: 347UH

668. Keenan, J. J.; Vega, H., and Krieger, R. I. Potential exposure of children and adults to cypermethrin following use of indoor insecticide foggers. 2009; 44, (6): 538-545.   
Rec #: 62699  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The magnitude and distribution of cypermethrin from total release, over-the-counter foggers was studied in a test room and in residences to facilitate evaluation of regulatory exposure algorithms and new human exposure assessments based upon urine biomonitoring. Surface residue (SR) was evenly distributed in a small test room (3.6 mu g cypermethrin/cm(2)) where thorough mixing of the aerosol occurred. In a residence SR was significantly affected by room size and distance from the fogger. Air levels in the residence were as high as 30 mu g cypermethrin/cm(3) after 4.5 h. The availability of surface residues was measured with an automated surface cotton cloth wipe and ethyl acetate extraction. Only 5% of the SR was available from nylon carpet. Tile, wood and linoleum resulted in 30, 10, and 10% of SR being available, respectively. These data are used to estimate cypermethrin exposure of children and adults for comparison with existing regulatory reference dosages and exposure assessments based upon biomonitoring.  
Keywords: Pyrethroid exposure, children, cypermethrin, indoor, fogger  
ISI Document Delivery No.: 535VX

669. Keikotlhaile, B. M.; Spanoghe, P., and Steurbaut, W. Effects of food processing on pesticide residues in fruits and vegetables: A meta-analysis approach. 2010; 48, (1): 1-6.   
Rec #: 62709  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticides are widely used in food production to increase food security despite the fact that they can have negative health effects on consumers. Pesticide residues have been found in various fruits and vegetables; both raw and processed. One of the most common routes of pesticide exposure in consumers is via food consumption. Most foods are consumed after passing through various culinary and processing treatments. A few literature reviews have indicated the general trend of reduction or concentration of pesticide residues by certain methods of food processing for a particular active ingredient. However, no review has focused on combining the obtained results from different studies on different active ingredients with differences in experimental designs, analysts and analysis equipment. In this paper, we present a meta-analysis of response ratios as a possible method of combining and quantifying effects of food processing on pesticide residue levels. Reduction of residue levels was indicated by blanching, boiling. canning, frying, juicing, peeling and washing of fruits and vegetables with an average response ratio ranging from 0.10 to 0.82. Baking, boiling, canning and juicing indicated both reduction and increases for the 95% and 99.5% confidence intervals. (C) 2009 Elsevier Ltd. All rights reserved.  
Keywords: Food processing, Fruits, Meta-analysis, Pesticides, Vegetables  
ISI Document Delivery No.: 554UJ

670. Kelley, R. L.; Lee, O. K., and Shim, Y. K. Transcription Rate of Noncoding Rox1 Rna Controls Local Spreading of the Drosophila Msl Chromatin Remodeling Complex.   
Rec #: 51059  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Genetics. 1988 Mar;118(3):461-70 (medline /2835286)  
COMMENTS: Cites: Biotechnology. 1988;10:437-56 (medline /2850048)  
COMMENTS: Cites: Genetics. 2007 Nov;177(3):1429-37 (medline /18039876)  
COMMENTS: Cites: Genes Dev. 2007 Aug 15;21(16):2030-40 (medline /17699750)  
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COMMENTS: Cites: Science. 2006 Dec 15;314(5806):1747-51 (medline /17138868)  
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COMMENTS: Cites: Mech Dev. 2005 Oct;122(10):1094-105 (medline /16125915)  
COMMENTS: Cites: EMBO J. 2004 Jul 21;23(14):2853-61 (medline /15229655)  
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COMMENTS: Cites: Mol Cell Biol. 1987 Oct;7(10):3446-51 (medline /3316976)  
COMMENTS: Cites: Nature. 1980 Jun 19;285(5766):573-5 (medline /7402300)  
COMMENTS: Cites: Development. 1993 Jun;118(2):401-15 (medline /8223268)  
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COMMENTS: Cites: Mol Cell. 2003 Apr;11(4):977-86 (medline /12718883)  
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COMMENTS: Cites: Novartis Found Symp. 2004;259:48-56; discussion 56-62, 163-9 (medline /15171246)  
COMMENTS: Cites: PLoS Biol. 2004 Nov;2(11):e341 (medline /15502872)  
COMMENTS: Cites: Genes Dev. 2005 Oct 1;19(19):2284-8 (medline /16204179)  
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COMMENTS: Cites: Mol Cell. 1999 Jul;4(1):117-22 (medline /10445033)  
COMMENTS: Cites: Mol Cell Biol. 2000 Jan;20(1):312-8 (medline /10594033)  
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COMMENTS: Cites: Genetics. 2003 Jul;164(3):1003-14 (medline /12871910)  
ABSTRACT: The dosage compensation complex in Drosophila is composed of at least five MSL proteins and two noncoding roX RNAs that bind hundreds of sites along the single male X chromosome. The roX RNAs are transcribed from X-linked genes and their RNA products &quot;paint&quot; the male X. The roX RNAs and bound MSL proteins can spread in cis from sites of roX transcription, but the mechanism controlling spreading is unknown. Here we find that cis spreading from autosomal roX1 transgenes is coupled to the level of roX transcription. Low to moderate transcription favors, and vigorous transcription abolishes local spreading. We constructed a roX1 minigene one third the size of wild type as a starting point for mutagenesis. This allowed us to test which evolutionarily conserved motifs were required for activity. One short repeat element shared between roX1 and roX2 was found to be particularly important. When all copies were deleted, the RNA was inactive and unstable, while extra copies seem to promote local spreading of the MSL complex from sites of roX1 synthesis. We propose that assembly of the MSL proteins onto the extreme 3' region of elongating roX1 transcripts determines whether the MSL complex spreads in cis.  
MESH HEADINGS: Animals  
MESH HEADINGS: Chromatin/\*chemistry/metabolism  
MESH HEADINGS: Chromosomes/metabolism  
MESH HEADINGS: DNA Mutational Analysis  
MESH HEADINGS: Deoxyribonuclease I/metabolism  
MESH HEADINGS: Drosophila/enzymology/\*genetics  
MESH HEADINGS: Drosophila Proteins/\*genetics/metabolism/\*physiology  
MESH HEADINGS: Female  
MESH HEADINGS: Male  
MESH HEADINGS: Models, Genetic  
MESH HEADINGS: Mutagenesis  
MESH HEADINGS: RNA/\*metabolism  
MESH HEADINGS: RNA, Untranslated/\*genetics  
MESH HEADINGS: Transcription Factors/\*genetics/\*physiology  
MESH HEADINGS: \*Transcription, Genetic eng

671. Kenaga, E. E. and Dowell, F. H. Critique of "Biological Effects and Persistence of Dursban in Freshwater Ponds". 1970; 63, 43-52.   
Rec #: 2050  
Keywords: NO SOURCE  
Notes: Chemical of Concern: CPY

672. Kennedy, Marc C. Bayesian modelling of long-term dietary intakes from multiple sources. 2010 Jan; 48, (1): 250-263.   
Rec #: 4660  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Human exposure to a specific pesticide or other chemical can occur from a combination of food and drink products. Probabilistic risk assessments are used to quantify the distribution of mean total daily exposures in the population, from the available data on residues and consumptions. We present a new statistical method for estimating this distribution, based on dietary survey data for multiple food types and residue monitoring data. The model allows for between-food correlations in both frequency and amounts of consumption. Three case studies are presented based on consumption data for UK children, considering the distribution of daily intakes of pyrimethanil, captan and chlorpyrifos aggregated over 4, 6 and 10 food types, respectively. We compared three alternative approaches, each using a Bayesian approach to quantify uncertainty: (i) a multivariate model that explicitly includes correlation parameters; (ii) separate independent parametric models for individual food types and (iii) a single parametric model applied to intakes aggregated directly from the data. The results demonstrate the importance of accounting for correlations between foods, using model (i) or (iii), for example, but also show that model (iii) can produce very different results when the aggregated intakes distribution is bimodal. The influence of residue uncertainty is also demonstrated. Statistical model/ Pesticide exposure/ Uncertainty/ Usual intakes

673. Kennedy, Marc C; Roelofs, Victoria J; Anderson, Clive W; Salazar, Jose Domingo, and Kennedy, Marc C. A Hierarchical Bayesian Model for Extreme Pesticide Residues. 2011 Jan; 49, (1): 222-232.   
Rec #: 47499  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The number of residue measurements in an individual field trial, carried out to provide data for a pesticide registration for a particular crop, is generally too small to estimate upper tails of the residue distribution for that crop with any certainty. We present a new method, using extreme value theory, which pools information from various field trials, with different crop and pesticide combinations, to provide a common model for the upper tails of residue distributions generally. The method can be used to improve the estimation of high quantiles of a particular residue distribution. It provides a flexible alternative to the direct fitting of a distribution to each individual dataset, and does not require strong distributional assumptions. By using a hierarchical Bayesian model, our method also accounts for parameter uncertainty. The method is applied to a range of supervised trials containing residues on individual items (e.g. on individual apples), and the results illustrate the variation in tail properties amongst all commodities and pesticides. The outputs could be used to select conservative high percentile residue levels as part of a deterministic risk assessment, taking account of the variability between crops and pesticides and also the uncertainty due to relatively small datasets.  
Keywords: Risk assessment  
Keywords: Food And Food Industries  
Keywords: Data processing  
Keywords: Mathematical models  
Keywords: Pesticide residues  
Keywords: Bayesian analysis  
Keywords: Tails  
Keywords: Pesticides  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Crops  
Keywords: Models  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 222-232  
ProQuest ID - 855284705  
SubjectsTermNotLitGenreText - Risk assessment; Data processing; Mathematical models; Pesticide residues; Bayesian analysis; Tails; Pesticides; Crops; Models  
Last updated - 2011-12-13  
Corporate institution author - Kennedy, Marc C; Roelofs, Victoria J; Anderson, Clive W; Salazar, Jose Domingo  
DOI - OB-6ff1b456-4871-4e19-a874csamfg201; 14366190; 0278-6915 English

674. Keune, H.; Gutleb, A. C.; Zimmer, K. E.; Ravnum, S.; Yang, A.; Bartonova, A.; von Krauss, M. K.; Ropstad, E.; Eriksen, G. S.; Saunders, M.; Magnanti, B., and Forsberg, B. We're only in it for the knowledge? A problem solving turn in environment and health expert elicitation. 2012; 11, S3-S3.   
Rec #: 62749  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: The FP6 EU HENVINET project aimed at synthesizing the scientific information available on a number of topics of high relevance to policy makers in environment and health. The goal of the current paper is to reflect on the methodology that was used in the project, in view of exploring the usefulness of this and similar methodologies to the policy process. The topics investigated included health impacts of the brominated flame retardants decabrominated diphenylether (decaBDE) and hexabromocyclododecane (HBCD), phthalates highlighting di(2-ethylhexyl)phthalate (DEHP), the pesticide chlorpyrifos (CPF), nanoparticles, the impacts of climate change on asthma and other respiratory disorders, and the influence of environment health stressors on cancer induction. Methods: Initially the focus was on identifying knowledge gaps in the state of the art in scientific knowledge. Literature reviews covered all elements that compose the causal chain of the different environmental health issues from emissions to exposures, to effects and to health impacts. Through expert elicitation, knowledge gaps were highlighted by assessing expert confidence using calibrated confidence scales. During this work a complementary focus to that on knowledge gaps was developed through interdisciplinary reflections. By extending the scope of the endeavour from only a scientific perspective, to also include the more problem solving oriented policy perspective, the question of which kind of policy action experts consider justifiable was addressed. This was addressed by means of a questionnaire. In an expert workshop the results of both questionnaires were discussed as a basis for policy briefs. Results: The expert elicitation, the application of the calibrated confidence levels and the problem solving approach were all experienced as being quite challenging for the experts involved, as these approaches did not easily relate to mainstream environment and health scientific practices. Even so, most experts were quite positive about it. In particular, the opportunity to widen one's own horizon and to interactively exchange knowledge and debate with a diversity of experts seemed to be well appreciated in this approach. Different parts of the approach also helped in focussing on specific relevant aspects of scientific knowledge, and as such can be considered of reflective value. Conclusions: The approach developed by HENVINET was part of a practice of learning by doing and of interdisciplinary cooperation and negotiation. Ambitions were challenged by unforeseen complexities and difference of opinion and as no Holy Grail approach was at hand to copy or follow, it was quite an interesting but also complicated endeavour. Perfection, if this could be defined, seemed out of reach all the time. Nevertheless, many involved were quite positive about it. It seems that many felt that it fitted some important needs in current science when addressing the needs of policy making on such important issues, without anyone really having a clue on how to actually do this. Challenging questions remain on the quality of such approach and its product. Practice tells us that there probably is no best method and that the best we can do is dependent on contextual negotiation and learning from experiences that we think are relevant.  
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675. Khairy, Mohammed Abd; El-Hamid; Kolb, Marit; Mostafa, Alaa R; El-Fiky, Anwar, and Bahadir, Mă Fit. Risk Posed by Chlorinated Organic Compounds in Abu Qir Bay, East Alexandria, Egypt. 2012 Mar; 19, (3): 794-811.   
Rec #: 42829  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In Egypt, the picture of threats to humans and the environment from the exposure to organic pollutants is still incomplete. Thus the objectives of this study were to assess the occurrence and distribution of polychlorinated biphenyls (PCB), organochlorine pesticides, and chlorpyrifos in sediments and mussels of Abu Qir Bay and their risks for environment and human health. Twenty-three different compounds organochlorines were determined in 20 surfacial sediment and 10 mussel samples by gas chromatography-electron capture detector. A Screening Level Ecological Risk Assessment (SLERA) and a Human Health Risk Assessment (HHRA) were performed with the data. ÎŁDDT (DDT, DDE, DDD) (average concentration 27 ÎĽg/kg dw) dominated the detected organic pollutants in the sediments, followed by CHLs (chlordane, heptachlor, heptachloro epoxide), hexachlorocyclohexane, chlorpyrifos, endosulfane, dieldrine, ÎŁ6 PCBs, aldrine, hexachlorobenzene, pentachlorobenzene, methoxychlor, and mirex. In general, concentrations of ÎŁ6 PCBs in mussels were higher than their corresponding sediment concentrations reflecting their relatively high bioavailability and bioaccumulative potential. However, concentrations of the organochlorine pesticides in mussels were lower than their corresponding sediment samples. Nevertheless, the SLERA on the bay sediments revealed that adverse ecological effects to benthic species are expected to occur whereas the HHRA showed that adverse health effects are not expected to occur from the consumption of the mussels. With the help of a SLERA, it was possible to indicate which class of chlorinated organic compounds is of highest concern to assess and to improve the environmental quality of the bay. Monitoring of organochlorines and chlorpyrifos would be needed to control the future trend of pollution. [PUBLICATION ABSTRACT]  
Keywords: Animals  
Keywords: Bivalvia -- chemistry  
Keywords: Polychlorinated Biphenyls -- analysis  
Keywords: Insecticides  
Keywords: Dieldrin -- toxicity  
Keywords: Dieldrin -- chemistry  
Keywords: Dieldrin -- analysis  
Keywords: DDT -- toxicity  
Keywords: Insecticides -- chemistry  
Keywords: Water Pollutants, Chemical  
Keywords: 3300:Risk management  
Keywords: DDT -- chemistry  
Keywords: DDT -- analogs & derivatives  
Keywords: Insecticides -- toxicity  
Keywords: Water Pollutants, Chemical -- chemistry  
Keywords: Chlorpyrifos -- chemistry  
Keywords: Dieldrin  
Keywords: Water Quality  
Keywords: Lindane -- analysis  
Keywords: Risk Assessment -- methods  
Keywords: Insecticides -- analysis  
Keywords: Chlorpyrifos  
Keywords: 9177:Africa  
Keywords: Shellfish -- analysis  
Keywords: Hydrocarbons, Chlorinated -- toxicity  
Keywords: Chlorpyrifos -- toxicity  
Keywords: DDT  
Keywords: Hydrocarbons, Chlorinated -- chemistry  
Keywords: Geologic Sediments -- chemistry  
Keywords: Lindane -- chemistry  
Keywords: Water Pollutants, Chemical -- analysis  
Keywords: Humans  
Keywords: Water Pollutants, Chemical -- toxicity  
Keywords: Polychlorinated Biphenyls  
Keywords: 1540:Pollution control  
Keywords: Chlorpyrifos -- analysis  
Keywords: Environmental Studies--Pollution  
Keywords: Hydrocarbons, Chlorinated  
Keywords: DDT -- analysis  
Keywords: Chlordan -- toxicity  
Keywords: Lindane -- toxicity  
Keywords: Chromatography, Gas  
Keywords: Polychlorinated Biphenyls -- toxicity  
Keywords: Polychlorinated Biphenyls -- chemistry  
Keywords: Lindane  
Keywords: 9130:Experimental/theoretical  
Keywords: Egypt  
Keywords: Chlordan  
Keywords: Chlordan -- analysis  
Keywords: Hydrocarbons, Chlorinated -- analysis  
Keywords: Chlordan -- chemistry  
Keywords: Mediterranean Sea  
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SubjectsTermNotLitGenreText - Egypt  
Last updated - 2012-04-12  
Place of publication - Landsberg  
Corporate institution author - Khairy, Mohammed Abd; El-hamid; Kolb, Marit; Mostafa, Alaa R; El-fiky, Anwar; Bahadir, MĂĽfit  
DOI - 2591621561; 67521382; 108413; EVSP; 21948127; SPVLEVSP11356193605  
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676. Khamiss, O.; Lery, X.; Belal, M. H.; Badawy, H. A.; Gianotti, J., and Abol-Ela, S. M. Effects of Some Insecticides on the Division of a Spodoptera littoralis Cell Line and on the Replication of Sl Baculovirus (NPV). 1998; 33, (3): 349-355.   
Rec #: 970  
Keywords: IN VITRO  
Call Number: NO IN VITRO (CPY)  
Notes: Chemical of Concern: CPY

677. Khan, I. A. T.; Riazuddin; Parveen, Z., and Ahmed, M. Multi-residue determination of synthetic pyrethroids and organophosphorus pesticides in whole wheat flour using gas chromatography. 2007; 79, (4): 454-458.   
Rec #: 62799  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: CHLORPYRIFOS-METHYL, ORGANO-PHOSPHORUS, GRAIN  
ISI Document Delivery No.: 219VH

678. Khodarahmpour, Z; Hamidi, J, and Khodarahmpour, Z. Study of Yield and Yield Components of Corn (Zea Mays L.) Inbred Lines to Drought Stress. 2012 Feb 14; 11, (13): 3099-3105.   
Rec #: 42879  
Keywords: NO EFFECT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Several strains of bacteria were successfully isolated from effluent storage pools of factories producing pesticides and from soil moisture around them. The isolates were capable of utilizing **chlorpyrifos (Cp)** as the sole source of carbon, phosphorus and energy. Isolates were identified based on 16SrRNA sequence analysis and were named IRLM.1, IRLM.2, IRLM.3, IRLM.4, and IRLM.5. IRLM.1 was able to grow at concentrations of chlorpyrifos up to 2000 mg/L and was selected as a preferable isolate for further analysis. The amount of the degraded Cp and the amount of metabolite 3,5,6-trichloropyridinol (TCP) produced were assessed in IRLM.1 by using high performance liquid chromatography (HPLC) techniques. Additionally, the location of the chlorpyrifos-degrading enzyme was determined by comparing the activity of intact bacteria to cytoplasm activity. Our study reveals that Cp-degrading enzyme of IRLM.1 is cytoplasmic and 10 mu l cytoplasm isolated from 0.05 g dry-weight bacteria can degrade 50% of 2 mM Cp in 2 min. Furthermore, the HPLC analysis showed accumulation of TCP in the medium, revealing that IRLM.1 was able to degrade Cp without being affected by the antimicrobial activity of TCP. Moreover, results show that the IRLM.1 isolate could grow and utilize diazinon and malathion as the sole source of carbon, phosphorus and energy. Thus IRLM.1 can successfully participate in efficient degradation of organophosphorus compounds (OPs).  
Keywords: High-performance liquid chromatography  
Keywords: Antimicrobial activity  
Keywords: Organophosphorus compounds  
Keywords: Phosphorus  
Keywords: Stress  
Keywords: Enzymes  
Keywords: Metabolites  
Keywords: Effluents  
Keywords: Malathion  
Keywords: Chlorpyrifos  
Keywords: Carbon  
Keywords: Zea mays  
Keywords: Energy  
Keywords: Cytoplasm  
Keywords: Pesticides  
Keywords: Biotechnology and Bioengineering Abstracts  
Keywords: W 30915:Pharmaceuticals & Vaccines  
Keywords: Inbreeding  
Keywords: Soil moisture  
Keywords: Diazinon  
Keywords: Droughts  
Date revised - 2012-06-01  
Language of summary - English  
Pages - 3099-3105  
ProQuest ID - 1020852235  
SubjectsTermNotLitGenreText - High-performance liquid chromatography; Antimicrobial activity; Organophosphorus compounds; Phosphorus; Enzymes; Stress; Metabolites; Effluents; Malathion; Chlorpyrifos; Carbon; Energy; Cytoplasm; Pesticides; Inbreeding; Soil moisture; Diazinon; Droughts; Zea mays  
Last updated - 2012-12-03  
British nursing index edition - African Journal of Biotechnology [Afr. J. Biotech.]. Vol. 11, no. 13, pp. 3099-3105. 14 Feb 2012.  
Corporate institution author - Khodarahmpour, Z; Hamidi, J  
DOI - MD-0018775909; 16778186; 1684-5315 English

679. Ki, Yeo-Woon; Park, Jae Hyeon; Lee, Jeong Eun; Shin, In Chul, and Koh, Hyun Chul. JNK and p38 MAPK regulate oxidative stress and the inflammatory response in chlorpyrifos-induced apoptosis. (0).  
Rec #: 900  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: To investigate mechanisms of neuronal cell death in response to chlorpyrifos (CPF), a pesticide, we evaluated the regulation of ROS and COX-2 in human neuroblastoma SH-SY5Y cells treated with CPF. CPF treatment produced cytotoxic effects that appeared to involve an increase in ROS. In addition, CPF treatment activated MAPK pathways including JNK, ERK1/2, and p38 MAPK, and MAPK inhibitors abolished the cytotoxicity and reduced ROS generation. Our data demonstrate that CPF induced apoptosis involving MAPK activation through ROS production. Furthermore, after the CPF treatment, COX-2 expression increased. Interestingly, JNK and p38 MAPK inhibitors attenuated the CPF-induced COX-2 expression while an ERK1/2 inhibitor did not. These findings suggest that pathways involving JNK and p38 MAPK, but not ERK1/2, mediated apoptosis and are involved in the inflammatory response. In conclusion, the JNK and p38 MAPK pathways might be critical mediators in CPF-induced neuronal apoptosis by both generating ROS and up-regulating COX-2. Chlorpyrifos/ Reactive oxidative species/ Apoptosis/ Mitogen activated protein kinase/ Cyclooxygenase-2

680. Kim, Ho-Hyun; Lim, Young-Wook; Yang, Ji-Yeon; Shin, Dong-Chun; Ham, Hyun-Sook; Choi, Byung-Soon, and Lee, Jae-Young. Health risk assessment of exposure to chlorpyrifos and dichlorvos in children at childcare facilities. 2013 Feb 1-; 444, (0): 441-450.   
Rec #: 2250  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract Childcare facility/ Dichlorvos/ Indoor environment/ Organophosphorus pesticide/ Pesticide exposure

681. Kim, J H; Stevens, R C; Maccoss, Mj; Goodlett; Scherl, a; Richter, R J; Suzuki, S M; Furlong, Ce, and Kim, J H. Identification and Characterization of Biomarkers of Organophosphorus Exposures in Humans. 2009; 660, 61-72.   
Rec #: 45139  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Over 1 billion pounds of organophosphorus (OP) chemicals are manufactured worldwide each year, including 70 million pounds of pesticides sprayed in the US. Current methods to monitor environmental and occupational exposures to OPs such as chlorpyrifos (CPS) have limitations, including low specificity and sensitivity, and short time windows for detection. Biomarkers for the OP tricresyl phosphate (TCP), which can contaminate bleed air from jet engines and cause an occupational exposure of commercial airline pilots, crewmembers and passengers, have not been identified. The aim of our work has been to identify, purify, and characterize new biomarkers of OP exposure. Butyrylcholinesterase (BChE) inhibition has been a standard for monitoring OP exposure. By identifying and characterizing molecular biomarkers with longer half-lives, we should be able to clinically detect TCP and OP insecticide exposure after longer durations of time than are currently possible. Acylpeptide hydrolase (APH) is a red blood cell (RBC) cytosolic serine proteinase that removes N-acetylated amino acids from peptides and cleaves oxidized proteins. Due to its properties, it is an excellent candidate for a biomarker of exposure. We have been able to purify APH and detect inhibition by both CPS and metabolites of TCP. The 120-day lifetime of the RBC offers a much longer window for detecting exposure. The OP-modified serine conjugate in the active site tryptic peptide has been characterized by mass spectrometry. This research uses functional proteomics and enzyme activities to identify and characterize useful biomarkers of neurotoxic environmental and occupational OP exposures.  
Keywords: Amino acids  
Keywords: Serine proteinase  
Keywords: Erythrocytes  
Keywords: tricresyl phosphate  
Keywords: Enzymes  
Keywords: Metabolites  
Keywords: biomarkers  
Keywords: Mass spectroscopy  
Keywords: Chlorpyrifos  
Keywords: Insecticides  
Keywords: Acylaminoacyl-peptidase  
Keywords: Pesticides  
Keywords: Neurotoxicity  
Keywords: Tryptic peptides  
Keywords: proteomics  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Occupational exposure  
Keywords: Serine  
Date revised - 2010-06-01  
Language of summary - English  
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SubjectsTermNotLitGenreText - Amino acids; Serine proteinase; Erythrocytes; tricresyl phosphate; Enzymes; Metabolites; biomarkers; Mass spectroscopy; Chlorpyrifos; Insecticides; Acylaminoacyl-peptidase; Pesticides; Neurotoxicity; Tryptic peptides; proteomics; Occupational exposure; Serine  
Last updated - 2011-12-14  
British nursing index edition - Advances in Experimental Medicine and Biology [Adv. Exp. Med. Biol.]. Vol. 660, pp. 61-72. 2009.  
Corporate institution author - Kim, J H; Stevens, R C; MacCoss, MJ; Goodlett; Scherl, A; Richter, R J; Suzuki, S M; Furlong, CE  
DOI - MD-0013621953; 13028077; 0065-2598 English

682. Kim, Jun-Ran; Ahn, Young-Joon, and Ahn, Young-Joon. Identification and Characterization of Chlorpyrifos-Methyl and 3,5,6-Trichloro-2-Pyridinol Degrading Burkholderia Sp. Strain Kr100. 2009 Jul; 20, (4): 487-497.   
Rec #: 41119  
Keywords: FATE  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: A chlorpyrifos-methyl (CM) degrading bacterium (designated strain KR100) was isolated from a Korean rice paddy soil and was further tested for its sensitivity against eight commercial antibiotics. Based on morphological, biochemical, and molecular characteristics, this bacterium showed greatest similarity to members of the order Burkholderiales and was shown to be most closely related to members of the Burkholderia cepacia group. Strain KR100 hydrolyzed CM to 3,5,6-trichloro-2-pyridinol (TCP) and utilized TCP as the sole source of carbon for its growth. The isolate was also able to degrade chlorpyrifos, dimethoate, fenitrothion, malathion, and monocrotophos at 300 mu g/ml but diazinon, dicrotophos, parathion, and parathion-methyl at 100 mu g/ml. The ability to degrade CM was found to be encoded on a single plasmid of ~50kb, pKR1. Genes encoding resistance to amphotericin B, polymixin B sulfate, and tetracycline were also located on the plasmid. This bacterium merits further study as a potential biological agent for the remediation of soil, water, or crop contaminated with organophosphorus compounds because of its greater biodegradation activity and its broad specificity against a range of organophosphorus insecticides.  
Keywords: A 01380:Plant Protection, Fungicides & Seed Treatments  
Keywords: Sulfates  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Bioremediation  
Keywords: Biodegradation  
Keywords: Specificity  
Keywords: Biochemistry  
Keywords: P 5000:LAND POLLUTION  
Keywords: monocrotophos  
Keywords: EE 30:Soil Pollution: Monitoring, Control & Remediation  
Keywords: Antibiotics  
Keywords: Burkholderia cepacia  
Keywords: Tetracyclines  
Keywords: Strain  
Keywords: Malathion  
Keywords: Crops  
Keywords: Environmental Studies  
Keywords: J 02410:Animal Diseases  
Keywords: Soil  
Keywords: Carbon  
Keywords: Insecticides  
Keywords: Resistance  
Keywords: Rice fields  
Keywords: SW 3020:Sources and fate of pollution  
Keywords: AQ 00002:Water Quality  
Keywords: Sensitivity  
Keywords: Amphotericin B  
Keywords: Microbiology Abstracts B: Bacteriology; Pollution Abstracts; Water Resources Abstracts; Environmental Engineering Abstracts; Aqualine Abstracts; Microbiology Abstracts A: Industrial & Applied Microbiology; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Organophosphorus compounds  
Keywords: carbon sources  
Keywords: Oryza sativa  
Keywords: Fenitrothion  
Keywords: Strains  
Keywords: Plasmids  
Keywords: Water pollution  
Keywords: Sulfate  
Keywords: Chlorpyrifos  
Keywords: Pesticides  
Keywords: Remediation  
Keywords: W 30915:Pharmaceuticals & Vaccines  
Keywords: Dimethoate  
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683. Kim, S. J.; Park, G. H.; Kim, D.; Lee, J.; Min, H.; Wall, E.; Lee, C. J.; Simon, M. I.; Lee, S. J., and Han, S. K. Analysis of Cellular and Behavioral Responses to Imiquimod Reveals a Unique Itch Pathway in Transient Receptor Potential Vanilloid 1 (Trpv1)-Expressing Neurons.   
Rec #: 50269  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Int J STD AIDS. 2001 Jan;12(1):22-8 (medline /11177478)  
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ABSTRACT: Despite its clinical importance, the mechanisms that mediate or generate itch are poorly defined. The identification of pruritic compounds offers insight into understanding the molecular and cellular basis of itch. Imiquimod (IQ) is an agonist of Toll-like receptor 7 (TLR7) used to treat various infectious skin diseases such as genital warts, keratosis, and basal cell carcinoma. Itch is reportedly one of the major side effects developed during IQ treatments. We found that IQ acts as a potent itch-evoking compound (pruritogen) in mice via direct excitation of sensory neurons. Combined studies of scratching behavior, patch-clamp recording, and Ca(2+) response revealed the existence of a unique intracellular mechanism, which is independent of TLR7 as well as different from the mechanisms exploited by other well-characterized pruritogens. Nevertheless, as for other pruritogens, IQ requires the presence of transient receptor potential vanilloid 1 (TRPV1)-expressing neurons for itch-associated responses. Our data provide evidence supporting the hypothesis that there is a specific subset of TRPV1-expressing neurons that is equipped with diverse intracellular mechanisms that respond to histamine, chloroquine, and IQ.  
MESH HEADINGS: Aminoquinolines/adverse effects/\*pharmacology  
MESH HEADINGS: Animals  
MESH HEADINGS: Chloroquine/pharmacology  
MESH HEADINGS: Histamine/pharmacology  
MESH HEADINGS: Interferon Inducers  
MESH HEADINGS: Mice  
MESH HEADINGS: Neurons/\*chemistry  
MESH HEADINGS: Pruritus/chemically induced/etiology/\*metabolism  
MESH HEADINGS: TRPV Cation Channels/\*analysis eng

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Rec #: 51499  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
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COMMENTS: Cites: EMBO J. 1996 Jul 15;15(14):3621-32 (medline /8670865)  
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COMMENTS: Cites: J Biol Chem. 1997 Nov 21;272(47):29460-7 (medline /9368005)  
COMMENTS: Cites: Curr Biol. 1997 Oct 1;7(10):776-89 (medline /9368760)  
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COMMENTS: Cites: FEBS Lett. 1995 May 8;364(2):229-33 (medline /7750577)  
ABSTRACT: Endogenous factors, including hormones, growth factors and cytokines, play an important role in the regulation of hepatic drug metabolizing enzyme expression in both physiological and pathophysiological conditions. Diabetes, fasting, obesity, protein-calorie malnutrition and long-term alcohol consumption produce changes in hepatic drug metabolizing enzyme gene and protein expression. This difference in expression alters the metabolism of xenobiotics, including procarcinogens, carcinogens, toxicants and therapeutic agents, potentially impacting the efficacy and safety of therapeutic agents, and/or resulting in drug-drug interactions. Although the mechanisms by which xenobiotics regulate drug metabolizing enzymes have been studied intensively, less is known regarding the cellular signaling pathways and components which regulate drug metabolizing enzyme gene and protein expression in response to hormones and cytokines. Recent findings, however, have revealed that several cellular signaling pathways are involved in hormone- and growth factor-mediated regulation of drug metabolizing enzymes. Our laboratory has reported that insulin and growth factors regulate drug metabolizing enzyme gene and protein expression, including cytochromes P450 (CYP), glutathione S-transferases (GST) and microsomal epoxide hydrolase (mEH), through receptors which are members of the large receptor tyrosine kinase (RTK) family, and by downstream effectors such as phosphatidylinositol 3-kinase, mitogen activated protein kinase (MAPK), Akt/protein kinase B (PKB), mammalian target of rapamycin (mTOR), and the p70 ribosomal protein S6 kinase (p70S6 kinase). Here, we review current knowledge of the signaling pathways implicated in regulation of drug metabolizing enzyme gene and protein expression in response to insulin and growth factors, with the goal of increasing our understanding of how disease affects these signaling pathways, components, and ultimately gene expression and translational control.  
MESH HEADINGS: Animals  
MESH HEADINGS: Cytochrome P-450 Enzyme System/biosynthesis/genetics  
MESH HEADINGS: Epoxide Hydrolases/biosynthesis/genetics  
MESH HEADINGS: \*Gene Expression Regulation, Enzymologic/drug effects  
MESH HEADINGS: Glutamate-Cysteine Ligase/biosynthesis/genetics  
MESH HEADINGS: Glutathione Transferase/biosynthesis/genetics  
MESH HEADINGS: Humans  
MESH HEADINGS: Hypoglycemic Agents/\*metabolism/pharmacology  
MESH HEADINGS: Insulin/\*metabolism/pharmacology  
MESH HEADINGS: Intercellular Signaling Peptides and Proteins/metabolism  
MESH HEADINGS: Isoenzymes  
MESH HEADINGS: Liver/drug effects/\*enzymology  
MESH HEADINGS: MAP Kinase Signaling System/drug effects  
MESH HEADINGS: Metabolic Detoxication, Phase II/genetics  
MESH HEADINGS: Phosphoric Monoester Hydrolases/metabolism  
MESH HEADINGS: Receptor, Insulin/metabolism  
MESH HEADINGS: Receptors, Growth Factor/metabolism  
MESH HEADINGS: \*Signal Transduction/drug effects eng

685. Kim, Young Ah; Lee, Eun-Hye; Kim, Kwang-Ok; Lee, Yong Tae; Hammock, Bruce D; Lee, Hye-Sung, and Kim, Young Ah. Competitive Immunochromatographic Assay for the Detection of the Organophosphorus Pesticide Chlorpyrifos. 2011 May 5; 693, (1-2): 106-113.   
Rec #: 39759  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An immunochromatographic assay (ICA) based on competitive antigen-coated format using colloidal gold as the label was developed for the detection of the organophosphorus insecticide chlorpyrifos. The ICA test strip consisted of a membrane with a detection zone, a sample pad and an absorbent pad. The membrane was separately coated with chlorpyrifos Hapten-OVA conjugate (test line) and anti-mouse IgG (control line). Based on the fact that the competition is between the migrating analyte in the sample and the analyte hapten immobilized on the test strip for the binding sites of the antibody-colloidal gold (Ab-CG) conjugate migrating on the test strip, this study suggests that the relative migration speed between the two migrating substances is a critically important factor for the sensitive detection by competitive ICA. This criterion was utilized for the confirmation of appropriateness of a nitrocellulose (NC) membrane for chlorpyrifos ICA. The detection limit of the ICA for chlorpyrifos standard and chlorpyrifos spiked into agricultural samples were 10 and 50 ng mL[super]-1, respectively. The assay time for the ICA test was less than 10 min, suitable for rapid on-site testing of chlorpyrifos.  
Keywords: ENA 06:Food & Drugs  
Keywords: Chlorpyrifos  
Keywords: migration  
Keywords: Organophosphorus compounds  
Keywords: Membranes  
Keywords: Pesticides  
Keywords: Gold  
Keywords: Assays  
Keywords: Environment Abstracts  
Keywords: absorbents  
Keywords: competition  
Date revised - 2012-01-01  
Language of summary - English  
Pages - 106-113  
ProQuest ID - 889429190  
SubjectsTermNotLitGenreText - Chlorpyrifos; migration; Organophosphorus compounds; Membranes; Pesticides; Assays; Gold; absorbents; competition  
Last updated - 2012-03-29  
British nursing index edition - Analytica Chimica Acta [Anal. Chim. Acta]. Vol. 693, no. 1-2, pp. 106-113. 5 May 2011.  
Corporate institution author - Kim, Young Ah; Lee, Eun-Hye; Kim, Kwang-Ok; Lee, Yong Tae; Hammock, Bruce D; Lee, Hye-Sung  
DOI - 25251078-d71a-4399-aa4dcsaobj201; 14977512; 0003-2670 English

686. Kimura, H.; Tsukagoshi, H.; Aoyama, Y.; Nishina, A.; Yamaguchi, T.; Iijima, A.; Kato, M., and Kozawa, K. Relationships between cellular events and signaling pathways in various pesticide-affected neural cells. 2010; 29, (2): 43-50.   
Rec #: 62889  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Various pesticides are considered hazardous to human health. Of particular concern are potential problems of neurotoxicity associated with their use. Cellular toxicity may manifest as a variety of biological events, such as carcinogenesis (mutagenesis) and/or cell death. Recent reports indicate that signaling pathways regulate these cellular events. Thus, the toxicity of pesticides in cells may involve modulation of signaling pathways. In this review, we mainly focus on relationships between cellular events and signaling pathways in various pesticide-affected neural cells. Our data and those of related studies suggest that these pesticides affect both the viability and various signaling pathways of neural cells.  
Keywords: PC12 cells, neuronal differentiation, organophosphate, pyrethroid,  
ISI Document Delivery No.: 628GQ

687. Kiss, Attila; Virag, Diana, and Kiss, Attila. Photostability and Photodegradation Pathways of Distinctive Pesticides. 2009; 38, (1): 157-163.   
Rec #: 45239  
Keywords: FATE  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Transformation of pesticides in the environment is a highly complex process affected by different factors. Biological and physical-chemical factors may play a role in the degradation to variable extent. Photodecomposition might be regarded as one of the most crucial factors affecting the fate of pesticides. Therefore, our study focused on revealing specific details of the photolytic degradation of pesticides. The toxicity of the examined pesticides is well known; however, little information is available regarding their natural degradation processes. More detailed examinations are required to reveal the exact mechanism of the pesticide decomposition and the biological impacts of the degradates. Significance of this study is enhanced by the fact that decomposition of pesticides may result in the formation of toxic degradation products. The photolytic degradation of frequently applied pesticides (e.g., acetochlor, simazine, chlorpyrifos, and carbendazim) with different chemical structures was investigated. An immersible ultraviolet light source was applied to induce photodegradation. The degradation processes were followed by thin-layer chromatography and gas chromatography/mass spectrometry techniques. Electron ionization mass spectrometry was used to identify the degradation species. Detailed mechanisms of photolytic transformation were established by identification of each degradate. The photolytic degradation of pesticides of distinctive chemical character exhibited markedly different photodecomposition mechanisms. At least four degradation species were detected and identified in each case. Loss of alkyl, chloro, and hydroxyl groups as well as cleavage of alkyloxy, amide, amino-alkyl, and ester bonds might be regarded as typical decomposition patterns. Deamination and ring opening might be observed at the last stages of decomposition.  
Keywords: Chromatography  
Keywords: Mass spectrometry  
Keywords: Herbicides  
Keywords: Simazine  
Keywords: Toxicity  
Keywords: Esters  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Decomposition  
Keywords: Chlorpyrifos  
Keywords: acetochlor  
Keywords: Amides  
Keywords: Photodegradation  
Keywords: Gas chromatography  
Keywords: light sources  
Keywords: Pesticides  
Keywords: Pollution Abstracts  
Date revised - 2009-02-01  
Language of summary - English  
Pages - 157-163  
ProQuest ID - 20290262  
SubjectsTermNotLitGenreText - Chromatography; Mass spectrometry; Simazine; Herbicides; Toxicity; Esters; Decomposition; Chlorpyrifos; acetochlor; Amides; Photodegradation; light sources; Gas chromatography; Pesticides  
Last updated - 2011-12-14  
British nursing index edition - Journal of Environmental Quality [J. Environ. Qual.]. Vol. 38, no. 1, pp. 157-163. 2009.  
Corporate institution author - Kiss, Attila; Virag, Diana  
DOI - MD-0009236223; 8932655; 0047-2425; 1537-2537 English

688. Kissel, J. C. The mismeasure of dermal absorption. 2011; 21, (3): 302-309.   
Rec #: 62909  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The results of dermal absorption experiments are routinely and often exclusively reported in terms of fractional absorption. However, fractional absorption is not generally independent of skin loading conditions. As a consequence, experimental outcomes are commonly misinterpreted. This can lead in turn to poor estimation of exposures under field conditions and inadequate threat assessment. To aid interpretation of dermal absorption-related phenomena, a dimensionless group representing the ratio of mass delivery to plausible absorptive flux under experimental or environmental conditions is proposed. High values of the dimensionless dermal number (N(DERM)) connote surplus supply (i.e., flux-limited) conditions. Under such conditions, fractional absorption will generally depend on load and should not be assumed transferable to other conditions. At low values of NDERM, dermal absorption will be delivery-limited. Under those conditions, high fractional absorption is feasible barring maldistribution or depletion due to volatilization, washing, mechanical abrasion or other means. Similar logic also applies to skin sampling and dermal toxicity testing. Skin surface sampling at low NDERM is unlikely to provide an appropriate measure of potential dermal dose due to depletion, whereas dermal toxicity testing at high NDERM is unlikely to show dose dependence due to saturation. Journal of Exposure Science and Environmental Epidemiology (2011) 21, 302-309; doi:10.1038/jes.2010.22; published online 28 April 2010  
Keywords: availability, dimensionless number, flux, skin  
ISI Document Delivery No.: 752RY

689. Kitos, P. A. and Suntornwat, O. Teratogenic Effects of Organophosphorus Compounds. 1992: 387-417.   
Rec #: 1980  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (CPY,DCTP,DDVP,DZ,FNT,MLN,MP,MTM,MVP,TCF), NO REVIEW (CPY,DCTP,DDVP,DZ,FNT,MLN,MP,MTM,MVP,TCF)  
Notes: Chemical of Concern: CPY,DCTP,DDVP,DEM,DZ,EPRN,ETN,FNT,FNTH,MLN,MP,MTM,MVP,PPHD,PRN,TCF

690. Klassen, W. and Schwartz, P. H. Jr. ARS Research Program in Chemical Insect Control. SOIL; 1985; 8, 267-292.   
Rec #: 980  
Keywords: NO TOX DATA  
Call Number: NO TOX DATA (ACP,ADC,AMZ,ATN,AZ,AlP,As,CBL,CBNDS,CLP,CPY,DCF,DCTP,DDVP,DFZ,DMT,DS,DZ,ES,FNT,FNV,MB,MCB,MDT,MLN,MOM,MP,MTM,MVP,Naled,OML,OXD,PIRE,PMR,PPB,PPG,PPX,PRT,PSM,RSM,RTN,SFR,SMT,TBO,TVP)  
Notes: Chemical of Concern: ACP,ADC,AMZ,AND,ATN,AZ,AlP,As,BDC,CBL,CBNDS,CHD,CHX,CLP,CPY,CTC,DCF,DCTP,DDT,DDVP,DEM,DFZ,DLD,DMT,DS,DZ,EDB,EN,EPRN,ES,ETN,FNF,FNT,FNTH,FNV,HPT,IFP,MB,MCB,MDT,MLN,MOM,MP,MTM,MVP,MXC,Naled,OML,OXD,PIRE,PMR,PPB,PPG,PPHD,PPX,PRN,PRT,PSM,PYN,Pb,RSM,RTN,RYA,SFR,SMT,SPS,TBO,TPH,TVP

691. Klein, I. H.; Abrahams, A. C.; Van Ede, T.; Oey, P. L.; Ligtenberg, G., and Blankestijn, P. J. Differential Effects of Acute and Sustained Cyclosporine and Tacrolimus on Sympathetic Nerve Activity.   
Rec #: 50479  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Comment in: J Hypertens. 2010 Sep;28(9):1809-10 (medline /20699713)  
ABSTRACT: BACKGROUND: We studied the effect of acute and sustained cyclosporine and tacrolimus on muscle sympathetic nerve activity (MSNA) in groups of healthy male volunteers.  
ABSTRACT: METHODS AND RESULTS: Acute cyclosporine in normal dose (2.5 mg/kg) increased MSNA from 11 +/- 6 to 19 +/- 8 bursts/min (P < 0.05). Acute cyclosporine in high dose (10 mg/kg) increased MSNA from 13 +/- 6 to 25 +/- 4 bursts/min (P < 0.05) and increased heart rate and mean arterial pressure (heart rate from 64 +/- 8 to 74 +/- 6 b.p.m., MAP from 92 +/- 10 to 105 +/- 8 mmHg; both P < 0.05). Sustained cyclosporine (2.5 mg/kg b.i.d. for 2 weeks) suppressed MSNA from 14 +/- 6 to 8 +/- 7 bursts/min (P < 0.05). Blood pressure increased from 89 +/- 6 to 98 +/- 6 mmHg (P < 0.05). Body weight increased and plasma renin activity was suppressed. Acute tacrolimus in regular dose (0.05 mg/kg) and high dose (0.20 mg/kg) had no effect on MSNA and blood pressure. Sustained tacrolimus (0.05 mg/kg b.i.d. for 2 weeks) had no effect on blood pressure, body weight and plasma renin activity, but decreased MSNA from 14 +/- 6 to 8 +/- 5 bursts/min (P < 0.05).  
ABSTRACT: CONCLUSION: Sympathetic overactivity plays a role in the acute hypertensive action of cyclosporine. Cyclosporine given during 2 weeks increases blood pressure and suppresses MSNA, possibly by volume retention. Tacrolimus, in the presently applied dosages, does not cause hypertension or sympathetic overactivity. However, sustained tacrolimus also suppresses sympathetic activity, the reason of which is unclear.  
MESH HEADINGS: Blood Pressure/drug effects  
MESH HEADINGS: Body Weight/drug effects  
MESH HEADINGS: Calcineurin/\*antagonists &amp  
MESH HEADINGS: inhibitors  
MESH HEADINGS: Cyclosporine/\*administration &amp  
MESH HEADINGS: dosage/\*adverse effects  
MESH HEADINGS: Dose-Response Relationship, Drug  
MESH HEADINGS: Heart Rate/drug effects  
MESH HEADINGS: Humans  
MESH HEADINGS: Hypertension/\*chemically induced/\*physiopathology  
MESH HEADINGS: Immunosuppressive Agents/administration &amp  
MESH HEADINGS: dosage/\*adverse effects  
MESH HEADINGS: Male  
MESH HEADINGS: Renin/blood  
MESH HEADINGS: Sympathetic Nervous System/\*drug effects/\*physiopathology  
MESH HEADINGS: Tacrolimus/administration &amp  
MESH HEADINGS: dosage/\*adverse effects eng

692. Knaak, James B.; Tan, Cecilla, and Dary, Curt C. Chapter Five - Pesticide Regulations: Exposure-Dose Modeling from FIFRA to FQPA. Ernest Hodgson. Progress in Molecular Biology and Translational Science: Toxicology and Human Environments. Volume 112 ed. Academic Press; 2012: 117-162.   
Rec #: 3430  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ISSN/ISBN: 1877-1173 Abstract Organophosphorus insecticides/ Carbamate insecticides/ Pyrethroid insecticide/ Probabilistic models/ Physiological pharmacokinetic models/ FIFRA/ FFDCA/ FQPA/ Pesticide mixtures/ Parathion/ Chlorpyrifos/ Paraoxon/ Chlorpyrifos-oxon/ Acetylcholinesterase/ **Vmax/ Km/ Urinary metabolites**/ Risk assessment

693. Knezevic, Zorka; Serdar, Maja, and Knezevic, Zorka. Screening of Fresh Fruit and Vegetables for Pesticide Residues on Croatian Market. 2009 Apr; 20, (4): 419-422.   
Rec #: 44899  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The aim of this study was to investigate pesticide residues in market foods in Croatia. A total of 240 samples of fresh fruit and vegetables from import and domestic production were analyzed. Pesticide resides were determined by gas chromatography with mass selective detector (GC-MSD). Sample extract was cleaned up using gel permeation chromatography (GPC). In 66.7% of the samples no residues were found, 25.8% of samples contained pesticide residues at or below MRL, and 7.5% of samples contained pesticide residues above MRL. Most frequently found pesticides were imazalil (found in 35 samples) and chlorpyrifos (found in 24 samples). The findings of this study pointed to the following recommendations: the need for a monitoring program for pesticide residues in food crops, especially imported food crops.  
Keywords: Chlorpyrifos  
Keywords: Fruits  
Keywords: Vegetables  
Keywords: Pesticide residues  
Keywords: Gas chromatography  
Keywords: Food  
Keywords: Pesticides  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Crops  
Date revised - 2008-12-01  
Language of summary - English  
Pages - 419-422  
ProQuest ID - 19692334  
SubjectsTermNotLitGenreText - Pesticide residues; Food; Pesticides; Vegetables; Fruits; Crops; Gas chromatography; Chlorpyrifos  
Last updated - 2011-12-14  
British nursing index edition - Food Control [Food Control]. Vol. 20, no. 4, pp. 419-422. Apr 2009.  
Corporate institution author - Knezevic, Zorka; Serdar, Maja  
DOI - MD-0008895023; 8683328; 0956-7135 English

694. Knodel, Janet. New formulation of Lorsban for 2009 . 2008 July 24, issue 11.  
Rec #: 53309  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: Internet resource  
1022986443

695. Knudsen, Thomas B; Houck, Keith a; Sipes, Nisha S; Singh, Amar V; Judson, Richard S; Martin, Matthew T; Weissman, Arthur; Kleinstreuer, Nicole C; Mortensen, Holly M; Reif, David M; Rabinowitz, James R; Setzer, Rwoodrow; Richard, Ann M; Dix, David J; Kavlock, Robert J, and Reif, David M. Activity Profiles of 309 Toxcast(Tm) Chemicals Evaluated Across 292 Biochemical Targets. 2011 Mar 28; 282, (1-2): 1-15.   
Rec #: 47379  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Understanding the potential health risks posed by environmental chemicals is a significant challenge elevated by the large number of diverse chemicals with generally uncharacterized exposures, mechanisms, and toxicities. The present study is a performance evaluation and critical analysis of assay results for an array of 292 high-throughput cell-free assays aimed at preliminary toxicity evaluation of 320 environmental chemicals in EPA's ToxCast(TM) project (Phase I). The chemicals (309 unique, 11 replicates) were mainly precursors or the active agent of commercial pesticides, for which a wealth of in vivo toxicity data is available. **Biochemical HTS (high-throughput screening) profiled cell and tissue extracts using semi-automated biochemical and pharmacological methodologies to evaluate a subset of G-protein coupled receptors (GPCRs), CYP450 enzymes (CYPs), kinases, phosphatases, proteases, HDACs, nuclear receptors, ion channels, and transporters**. The primary screen tested all chemicals at a relatively high concentration 25 mu M concentration (or 10 mu M for CYP assays), and a secondary screen re-tested 9132 chemical-assay pairs in 8-point concentration series from 0.023 to 50 mu M (or 0.009-20 mu M for CYPs). Mapping relationships across 93,440 chemical-assay pairs based on half-maximal activity concentration (AC50) revealed both known and novel targets in signaling and metabolic pathways. The primary dataset, summary data and details on quality control checks are available for download at http://www.epa.gov/ncct/toxcast/.  
Keywords: Risk assessment  
Keywords: Chemicals  
Keywords: Biochemistry  
Keywords: Q5 01502:Methods and instruments  
Keywords: Ion channels  
Keywords: Metabolic pathways  
Keywords: Proteinase  
Keywords: high-throughput screening  
Keywords: Mapping  
Keywords: X 24330:Agrochemicals  
Keywords: Phosphatase  
Keywords: Toxicology  
Keywords: Screening  
Keywords: Histone deacetylase  
Keywords: Pharmacy And Pharmacology  
Keywords: Data processing  
Keywords: double prime G protein-coupled receptors  
Keywords: Nuclear receptors  
Keywords: Receptors  
Keywords: Enzymes  
Keywords: Toxicity  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: EPA  
Keywords: Quality control  
Keywords: Pesticides  
Keywords: Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Environment Abstracts; Toxicology Abstracts  
Keywords: Signal transduction  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 1-15  
ProQuest ID - 886614325  
SubjectsTermNotLitGenreText - Screening; Quality control; Pesticides; Receptors; Phosphatase; Toxicology; Histone deacetylase; Data processing; double prime G protein-coupled receptors; Nuclear receptors; Enzymes; Toxicity; Ion channels; Metabolic pathways; Proteinase; high-throughput screening; Mapping; Signal transduction; Risk assessment; Chemicals; EPA; Biochemistry  
Last updated - 2011-12-13  
Corporate institution author - Knudsen, Thomas B; Houck, Keith A; Sipes, Nisha S; Singh, Amar V; Judson, Richard S; Martin, Matthew T; Weissman, Arthur; Kleinstreuer, Nicole C; Mortensen, Holly M; Reif, David M; Rabinowitz, James R; Setzer, RWoodrow; Richard, Ann M; Dix, David J; Kavlock, Robert J  
DOI - OB-bdba0d4a-2be7-4b03-9c09csamfg201; 14515435; CS1147059; 0300-483X English

696. Kobayash, Maki; Takano, Ichiro; Tamura, Yasuhiro; Tomizawa, Sanae; Tateishi, Yukinari; Sakai, Naoko; Kamijo, Kyoko; Ibe, Akihiro; Nagayama, Toshihiro, and Kobayash, Maki. Survey of Pesticide Residues in Imported Cereal Products (1994.4[Approx]2006.3). 2008; 49, (3): 249-260.   
Rec #: 46249  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A survey of pesticide residues in 490 imported cereal products on the Tokyo market from April 1994 to March 2006 was carried out. Eight kinds of organophosphorus pesticides (chlorpyrifos, chlorpyrifos-methyl, DDVP, diazinon, etrimfos, malathion, MEP and pirimiphos-methyl) were detected at levels between Tr (below 0.01 ppm) and 0.82 ppm from 91 samples. In our investigations, chlorpyrifos-methyl and malathion tended to be detected in samples from America, pirimiphos-methyl in those from Europe, and MEP in those from Oceania. Thus, pesticide residues seemed to be different in produce from different areas. Residue levels of these pesticides were calculated as between 0.08 and 13.2% of their ADI values according to the daily intake of cereal products. Therefore, these cereal products should be safe for normal usage.  
Keywords: Chlorpyrifos  
Keywords: Pesticide residues  
Keywords: H 5000:Pesticides  
Keywords: ANE, Europe  
Keywords: Pesticides  
Keywords: Oceania  
Keywords: Health & Safety Science Abstracts  
Keywords: Diazinon  
Keywords: Malathion  
Keywords: INW, Japan, Honshu, Tokyo Prefect., Tokyo  
Date revised - 2011-05-01  
Language of summary - English  
Location - ANE, Europe; Oceania; INW, Japan, Honshu, Tokyo Prefect., Tokyo  
Pages - 249-260  
ProQuest ID - 867746332  
SubjectsTermNotLitGenreText - Chlorpyrifos; Pesticide residues; Pesticides; Diazinon; Malathion; ANE, Europe; Oceania; INW, Japan, Honshu, Tokyo Prefect., Tokyo  
Last updated - 2013-02-08  
British nursing index edition - Food Hygiene and Safety Science/Shokuhin Eiseigaku Zasshi. Vol. 49, no. 3, pp. 249-260. 2008.  
Corporate institution author - Kobayash, Maki; Takano, Ichiro; Tamura, Yasuhiro; Tomizawa, Sanae; Tateishi, Yukinari; Sakai, Naoko; Kamijo, Kyoko; Ibe, Akihiro; Nagayama, Toshihiro  
DOI - c186a031-a75b-4295-af21csamfg201; 13907475; 1882-1006 English

697. Kobayashi, Maki; Ohtsuka, Kenji; Tamura, Yasuhiro; Tomizawa, Sanae; Kamijo, Kyoko; Iwakoshi, Keiko; Kageyama, Yuriko; Nagayama, Toshihiro; Takano, Ichiro, and Kobayashi, Maki. Survey of Pesticide Residues in Imported Frozen Vegetables and Fruits (1989.4~2008.3). 2011; 52, (2): 121-129.   
Rec #: 43629  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A survey of pesticide residues in 595 imported frozen products on the Tokyo market from April 1989 to March 2008 was carried out. Forty three kinds of pesticides, including organophosphorus, organochlorine, carbamate, pyrethroid and others, were detected between levels of trace (below 0.01 ppm) and 4.6 ppm from 162 samples. Chlorpyrifos, cypermethrin and omethoate were frequently detected in green vegetables (komatsuna leaf and spinach), cypermethrin and methamidophos were detected in pods and seeds (green soybean and string pea), chlorpropham (CIPC) was detected in potato, and captan and carbaryl were detected in berries (blueberry, raspberry and strawberry). The hydrophilic pesticide methamidophos was detected in flesh of lychee. Residue levels of these pesticides were calculated as between less than 0.5% and 30% of their ADI values according to the daily intake of frozen products. Therefore, these frozen products should be safe when they were eaten in customary amounts.  
Keywords: Organochlorine compounds  
Keywords: Pesticide residues  
Keywords: fruits  
Keywords: Carbaryl  
Keywords: Health & Safety Science Abstracts  
Keywords: Fragaria  
Keywords: Vaccinium  
Keywords: Chlorpyrifos  
Keywords: cypermethrin  
Keywords: H 5000:Pesticides  
Keywords: Solanum tuberosum  
Keywords: Pesticides  
Keywords: Japan, Honshu, Tokyo Prefect., Tokyo  
Keywords: Spinacia oleracea  
Keywords: soybeans  
Keywords: Captan  
Date revised - 2011-06-01  
Language of summary - English  
Location - Japan, Honshu, Tokyo Prefect., Tokyo  
Pages - 121-129  
ProQuest ID - 872137978  
SubjectsTermNotLitGenreText - Chlorpyrifos; cypermethrin; Organochlorine compounds; Pesticide residues; Pesticides; fruits; Carbaryl; soybeans; Captan; Solanum tuberosum; Vaccinium; Spinacia oleracea; Fragaria; Japan, Honshu, Tokyo Prefect., Tokyo  
Last updated - 2012-03-29  
British nursing index edition - Food Hygiene and Safety Science/Shokuhin Eiseigaku Zasshi. Vol. 52, no. 2, pp. 121-129. 2011.  
Corporate institution author - Kobayashi, Maki; Ohtsuka, Kenji; Tamura, Yasuhiro; Tomizawa, Sanae; Kamijo, Kyoko; Iwakoshi, Keiko; Kageyama, Yuriko; Nagayama, Toshihiro; Takano, Ichiro  
DOI - eef9ef3f-97b5-4725-b606csaobj201; 14899482; 1882-1006 English

698. Koblizkova, M; Lee, S C; Harner, T, and Koblizkova, M. Sorbent Impregnated Polyurethane Foam Disk Passive Air Samplers for Investigating Current-Use Pesticides at the Global Scale. 2012 Oct; 3, (4): 456-462.   
Rec #: 42499  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A pilot study conducted at a subset of 20 sites operated under the GAPS (Global Atmospheric Passive Sampling) Network compared the performance of two types of passive samplers for measuring air concentrations of currently-used pesticides, during 3-month deployment periods. The conventional polyurethane foam (PUF) disk sampler was able to capture a range of targeted current-use pesticides CUPs (dacthal, trifluralin, chlorothalonil, chlorpyrifos, and pendimethalin) but experienced equilibrium for some compounds (dacthal, trifluralin, and chlorothalonil) during the deployment period. The second sampler type used was a modified PUF disk sampler impregnated with XAD powder [i.e. the SIP (sorbent-impregnated PUF) disk] to increase sorptive capacity. The SIP disk sampler accumulated greater amounts of most targeted CUPs when compared to the PUF disk sampler. Results of the study showed that chlorothalonil was the most abundant CUP reflecting its widespread use, globally; whereas dacthal exhibited greater global distribution, including presence at remote sites, reflecting its high potential for long-range atmospheric transport. A thorough calibration of both the PUF disk and the SIP disk samplers is required to further define uptake profiles and to determine their range of applicability for various CUPs.  
Keywords: P 0000:AIR POLLUTION  
Keywords: Meteorological & Geoastrophysical Abstracts; Pollution Abstracts  
Keywords: Pendimethalin  
Keywords: Air pollution  
Keywords: Chlorpyrifos  
Keywords: Sorbents  
Keywords: Atmospheric transport  
Keywords: M2 551.510.42:Air Pollution (551.510.42)  
Keywords: Foam  
Keywords: Pesticides  
Keywords: Air sampling  
Keywords: Trifluralin  
Keywords: Atmospheric pollution research  
Date revised - 2012-11-01  
Language of summary - English  
Pages - 456-462  
ProQuest ID - 1221146686  
SubjectsTermNotLitGenreText - Atmospheric transport; Foam; Atmospheric pollution research; Chlorpyrifos; Air pollution; Sorbents; Pesticides; Air sampling; Trifluralin; Pendimethalin  
Last updated - 2013-01-11  
British nursing index edition - Atmospheric Pollution Research. Vol. 3, no. 4, pp. 456-462. Oct 2012.  
Corporate institution author - Koblizkova, M; Lee, S C; Harner, T  
DOI - MD-0020083596; 17394721; 1309-1042 English

699. Kojima, Hiroyuki; Sata, Fumihiro; Takeuchi, Shinji; Sueyoshi, Tatsuya; Nagai, Tadanori, and Kojima, Hiroyuki. Comparative Study of Human and Mouse Pregnane X Receptor Agonistic Activity in 200 Pesticides Using in Vitro Reporter Gene Assays. 2011 Feb 27; 280, (3 ): 77-87.   
Rec #: 47409  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The nuclear receptor, pregnane X receptor (PXR), is a ligand-dependent transcription factor that regulates genes involved in xenobiotic metabolism. Recent studies have shown that PXR activation may affect energy metabolism as well as the endocrine and immune systems. **In this study, we characterized and compared the agonistic activities of a variety of pesticides against human PXR (hPXR) and mouse PXR (mPXR).** We tested the hPXR and mPXR agonistic activity of 200 pesticides (29 organochlorines, 11 diphenyl ethers, 56 organophosphorus pesticides, 12 pyrethroids, 22 carbamates, 12 acid amides, 7 triazines, 7 ureas, and 44 others) by reporter gene assays using COS-7 simian kidney cells. Of the 200 pesticides tested, 106 and 93 activated hPXR and mPXR, respectively, and a total of 111 had hPXR and/or mPXR agonistic activity with greater or lesser inter-species differences. Although all of the pyrethroids and most of the organochlorines and acid amides acted as PXR agonists, a wide range of pesticides with diverse structures also showed hPXR and/or mPXR agonistic activity. Among the 200 pesticides, pyributicarb, pretilachlor, piperophos and butamifos for hPXR, and phosalone, prochloraz, pendimethalin, and butamifos for mPXR, acted as particularly potent activators at low concentrations in the order of 10a degree 8-10a degree 7M. In addition, we found that several organophosphorus oxon- and pyributicarb oxon-metabolites decreased PXR activation potency compared to their parent compounds. These results suggest that a large number of structurally diverse pesticides and their metabolites possess PXR-mediated transcriptional activity, and their ability to do so varies in a species-dependent manner in humans and mice.  
Keywords: ENA 03:Energy  
Keywords: Organochlorine compounds  
Keywords: phosalone  
Keywords: immune system  
Keywords: Immune system  
Keywords: diphenyl ether  
Keywords: Urea  
Keywords: Metabolites  
Keywords: Pendimethalin  
Keywords: triazine  
Keywords: G 07720:Immunogenetics  
Keywords: Prochloraz  
Keywords: Amides  
Keywords: Ethers  
Keywords: Pyrethroids  
Keywords: X 24330:Agrochemicals  
Keywords: pendimethalin  
Keywords: Pesticides (organophosphorus)  
Keywords: Pharmacy And Pharmacology  
Keywords: Energy metabolism  
Keywords: Nuclear receptors  
Keywords: Genetics Abstracts; Environment Abstracts; Toxicology Abstracts  
Keywords: Pesticides (carbamates)  
Keywords: Reporter gene  
Keywords: Transcription factors  
Keywords: Pesticides  
Keywords: Kidney  
Keywords: pregnane X receptors  
Keywords: amides  
Keywords: Metabolism  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 77-87  
ProQuest ID - 854227768  
SubjectsTermNotLitGenreText - Pesticides (organophosphorus); Organochlorine compounds; phosalone; Energy metabolism; Immune system; Nuclear receptors; diphenyl ether; Urea; Metabolites; Pesticides (carbamates); Pendimethalin; triazine; Prochloraz; Reporter gene; Transcription factors; Kidney; pregnane X receptors; Pyrethroids; amides; Amides; immune system; Pesticides; Ethers; pendimethalin; Metabolism  
Last updated - 2011-12-12  
Corporate institution author - Kojima, Hiroyuki; Sata, Fumihiro; Takeuchi, Shinji; Sueyoshi, Tatsuya; Nagai, Tadanori  
DOI - OB-2dd1852d-c999-4159-9b92csamfg201; 14344236; 0300-483X English

700. Komuro, A.; Bamming, D., and Horvath, C. M. Negative Regulation of Cytoplasmic Rna-Mediated Antiviral Signaling.   
Rec #: 51119  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Mol Cell Biol. 1999 Apr;19(4):2465-74 (medline /10082512)  
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COMMENTS: Cites: Nature. 1975 Nov 6;258(5530):76-8 (medline /1186883)  
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COMMENTS: Cites: Mol Cell. 1998 Jun;1(7):991-1000 (medline /9651582)  
COMMENTS: Cites: EMBO J. 1999 Apr 15;18(8):2273-83 (medline /10205180)  
COMMENTS: Cites: Mol Cell Biol. 1998 May;18(5):2986-96 (medline /9566918)  
COMMENTS: Cites: PLoS Pathog. 2008 May;4(5):e1000077 (medline /18516301)  
COMMENTS: Cites: PLoS One. 2008;3(4):e2032 (medline /18446221)  
COMMENTS: Cites: Mol Immunol. 2008 May;45(10):2839-46 (medline /18336912)  
COMMENTS: Cites: J Virol. 2008 Apr;82(7):3500-8 (medline /18216110)  
COMMENTS: Cites: EMBO Rep. 2008 Mar;9(3):293-300 (medline /18219313)  
COMMENTS: Cites: Mol Cell. 2008 Feb 29;29(4):428-40 (medline /18242112)  
COMMENTS: Cites: Curr Opin Immunol. 2008 Feb;20(1):23-9 (medline /18262399)  
COMMENTS: Cites: Nature. 2008 Jan 31;451(7178):573-7 (medline /18200010)  
COMMENTS: Cites: Mol Cell. 2008 Feb 1;29(2):169-79 (medline /18243112)  
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COMMENTS: Cites: Biochem Pharmacol. 2008 Feb 1;75(3):589-602 (medline /17868652)  
COMMENTS: Cites: J Gen Virol. 2008 Jan;89(Pt 1):1-47 (medline /18089727)  
COMMENTS: Cites: J Virol. 2008 Jan;82(1):335-45 (medline /17942531)  
COMMENTS: Cites: Science. 2007 Dec 7;318(5856):1628-32 (medline /17991829)  
COMMENTS: Cites: Cell Microbiol. 2007 Dec;9(12):2921-30 (medline /17991048)  
COMMENTS: Cites: Immunol Rev. 2007 Dec;220:214-24 (medline /17979849)  
COMMENTS: Cites: J Virol. 2007 Nov;81(22):12227-37 (medline /17804509)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2007 Aug 28;104(35):14050-5 (medline /17709747)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2007 Jul 10;104(28):11706-11 (medline /17600090)  
COMMENTS: Cites: J Biol Chem. 2007 May 25;282(21):15315-8 (medline /17395582)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2007 May 1;104(18):7500-5 (medline /17460044)  
COMMENTS: Cites: J Immunol. 2007 May 15;178(10):6444-55 (medline /17475874)  
COMMENTS: Cites: Nat Med. 2007 May;13(5):543-51 (medline /17479100)  
COMMENTS: Cites: J Virol. 2007 Jun;81(11):5737-48 (medline /17376932)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2007 Apr 24;104(17):7253-8 (medline /17438296)  
COMMENTS: Cites: Cell Mol Life Sci. 2007 May;64(9):1038-42 (medline /17372677)  
COMMENTS: Cites: Nature. 2007 Apr 19;446(7138):916-920 (medline /17392790)  
COMMENTS: Cites: Cell Microbiol. 2007 Apr;9(4):930-8 (medline /17140406)  
ABSTRACT: The recent, rapid progress in our understanding of cytoplasmic RNA-mediated antiviral innate immune signaling was initiated by the discovery of retinoic acid-inducible gene I (RIG-I) as a sensor of viral RNA. It is now widely recognized that RIG-I and related RNA helicases, melanoma differentiation-associated gene-5 (MDA5) and laboratory of genetics and physiology-2 (LGP2), can initiate and/or regulate RNA and virus-mediated type I IFN production and antiviral responses. As with other cytokine systems, production of type I IFN is a transient process, and can be hazardous to the host if unregulated, resulting in chronic cellular toxicity or inflammatory and autoimmune diseases. In addition, the RIG-I-like receptor (RLR) system is a fundamental target for virus-encoded immune suppression, with many indirect and direct examples of interference described. In this article, we review the current understanding of endogenous negative regulation in RLR signaling and explore direct inhibition of RLR signaling by viruses as a host immune evasion strategy.  
MESH HEADINGS: Animals  
MESH HEADINGS: Cytokines/physiology  
MESH HEADINGS: DEAD-box RNA Helicases/\*physiology  
MESH HEADINGS: DNA-Binding Proteins  
MESH HEADINGS: Endopeptidases/physiology  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunity, Innate/\*physiology  
MESH HEADINGS: Interferon Type I/\*biosynthesis  
MESH HEADINGS: Intracellular Signaling Peptides and Proteins/physiology  
MESH HEADINGS: Microtubule-Associated Proteins  
MESH HEADINGS: Mitochondrial Proteins/physiology  
MESH HEADINGS: Nuclear Proteins/physiology  
MESH HEADINGS: Nuclear Receptor Co-Repressor 1  
MESH HEADINGS: Peptidylprolyl Isomerase/physiology  
MESH HEADINGS: Phosphotransferases (Alcohol Group Acceptor)/physiology  
MESH HEADINGS: RNA Helicases/physiology  
MESH HEADINGS: RNA, Viral/\*analysis  
MESH HEADINGS: Repressor Proteins/physiology  
MESH HEADINGS: Signal Transduction/\*drug effects/physiology  
MESH HEADINGS: Small Ubiquitin-Related Modifier Proteins/physiology  
MESH HEADINGS: Tumor Suppressor Proteins/physiology  
MESH HEADINGS: Ubiquitins/physiology eng

701. Kong, Z; Shan, W; Dong, F; Liu, X; Xu, J; Li, M; Zheng, Y, and Kong, Z. Effect of Home Processing on the Distribution and Reduction of Pesticide Residues in Apples. 2012 Aug 1; 29, (8): 1280-1287.   
Rec #: 42639  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effect of home processing (washing, peeling, coring and juicing) on residue levels of chlorpyrifos, beta -cypermethrin, tebuconazole, acetamiprid and carbendazim in apple segments was investigated. The pesticide residues were determined by UPLC-MS/MS and GC with a flame photometric (FPD) and electron capture detection (ECD). The results indicated that the pesticide residue levels in the apple peel and core were higher compared with in the apple flesh. After peeled and cored apple was processed into apple juice and pomace, chlorpyrifos, beta -cypermethrin and tebuconazole were concentrated in the apple pomace. However, residues of acetamiprid and carbendazim were exceptions. The apple pomace was free of acetamiprid, which was mainly present in the apple juice. After washing the mean loss of chlorpyrifos, beta -cypermethrin, tebuconazole, acetamiprid and carbendazim from apples under recommended dosage and twofold higher dosage were 17-21%, 6.7-7.1%, 13-32%, 42-67% and 47-50%, respectively. The pesticide residues were significantly reduced in the edible part of the apple except for beta -cypermethrin during peeling and coring process. The removal effect of apple juicing was found to be the most pronounced on beta -cypermethrin residue, which was reduced in the range of 81-84%, and the reductions of chlorpyrifos, tebuconazole, acetamiprid and carbendazim upon apple juicing were in the range of 15-36%.  
Keywords: Chlorpyrifos  
Keywords: Risk assessment  
Keywords: Risk Abstracts  
Keywords: Food additives  
Keywords: Pesticide residues  
Keywords: Pesticides  
Keywords: Malus  
Keywords: R2 23060:Medical and environmental health  
Date revised - 2013-01-01  
Language of summary - English  
Pages - 1280-1287  
ProQuest ID - 1268653711  
SubjectsTermNotLitGenreText - Risk assessment; Chlorpyrifos; Food additives; Pesticide residues; Pesticides; Malus  
Last updated - 2013-02-08  
British nursing index edition - Food Additives & Contaminants: Part A - Chemistry, Analysis, Control, Exposure & Risk Assessment. Vol. 29, no. 8, pp. 1280-1287. 1 Aug 2012.  
Corporate institution author - Kong, Z; Shan, W; Dong, F; Liu, X; Zheng, Y  
DOI - 06c7350b-c7f9-491d-9e8amfgefd109; 17485818; 1944-0049; 1944-0057 English

702. Koolen, D. A.; Sharp, A. J.; Hurst, J. A.; Firth, H. V.; Knight, S. J.; Goldenberg, A.; Saugier-Veber, P.; Pfundt, R.; Vissers, L. E.; Destr‚E, A.; Grisart, B.; Rooms, L.; Van Der Aa, N.; Field, M.; Hackett, A.; Bell, K.; Nowaczyk, M. J.; Mancini, G. M.; Poddighe, P. J.; Schwartz, C. E.; Rossi, E.; De Gregori, M.; Antonacci-Fulton, L. L.; Mclellan, M. D. 2nd; Garrett, J. M.; Wiechert, M. A.; Miner, T. L.; Crosby, S.; Ciccone, R.; Willatt, L.; Rauch, A.; Zenker, M.; Aradhya, S.; Manning, M. A.; Strom, T. M.; Wagenstaller, J.; Krepischi-Santos, A. C.; Vianna-Morgante, A. M.; Rosenberg, C.; Price, S. M.; Stewart, H.; Shaw-Smith, C.; Brunner, H. G.; Wilkie, A. O.; Veltman, J. A.; Zuffardi, O.; Eichler, E. E., and De Vries, B. B. Clinical and Molecular Delineation of the 17q21.31 Microdeletion Syndrome.   
Rec #: 51569  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Am J Med Genet A. 2007 Jul 1;143A(13):1431-41 (medline /17568414)  
COMMENTS: Cites: Eur J Med Genet. 2007 Jul-Aug;50(4):256-63 (medline /17576104)  
COMMENTS: Cites: J Med Genet. 2007 Oct;44(10):629-36 (medline /17601928)  
COMMENTS: Cites: Am J Med Genet C Semin Med Genet. 2007 Aug 15;145C(3):280-90 (medline /17639596)  
COMMENTS: Cites: Am J Hum Genet. 2007 Oct;81(4):768-79 (medline /17847001)  
COMMENTS: Cites: Nat Genet. 2008 Mar;40(3):322-8 (medline /18278044)  
COMMENTS: Cites: Nat Genet. 1997 Jan;15(1):70-3 (medline /8988171)  
COMMENTS: Cites: Am J Hum Genet. 1997 Sep;61(3):660-7 (medline /9326332)  
COMMENTS: Cites: Nature. 1998 Jun 18;393(6686):702-5 (medline /9641683)  
COMMENTS: Cites: Trends Genet. 1998 Oct;14(10):417-22 (medline /9820031)  
COMMENTS: Cites: Dev Med Child Neurol. 1997 Feb;39(2):125-32 (medline /9062428)  
COMMENTS: Cites: Nucleic Acids Res. 1997 Jul 15;25(14):2745-51 (medline /9207020)  
COMMENTS: Cites: Hum Mol Genet. 1999 Apr;8(4):711-5 (medline /10072441)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1999 May 11;96(10):5598-603 (medline /10318930)  
COMMENTS: Cites: J Neuropathol Exp Neurol. 1999 Dec;58(12):1207-26 (medline /10604746)  
COMMENTS: Cites: Ann Neurol. 2000 Dec;48(6):859-67 (medline /11117542)  
COMMENTS: Cites: Trends Genet. 2002 Feb;18(2):74-82 (medline /11818139)  
COMMENTS: Cites: Nucleic Acids Res. 2002 Jun 15;30(12):e57 (medline /12060695)  
COMMENTS: Cites: Ment Retard Dev Disabil Res Rev. 2002;8(3):117-34 (medline /12216056)  
COMMENTS: Cites: Nat Genet. 2003 Apr;33(4):466-8 (medline /12652298)  
COMMENTS: Cites: J Med Genet. 2004 Apr;41(4):241-8 (medline /15060094)  
COMMENTS: Cites: Hum Mutat. 2004 Jul;24(1):86-92 (medline /15221792)  
COMMENTS: Cites: Hum Genomics. 2004 May;1(4):287-99 (medline /15588488)  
COMMENTS: Cites: Nat Genet. 2005 Feb;37(2):129-37 (medline /15654335)  
COMMENTS: Cites: J Med Genet. 2005 Nov;42(11):837-46 (medline /15792962)  
COMMENTS: Cites: Am J Hum Genet. 2005 Jul;77(1):78-88 (medline /15918152)  
COMMENTS: Cites: Hum Mol Genet. 2005 Aug 15;14(16):2399-404 (medline /16000317)  
COMMENTS: Cites: Cancer Res. 2005 Jul 15;65(14):6071-9 (medline /16024607)  
COMMENTS: Cites: Genet Med. 2005 Jul-Aug;7(6):422-32 (medline /16024975)  
COMMENTS: Cites: Genes Chromosomes Cancer. 2005 Nov;44(3):305-19 (medline /16075461)  
COMMENTS: Cites: Am J Hum Genet. 2005 Nov;77(5):709-26 (medline /16252233)  
COMMENTS: Cites: Nat Rev Genet. 2006 Feb;7(2):85-97 (medline /16418744)  
COMMENTS: Cites: Cytogenet Genome Res. 2006;114(1):89-92 (medline /16717456)  
COMMENTS: Cites: Eur J Hum Genet. 2006 Sep;14(9):1009-17 (medline /16773131)  
COMMENTS: Cites: Nat Genet. 2006 Sep;38(9):1038-42 (medline /16906162)  
COMMENTS: Cites: Nat Genet. 2006 Sep;38(9):1032-7 (medline /16906163)  
COMMENTS: Cites: Nat Genet. 2006 Sep;38(9):999-1001 (medline /16906164)  
COMMENTS: Cites: Nat Genet. 2006 Sep;38(9):974-6 (medline /16941003)  
COMMENTS: Cites: Arch Dis Child. 2007 Feb;92(2):128-32 (medline /16990350)  
COMMENTS: Cites: Am J Med Genet A. 2006 Dec 15;140(24):2730-41 (medline /17103451)  
COMMENTS: Cites: Genome Res. 2007 May;17(5):659-66 (medline /17416743)  
COMMENTS: Erratum in: J Med Genet. 2009 Aug;46(8):576  
ABSTRACT: BACKGROUND: The chromosome 17q21.31 microdeletion syndrome is a novel genomic disorder that has originally been identified using high resolution genome analyses in patients with unexplained mental retardation.  
ABSTRACT: AIM: We report the molecular and/or clinical characterisation of 22 individuals with the 17q21.31 microdeletion syndrome.  
ABSTRACT: RESULTS: We estimate the prevalence of the syndrome to be 1 in 16,000 and show that it is highly underdiagnosed. Extensive clinical examination reveals that developmental delay, hypotonia, facial dysmorphisms including a long face, a tubular or pear-shaped nose and a bulbous nasal tip, and a friendly/amiable behaviour are the most characteristic features. Other clinically important features include epilepsy, heart defects and kidney/urologic anomalies. Using high resolution oligonucleotide arrays we narrow the 17q21.31 critical region to a 424 kb genomic segment (chr17: 41046729-41470954, hg17) encompassing at least six genes, among which is the gene encoding microtubule associated protein tau (MAPT). Mutation screening of MAPT in 122 individuals with a phenotype suggestive of 17q21.31 deletion carriers, but who do not carry the recurrent deletion, failed to identify any disease associated variants. In five deletion carriers we identify a < 500 bp rearrangement hotspot at the proximal breakpoint contained within an L2 LINE motif and show that in every case examined the parent originating the deletion carries a common 900 kb 17q21.31 inversion polymorphism, indicating that this inversion is a necessary factor for deletion to occur (p < 10(-5)).  
ABSTRACT: CONCLUSION: Our data establish the 17q21.31 microdeletion syndrome as a clinically and molecularly well recognisable genomic disorder.  
MESH HEADINGS: \*Abnormalities, Multiple/epidemiology/genetics/physiopathology  
MESH HEADINGS: Adolescent  
MESH HEADINGS: Adult  
MESH HEADINGS: Child  
MESH HEADINGS: Child, Preschool  
MESH HEADINGS: \*Chromosome Deletion  
MESH HEADINGS: Chromosome Inversion  
MESH HEADINGS: Chromosomes, Human, Pair 17/\*genetics  
MESH HEADINGS: \*Developmental Disabilities/epidemiology/genetics/physiopathology  
MESH HEADINGS: Face/pathology  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: Infant  
MESH HEADINGS: Male  
MESH HEADINGS: Muscle Hypotonia/epidemiology/genetics/physiopathology  
MESH HEADINGS: Oligonucleotide Array Sequence Analysis  
MESH HEADINGS: Polymorphism, Single Nucleotide  
MESH HEADINGS: Prevalence  
MESH HEADINGS: Young Adult  
MESH HEADINGS: tau Proteins eng

703. Kopecka-Pilarczyk, Justyna and Kopecka-Pilarczyk, Justyna. In Vitro Effects of Pesticides and Metals on the Activity of Acetylcholinesterase (Ache) From Different Tissues of the Blue Mussel, Mytilus Trossulus L. 2010 Jan; 45, (1): 46-52.   
Rec #: 44359  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The objective of this study was to conduct a comprehensive comparison of the effect on acetylcholinesterase (AChE) from various tissues of Mytilus trossulus caused by in vitro exposure to several pesticides and metals, because results available in the literature are inconsistent, difficult to compare, and sometimes contradict each other. For this purpose, fraction S10 extracted from gills, digestive gland, mantle and muscles, and the whole soft tissue of the mussel was exposed to several pesticides (dichlorvos, chlorpyrifos, fenitrothion, carbofuran and carbaryl) and metals (Cu, Zn, Cd, Hg, Pb) at a wide range of concentrations. AChE was inhibited in 50% or more in all the tissues exposed to dichlorvos, Cu, Hg and the mixture of Cu+Cd, and in some tissues exposed to carbaryl and carbofuran. The IC50 was calculated where possible. No inhibition was found in the case of chlorpyrifos, Cd, Pb, and Zn.  
Keywords: Mytilus  
Keywords: Acetylcholinesterase  
Keywords: Carbaryl  
Keywords: Mytilus edulis  
Keywords: Copper  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Toxicity tests  
Keywords: Environmental factors  
Keywords: Lead  
Keywords: Agricultural Chemicals  
Keywords: Glands  
Keywords: Zinc  
Keywords: Cadmium  
Keywords: Mytilus trossulus  
Keywords: Gills  
Keywords: Dichlorvos  
Keywords: Mantle  
Keywords: Marine  
Keywords: Metals  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: Carbofuran  
Keywords: ASFA 1: Biological Sciences & Living Resources; Toxicology Abstracts; Environment Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Water Resources Abstracts; Pollution Abstracts  
Keywords: Mussels  
Keywords: Agricultural wastes  
Keywords: dichlorvos  
Keywords: Muscles  
Keywords: Wastes  
Keywords: X 24320:Food Additives & Contaminants  
Keywords: carbofuran  
Keywords: Q5 01504:Effects on organisms  
Keywords: Fenitrothion  
Keywords: Q1 01485:Species interactions: pests and control  
Keywords: Food contamination  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Bioaccumulation  
Keywords: Digestive glands  
Keywords: Water Pollution Effects  
Keywords: Pesticides  
Keywords: Marine molluscs  
Keywords: Soft tissues  
Date revised - 2010-11-01  
Language of summary - English  
Number of references - 27  
Pages - 46-52  
ProQuest ID - 762272674  
SubjectsTermNotLitGenreText - Digestive glands; Pesticides; Wastes; Marine molluscs; Environmental factors; Toxicity tests; Gills; Mantle; Metals; Carbofuran; Acetylcholinesterase; Agricultural wastes; Muscles; Carbaryl; Fenitrothion; Copper; Food contamination; Lead; Chlorpyrifos; Glands; Zinc; Cadmium; Soft tissues; Dichlorvos; dichlorvos; carbofuran; Bioaccumulation; Agricultural Chemicals; Mytilus; Mussels; Water Pollution Effects; Mytilus edulis; Mytilus trossulus; Marine  
Last updated - 2012-12-14  
British nursing index edition - Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants and Agricultural Wastes [J. Environ. Sci. Health, Pt. B: Pestic., Food Contam., Agric. Wastes]. Vol. 45, no. 1, pp. 46-52. Jan 2010.  
Corporate institution author - Kopecka-Pilarczyk, Justyna  
DOI - 849cc773-99cd-4aef-b31cmfgefd108; 13810500; CS1106438; 0360-1234; 1532-4109  
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704. Koppenhofer, A. M. New Products for Surface Feeding Insect Pests in Turfgrass. 2008; 14, (10): 1-2.   
Rec #: 2250  
Keywords: NO CONC,NO DURATION  
Call Number: NO CONC (ACP,BFT,CBL,CPY,DM,HFZ,IMC,LCYT,PMR,TCF), NO DURATION (ACP,BFT,CBL,CPY,DM,HFZ,IMC,LCYT,PMR,TCF)  
Notes: Chemical of Concern: ACP,BFT,CBL,CPY,DM,HFZ,HMN,IMC,LCYT,PMR,SS,TCF

705. Korade, D. L. and Fulekar, M. H. Rhizosphere Remediation of Chlorpyrifos in Mycorrhizospheric Soil Using Ryegrass. SOIL; 2009; 172, (2/3): 1344-1350.   
Rec #: 2750  
Keywords: FATE  
Call Number: NO FATE (CPY)  
Notes: Chemical of Concern: CPY

706. Korth, W.; Thomas, M.; Foster, S.; McCorkelle, G., and Bowmer, K. H. Toxicity of Rice and Maize Pesticides to Ceriodaphnia sp.: Implications for Management of Irrigation Drainage Water in Australia. 6185//: 1995; 1, 55-62.   
Rec #: 990  
Keywords: EFFLUENT  
Call Number: NO EFFLUENT (CPY)  
Notes: Chemical of Concern: CPY

707. Kotonia, C. A.; Liapis, K. S., and Ziogas, V. N. Determination of residues of 14 insecticides and metabolites in grapes and peaches by gas chromatography - mass spectrometry. 2007; 16, (3): 223-226.   
Rec #: 63049  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In this study, a multiresidue method has been validated for the quantification and confirmation of 14 insecticides and metabolites in grapes and peaches. A system of GC-MS with Ion Trap technology and external ion source, operated in the electron impact mode, was used for pesticide residues. Fourteen pesticides and metabolites of four different chemical groups (organophosphorus, pyrethroides, carbamates and cyclodiene organochlorine) were determined, and both recoveries and relative standard deviations (RSDs) were calculated at two concentration levels, at the limit of quantification (LOQ) and ten times higher for peaches, and at the LOQ for grapes. For each compound one ion was selected for quantification and at least two more for identification and confirmation. In the case of peaches and at the lower fortification level, recovery values ranged from 84 to 123% for chlorpyrifos ethyl, parathion methyl, paraoxon methyl and a-cypermethrin with RSD values from 7.9 to 33.3%. At the higher fortification level. recoveries were 81.5-91.3% with RSD values from 2.2 to 6.5%. In the case of grapes, recoveries ranged from 56.8 to 112% for methamidophos, endosulfan sulfate, alpha-endosulfan, paraoxon ethyl and b-endosulfan with RSD values from 1.2 to 10.1%.  
Keywords: insecticides, multiresidue method, grapes, peaches, gas-chromatography,  
ISI Document Delivery No.: 152LU

708. Koumbi, L. J.; Papadopoulos, N. G.; Anastassiadou, V.; Machaira, M.; Kafetzis, D. A., and Papaevangelou, V. Dendritic Cells in Uninfected Infants Born to Hepatitis B Virus-Positive Mothers.   
Rec #: 51539  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Am J Respir Crit Care Med. 2005 Oct 15;172(8):1037-40 (medline /15994468)  
COMMENTS: Cites: Thorax. 1998 Nov;53(11):913-4 (medline /10193386)  
COMMENTS: Cites: J Gastroenterol Hepatol. 2005 Feb;20(2):234-42 (medline /15683426)  
COMMENTS: Cites: Vaccine. 1998 Aug-Sep;16(14-15):1415-9 (medline /9711781)  
COMMENTS: Cites: J Infect Dis. 1985 Apr;151(4):599-603 (medline /3973412)  
COMMENTS: Cites: Science. 2004 Mar 5;303(5663):1529-31 (medline /14976261)  
COMMENTS: Cites: Allergy. 2009 Mar;64(3):375-86 (medline /19175599)  
COMMENTS: Cites: J Immunol. 2004 Nov 15;173(10):5935-43 (medline /15528327)  
COMMENTS: Cites: Blood. 1994 Dec 15;84(12):4333-43 (medline /7994049)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1990 Sep;87(17):6599-603 (medline /2395863)  
COMMENTS: Cites: Blood. 2004 Feb 1;103(3):1030-2 (medline /14504106)  
COMMENTS: Cites: Eur J Immunol. 2001 Oct;31(10):3026-37 (medline /11592079)  
COMMENTS: Cites: J Clin Immunol. 2004 Nov;24(6):637-46 (medline /15622448)  
COMMENTS: Cites: J Hepatol. 2007 Dec;47(6):751-9 (medline /17920718)  
COMMENTS: Cites: J Virol. 2005 May;79(9):5507-15 (medline /15827165)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1992 Nov 1;89(21):10006-10 (medline /1438190)  
COMMENTS: Cites: Am J Epidemiol. 1983 Feb;117(2):213-22 (medline /6402925)  
COMMENTS: Cites: Clin Exp Allergy. 2002 Apr;32(4):537-42 (medline /11972599)  
COMMENTS: Cites: Science. 1999 Jun 11;284(5421):1835-7 (medline /10364556)  
COMMENTS: Cites: Hum Immunol. 2002 Dec;63(12):1103-10 (medline /12480253)  
COMMENTS: Cites: Clin Immunol. 2008 Mar;126(3):243-50 (medline /18201932)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2004 Apr 13;101(15):5598-603 (medline /15034168)  
COMMENTS: Cites: J Virol Methods. 2002 May 16;103(2):201-12 (medline /12008014)  
COMMENTS: Cites: J Immunol. 2009 Oct 1;183(7):4440-8 (medline /19734213)  
COMMENTS: Cites: Clin Immunol. 2006 Dec;121(3):251-9 (medline /17010668)  
COMMENTS: Cites: Hepatology. 2003 Nov;38(5):1075-86 (medline /14578844)  
COMMENTS: Cites: Pathol Biol (Paris). 2002 Nov;50(9):568-75 (medline /12490422)  
COMMENTS: Cites: Cell Immunol. 2002 Jul-Aug;218(1-2):74-86 (medline /12470615)  
COMMENTS: Cites: Chin Med J (Engl). 2002 Sep;115(9):1380-2 (medline /12411117)  
COMMENTS: Cites: Immunol Cell Biol. 2005 Oct;83(5):571-7 (medline /16174109)  
ABSTRACT: Plasmacytoid dendritic cells (pDCs) play a central role in antiviral immunity, detecting viruses via Toll-like receptors (TLR) and producing in response vast amounts of type I interferons (IFNs). Hepatitis B virus (HBV) causes chronic infection after vertical transmission. This study investigated whether an HBV-infected maternal environment might influence DC numbers and pDC function in uninfected infants. Blood was collected from inactive HBsAg carrier and control mothers and their infants at birth and 1 and 6 months of age. HBV DNA was measured in maternal and neonatal perinatal sera using real-time PCR. The circulating frequencies of myeloid DCs (mDCs) and pDCs were determined in the babies by flow cytometry. Peripheral blood mononuclear cells (PBMCs) and cord blood pDCs were stimulated with resiquimod, and alpha interferon (IFN-alpha) production and the pDC phenotype were assessed. The effect of the common-cold virus, rhinovirus (RV), on resiquimod stimulation was also determined. HBV DNA was detected in 62.3% of the mothers and 41% of their infants. DC numbers and pDC functions were similar between subjects and controls and were not correlated with maternal or neonatal viremia. RV infection did not induce pDC maturation until the age of 6 months, and it reduced TLR7-dependent resiquimod-induced IFN-alpha production similarly in both groups. Although the DC system is immature at birth, DCs of uninfected neonates of HBV-positive mothers are competent to initiate and maintain T-cell responses. RV is a weak inducer of IFN-alpha production until the age of 6 months and inhibits IFN-alpha responses triggered by the TLR7 pathway.  
MESH HEADINGS: Adult  
MESH HEADINGS: Case-Control Studies  
MESH HEADINGS: Dendritic Cells/\*immunology  
MESH HEADINGS: Female  
MESH HEADINGS: Flow Cytometry  
MESH HEADINGS: Hepatitis B/immunology/transmission  
MESH HEADINGS: Hepatitis B virus/\*immunology  
MESH HEADINGS: Humans  
MESH HEADINGS: Imidazoles/pharmacology  
MESH HEADINGS: Infant  
MESH HEADINGS: Infant, Newborn  
MESH HEADINGS: Male  
MESH HEADINGS: Maternal-Fetal Exchange/\*immunology  
MESH HEADINGS: Mothers  
MESH HEADINGS: Pregnancy  
MESH HEADINGS: Viremia eng

709. Koureas, Michalis; Tsakalof, Andreas; Tsatsakis, Aristidis, and Hadjichristodoulou, Christos. Systematic review of biomonitoring studies to determine the association between exposure to organophosphorus and pyrethroid insecticides and human health outcomes: Advances on biomonitoring and exposure assessment for pesticides and persistent organic pollutants. 2012 Apr 25-; 210, (2): 155-168.   
Rec #: 3250  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: For the appropriate protection of human health it is necessary to accurately estimate the health effects of human exposure to toxic compounds. In the present review, epidemiological studies on the health effects of human exposure to organophosphorus (OP) and pyrethroid (PYR) insecticides have been critically assessed. This review is focused on studies where the exposure assessment was based on quantification of specific biomarkers in urine or plasma. The 49 studies reviewed used different epidemiological approaches and analytical methods as well as different exposure assessment methodologies. With regard to OP pesticides, the studies reviewed suggested negative effects of prenatal exposure to these pesticides on neurodevelopment and male reproduction. Neurologic effects on adults, DNA damage and adverse birth outcomes were also associated with exposure to OP pesticides. With regard to exposure to PYR pesticides, there are currently few studies investigating the adverse health outcomes due to these pesticides. The effects studied in relation to PYR exposure were mainly male reproductive effects (sperm quality, sperm DNA damage and reproductive hormone disorders). StudiesÇÖ findings provided evidence to support the hypothesis that PYR exposure is adversely associated with effects on the male reproductive system. Biomarkers/ Exposure assessment/ Organophosphates/ Pesticides/ Pesticides health effects/ Pyrethroids

710. Kozawa, K.; Aoyama, Y.; Mashimo, S., and Kimura, H. Toxicity and actual regulation of organophosphate pesticides. 2009; 28, (4): 245-254.   
Rec #: 63079  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphate pesticides (OPs) are widely used as agricultural or domestic insecticides and are necessary for maintaining a good-quality, stable supply of harvested farm products. OPs can, however, exert significant adverse effects on human health. Thus, it may be necessary to regulate usage of OPs and other chemical pesticides. In this review, to better understand the effects of pesticides including OPs on humans, we focus on their toxicity and actual regulation.  
Keywords: Acetylcholine esterase, neurotoxicity, malathion, aerial spraying,  
ISI Document Delivery No.: 536MH

711. Kramer, Kirsten E; Rice, Pamela J; Horgan, Brian P; Rittenhouse, Jennifer L; King, Kevin W, and Kramer, Kirsten E. Pesticide Transport With Runoff From Turf: Observations Compared With Turfpq Model Simulations. 2009; 38, (6): 2402-2411.   
Rec #: 45249  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticides applied to turf grass have been detected in surface waters raising concerns of their effect on water quality and interest in their source, hydrological transport and use of models to predict transport. TurfPQ, a pesticide runoff model for turf grass, predicts pesticide transport but has not been rigorously validated for larger storms. The objective of this study was to determine TurfPQ's ability to accurately predict the transport of pesticides with runoff following more intense precipitation. The study was conducted with creeping bentgrass [Agrostis palustris Huds.] turf managed as a golf course fairway. A pesticide mixture containing dicamba, 2,4-D, MCPP, flutolanil, and chlorpyrifos was applied to six adjacent 24.4 by 6.1 m plots. Controlled rainfall simulations were conducted using a rainfall simulator designed to deliver water droplets similar to natural rain. Runoff flow rates and volume were measured and water samples were collected for analysis of pesticide concentrations. Six simulations yielded 13 events with which to test TurfPQ. Measured mean percentage of applied pesticide recovered in the runoff for dicamba, 2,4-D, MCPP, flutolanil, and chlorpyrifos was 24.6, 20.7, 14.9, 5.9, and 0.8%, respectively. The predicted mean values produced by TurfPQ were 13.7, 15.6, 15.5, 2.5, and 0.2%, respectively. The model produced correlations of r = 0.56 and 0.64 for curve number hydrology and measured hydrology, respectively. Comparisons of the model estimates with our field observations indicate that TurfPQ under predicted pesticide runoff during 69.5 c 11.4 mm, 1.9 c 0.2 h, simulated storms.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: water quality  
Keywords: Runoff models  
Keywords: Q2 02243:Structure, mechanics and thermodynamics  
Keywords: Storm Runoff  
Keywords: Water sampling  
Keywords: Simulators  
Keywords: ENA 09:Land Use & Planning  
Keywords: Grasses  
Keywords: Surface water  
Keywords: Water Analysis  
Keywords: Pesticide transport  
Keywords: Rainfall  
Keywords: Correlations  
Keywords: SW 3030:Effects of pollution  
Keywords: M2 551.578.1:Liquid (551.578.1)  
Keywords: Current observations  
Keywords: Water quality  
Keywords: Environmental factors  
Keywords: Storms  
Keywords: Flow rates  
Keywords: Rainfall simulators  
Keywords: Hydrologic Models  
Keywords: Agricultural Chemicals  
Keywords: Flow Rates  
Keywords: Environmental effects  
Keywords: 2,4-Dichlorophenoxyacetic acid  
Keywords: Hydrology  
Keywords: Pollution Abstracts; Environment Abstracts; Water Resources Abstracts; Aqualine Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; ASFA 2: Ocean Technology Policy & Non-Living Resources; Meteorological & Geoastrophysical Abstracts  
Keywords: Agrostis palustris  
Keywords: Hydrologic analysis  
Keywords: Rainfall runoff  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Simulation  
Keywords: turf  
Keywords: AQ 00003:Monitoring and Analysis of Water and Wastes  
Keywords: Precipitation  
Keywords: Chlorpyrifos  
Keywords: Turf Grasses  
Keywords: Numerical simulations  
Keywords: Pesticides  
Keywords: Rainfall-runoff modeling  
Keywords: Golf courses  
Keywords: Environmental quality  
Keywords: Runoff  
Date revised - 2010-02-01  
Language of summary - English  
Pages - 2402-2411  
ProQuest ID - 21259775  
SubjectsTermNotLitGenreText - Simulators; Pesticides; Environmental effects; Hydrology; Simulation; Water quality; Current observations; Environmental factors; Runoff; Runoff models; Hydrologic analysis; Rainfall runoff; Pesticide transport; Correlations; Precipitation; Storms; Rainfall simulators; Numerical simulations; Rainfall-runoff modeling; Environmental quality; water quality; Water sampling; Grasses; Surface water; Rainfall; turf; Flow rates; Chlorpyrifos; 2,4-Dichlorophenoxyacetic acid; Golf courses; Turf Grasses; Hydrologic Models; Agricultural Chemicals; Flow Rates; Storm Runoff; Water Analysis; Agrostis palustris  
Last updated - 2012-03-29  
British nursing index edition - Journal of Environmental Quality [J. Environ. Qual.]. Vol. 38, no. 6, pp. 2402-2411. 2009.  
Corporate institution author - Kramer, Kirsten E; Rice, Pamela J; Horgan, Brian P; Rittenhouse, Jennifer L; King, Kevin W  
DOI - MD-0012662015; 11840061; CS1013667; 0047-2425; 1537-2537 English

712. Kravvariti, Konstantina; Tsiropoulos, Nikolaos G; Karpouzas, Dimitrios G, and Kravvariti, Konstantina. Degradation and Adsorption of Terbuthylazine and Chlorpyrifos in Biobed Biomixtures From Composted Cotton Crop Residues. 2010 Oct; 66, (10): 1122-1128.   
Rec #: 40309  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: Biobeds have been well studied in northern Europe, whereas little is known regarding their use in southern Europe. The degradation and adsorption of terbuthylazine (TA) and chlorpyrifos (CP) were studied in three different biomixtures composed of composted cotton crop residues, soil and straw in various proportions, and also in sterilised and non-sterilised soil. RESULTS: Compost biomixtures degraded the less hydrophobic TA at a faster rate than soil, while the opposite was evident for the more hydrophobic CP. These results were attributed to the rapid abiotic hydrolysis of CP in the alkaline soil (pH 8.5) compared with the lower pH of the compost (6.6), but also to the increasing adsorption (Kd = 746 mL g-1) and reduced bioavailability of CP in the biomixtures compared with soil (Kd = 17 mL g-1), as verified by the adsorption studies. CONCLUSIONS: Compost had a dual but contrasting effect on degradation that depended on the chemical nature of the pesticide studied: a positive effect towards TA owing to increasing biodegradation and a negative effect towards CP owing to increasing adsorption. Overall, composted cotton crop residues could be potentially used in local biobed systems in Greece, as they promoted the degradation of hydrophilic pesticides and the adsorption of hydrophobic pesticides.  
Keywords: Compost  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: Cotton  
Keywords: crop residues  
Keywords: Greece  
Keywords: Degradation  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Hydrogen Ion Concentration  
Keywords: Europe  
Keywords: Hydrolysis  
Keywords: Crops  
Keywords: ENA 06:Food & Drugs  
Keywords: Chlorpyrifos  
Keywords: Soil  
Keywords: Agricultural Chemicals  
Keywords: Water Resources Abstracts; Environment Abstracts; Aqualine Abstracts  
Keywords: Pesticides  
Keywords: Adsorption  
Keywords: Straw  
Keywords: pH  
Date revised - 2012-06-01  
Language of summary - English  
Location - Greece; Europe  
Pages - 1122-1128  
ProQuest ID - 1020854293  
SubjectsTermNotLitGenreText - Chlorpyrifos; Compost; Soil; crop residues; Cotton; Degradation; Pesticides; Adsorption; pH; Agricultural Chemicals; Hydrogen Ion Concentration; Straw; Hydrolysis; Crops; Greece; Europe  
Last updated - 2012-07-27  
British nursing index edition - Pest Management Science [Pest Manage. Sci.]. Vol. 66, no. 10, pp. 1122-1128. Oct 2010.  
Corporate institution author - Kravvariti, Konstantina; Tsiropoulos, Nikolaos G; Karpouzas, Dimitrios G  
DOI - e306975b-da97-45d9-9208csamfg201; 16710353; 1526-4998 English

713. Kretschmann, A.; Ashauer, R.; Hollender, J., and Escher, B. I. Toxicokinetic and toxicodynamic model for diazinon toxicity-mechanistic explanation of differences in the sensitivity of Daphnia magna and Gammarus pulex. 2012; 31, (9): 2014-2022.   
Rec #: 63129  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: **A mechanistic toxicokinetic and toxicodynamic model for acute toxic effects (immobilization, mortality) of the organothiophosphate insecticide diazinon in Daphnia magna is presented.** The model was parameterized using measured external and internal (whole-body) concentrations of diazinon, its toxic metabolite diazoxon, and the inactive metabolite 2-isopropyl-6-methyl-4-pyrimidinol, plus acetylcholinesterase (AChE) activity measured during exposure to diazinon in vivo. The toxicokinetic and toxicodynamic model provides a coherent picture from exposure to the resulting toxic effect on an organism level through internally formed metabolites and the effect on a molecular scale. A very fast reaction of diazoxon with AChE (pseudo first-order inhibition rate constant ki?=?3.3?h-1) compared with a slow formation of diazoxon (activation rate constant kact?=?0.014?h-1) was responsible for the high sensitivity of D. magna toward diazinon. Recovery of AChE activity from inhibition was slow and rate-determining (99% recovery within 16 d), compared with a fast elimination of diazinon (99% elimination within 17?h). **The obtained model parameters were compared with toxicokinetic and toxicodynamic parameters of Gammarus pulex exposed to diazinon from previous work. T**his comparison revealed that G. pulex is less sensitive because of a six times faster detoxification of diazinon and diazoxon and an approximately 400 times lower rate for damage accrual. These differences overcompensate the two times faster activation of diazinon to diazoxon in G. pulex compared to D. magna. The present study substantiates theoretical considerations that mechanistically based effect models are helpful to explain sensitivity differences among different aquatic invertebrates. Environ. Toxicol. Chem. 2012; 31: 20142022. (c) 2012 SETAC  
Keywords: Diazinon, Daphnia magna, Gammarus pulex, Toxicokinetic and toxicodynamic  
ISI Document Delivery No.: 994NW

714. Krieg, E. F. The Relationships Between Pesticide Metabolites and Neurobehavioral Test Performance in the Third National Health and Nutrition Examination Survey. 2013; 68, (1): 39-46.   
Rec #: 63149  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Regression analysis was used to estimate and test for relationships between urinary pesticide metabolites and neurobehavioral test performance in adults, 20 to 59 years old, participating in the third National Health and Nutrition Examination Survey. The 12 pesticide metabolites included 2 naphthols, 8 phenols, a phenoxyacetic acid, and a pyridinol. The 3 neurobehavioral tests included in the survey were simple reaction time, symbol-digit substitution, and serial digit learning. As the 2,4-dichlorophenol, 2,5-dichlorophenol, and the pentachlorophenol concentrations increased, performance on the serial digit learning test improved. As the 2,5-dichlorophenol concentration increased, performance on the symbol-digit substitution test improved. At low concentrations, the parent compounds of these metabolites may act at acetylcholine and ?-aminobutyric acid synapses in the central nervous system to improve neurobehavioral test performance.  
Keywords: neurobehavioral tests, NHANES III, pesticide metabolites  
ISI Document Delivery No.: 071SQ

715. Krieger, R. I.; Chen, L.; Ginevan, M.; Watkins, D.; Cochran, R. C.; Driver, J. H., and Ross, J. H. Implications of estimates of residential organophosphate exposure from dialkylphosphates (DAPs) and their relevance to risk. 2012; 64, (2): 263-266.   
Rec #: 63159  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Recent epidemiological studies have claimed to associate a variety of toxicological effects of organophosphorus insecticides (OPs) and residential OP exposure based on the dialkyl phosphates (DAPs; metabolic and environmental breakdown products of OPs) levels in the urine of pregnant females. A key premise in those epidemiology studies was that the level of urinary DAPs was directly related to the level of parent OP exposure. Specific chemical biomarkers and DAPs representing absorbed dose of OPs are invaluable to reconstruct human exposures in prospective occupational studies and even in non-occupational studies when exposure to a specific OP can be described. However, measurement of those detoxification products in urine without specific knowledge of insecticide exposure is insufficient to establish OP insecticide exposure. DAPs have high oral bioavailability and are ubiquitously present in produce at concentrations several-fold greater than parent OPs. Studies relying on DAPs as an indicator of OP exposure that lack credible information on proximate OP exposure are simply measuring DAP exposure and misattributing OP exposure. (C) 2012 Elsevier Inc. All rights reserved.  
Keywords: Organophosphorus insecticide, Dialkyl phosphate, DAPs, Epidemiology,  
ISI Document Delivery No.: 036VX

716. Krinke, G. J. Neuronal Vacuolation.   
Rec #: 74909  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Comment on: Toxicol Pathol. 2010 Jun;38(4):554-9 (medline /20448080)  
COMMENTS: Comment on: Toxicol Pathol. 2011 Feb;39(2):451-3 (medline /21422267)  
MESH HEADINGS: Animals  
MESH HEADINGS: Chlorpyrifos/\*toxicity  
MESH HEADINGS: Cytoplasm/\*drug effects  
MESH HEADINGS: Ganglia, Sensory/\*drug effects  
MESH HEADINGS: Ganglia, Spinal/\*pathology  
MESH HEADINGS: Male  
MESH HEADINGS: Neurons/\*pathology  
MESH HEADINGS: Sensory Receptor Cells/\*drug effects  
MESH HEADINGS: Tritolyl Phosphates/\*toxicity  
MESH HEADINGS: Vacuoles/\*drug effects/\*metabolism eng

717. Kristenson, E. M.; Shahmiri, S.; Slooten, C. J.; Vreuls, R. J. J., and Brinkman, U. A. T. Matrix Solid-Phase Dispersion Micro-Extraction of Pesticides from Single Insects with Subsequent GC-MS Analysis. 2004; 59, (5-6): 315-320.   
Rec #: 1000  
Keywords: METHODS  
Call Number: NO METHODS (ATN,AZ,CPY,CYF,CYH,DZ,FNT,MDT,MLN,MP,PMR,RSM,TFN)  
Notes: Chemical of Concern: ATN,AZ,CPY,CYF,CYH,DZ,FNT,FNTH,MDT,MLN,MP,PMR,RSM,TFN

718. Kuivila, K. M. and Foe, C. G. Concentrations, Transport and Biological Effects of Dormant Spray Pesticides in the San Francisco Estuary, California. 22604//: 1995; 14, (7): 1141-1150.   
Rec #: 1010  
Keywords: MIXTURE  
Call Number: NO MIXTURE (ATZ,CBL,CPY,DZ,MDT,MLN,SZ)  
Notes: Chemical of Concern: ATZ,CBL,CPY,DZ,EPRN,MDT,MLN,PRN,SZ

719. Kulshrestha, G. and Kumari, A. Simultaneous Degradation of Mixed Insecticides by Mixed Fungal Culture Isolated from Sewage Sludge. 2010; 58, (22): 11852-11856.   
Rec #: 63209  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The degradation of mixed (DDT and chlorpyrifos) insecticides by mixed insecticide enriched cultures was investigated. The mixed fungal population was isolated from mixed insecticide acclimatized sewage sludge over a period of 90 days. Gas chromatography was used to detect the concentration of mixed insecticides and calculate the degradation efficiency. The results showed that the degradation capability of the mixed microbial culture was higher in low concentrations than in high concentrations of the mixed insecticides. After 12 weeks of incubation, mixed pesticide enriched cultures were able to degrade 79.5-94.4% of DDT and 73.6-85.9% of chlorpyrifos in facultative cometabolic conditions. The fungal strains isolated from the mixed microbial consortium were identified as Fusarium sp. isolates GFSM-4 (ITCC 6841) and GFSM-5 (ITCC 6842). The fungal culture GFSM-4 could not utilize mixed insecticides as source of carbon and nitrogen, probably due to high combined toxicity of the mixed insecticides. Liquid media deficient in carbon (1% mannitol) and nitrogen (0.1% sodium nitrate) source increased the degradation efficiency of DDT and chlorpyrifos to 69 and 45%, respectively. The media with normal carbon and deficient nitrogen (0.1% sodium nitrate) sources extensively increased the degradation efficiencies of DDT (94%) and chlorpyrifos (69.2%). Traces of p,p'-dichlorobenzophenone and desdiethylchlorpyrifos were observed in the liquid medium, which did not accumulate probably due to further rapid degradation. This fungal isolate (GFSM-4) was able to degrade simultaneously DDT (26.94%) and chlorpyrifos (24.94%) in sterile contaminated (50 mg of each insecticide kg(-1)) soil in aerobic conditions.  
Keywords: Mixed pesticides, DDT, chlorpyrifos, insecticide mixture,  
ISI Document Delivery No.: 680AR

720. Kulshrestha, Gita; Kumari, Anupriya, and Kulshrestha, Gita. Fungal Degradation of Chlorpyrifos by Acremonium Sp. Strain (Gfrc-1) Isolated From a Laboratory-Enriched Red Agricultural Soil. 2011 Feb; 47, (2): 219-225.   
Rec #: 39979  
Keywords: NO EFFECT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The organophosphorus insecticide, chlorpyrifos, has been widely applied in agriculture; in veterinary, against household pests; and in subterranean termite control. Due to its slow rate of degradation in soil, it can persist for extended periods in soil with a significant threat to environment and public health. The mixed and pure fungi were isolated from three soils by enrichment technique. The enriched mixed fungal cultures were capable of biodegrading chlorpyrifos (300mgL super(-1)) when cultivated in Czapek Dox medium. The identified pure fungal strain, Acremonium sp., utilized chlorpyrifos as a source of carbon and nitrogen. The highest chlorpyrifos degradation (83.9%) by Acremonium sp. strain GFRC-1 was found when cultivated in the nutrient medium with full nutrients. Desdiethyl chlorpyrifos was detected as a major biodegradation product of chlorpyrifos. The isolated fungal strain will be used for developing bioremediation strategy for chlorpyrifos-polluted soils.  
Keywords: Environmental degradation  
Keywords: Agriculture  
Keywords: Fertility  
Keywords: Bioremediation  
Keywords: Biodegradation  
Keywords: Degradation  
Keywords: Fungi  
Keywords: Z 05350:Medical, Veterinary, and Agricultural Entomology  
Keywords: Entomology Abstracts; Microbiology Abstracts C: Algology, Mycology & Protozoology; Ecology Abstracts  
Keywords: agricultural land  
Keywords: Nutrients  
Keywords: Public health  
Keywords: Chlorpyrifos  
Keywords: Soil  
Keywords: Carbon  
Keywords: Insecticides  
Keywords: Acremonium  
Keywords: D 04040:Ecosystem and Ecology Studies  
Keywords: Pesticides  
Keywords: Pests  
Keywords: K 03320:Cell Biology  
Keywords: Nitrogen  
Keywords: Isoptera  
Date revised - 2011-07-01  
Language of summary - English  
Pages - 219-225  
ProQuest ID - 879470118  
SubjectsTermNotLitGenreText - Agriculture; Soil; Chlorpyrifos; Biodegradation; Insecticides; Bioremediation; Carbon; Fungi; Nutrients; Pests; Nitrogen; Public health; Environmental degradation; Fertility; Degradation; Pesticides; agricultural land; Acremonium; Isoptera  
Last updated - 2012-03-29  
British nursing index edition - Biology and Fertility of Soils [Biol. Fertility Soils]. Vol. 47, no. 2, pp. 219-225. Feb 2011.  
Corporate institution author - Kulshrestha, Gita; Kumari, Anupriya  
DOI - 744c8215-782b-4876-8be3mfgefd101; 14263656; 0178-2762; 1432-0789 English

721. Kumar, Anjani; Nayak, a K; Shukla, Arvind K; Panda, B B; Raja, R; Shahid, Mohammad; Tripathi, Rahul; Mohanty, Sangita, and Rath, P C. Microbial Biomass and Carbon Mineralization in Agricultural Soils as Affected by Pesticide Addition. 2012 Apr; 88, (4): 538-42.   
Rec #: 42769  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A laboratory study was conducted with four pesticides, viz. a fungicide (carbendazim), two insecticides (chlorpyrifos and cartap hydrochloride) and an herbicide (pretilachlor) applied to a sandy clay loam soil at a field rate to determine their effect on microbial biomass carbon (MBC) and carbon mineralization (C^sub min^). The MBC content of soil increased with time up to 30 days in cartap hydrochloride as well as chlorpyrifos treated soil. Thereafter, it decreased and reached close to the initial level by 90th day. However, in carbendazim treated soil, the MBC showed a decreasing trend up to 45 days and subsequently increased up to 90 days. In pretilachlor treated soil, MBC increased through the first 15 days, and thereafter decreased to the initial level. Application of carbendazim, chlorpyrifos and cartap hydrochloride decreased C^sub min^ for the first 30 days and then increased afterwards, while pretilachlor treated soil showed an increasing trend.[PUBLICATION ABSTRACT]  
Keywords: Agriculture  
Keywords: Pesticides -- analysis  
Keywords: Carbamates -- chemistry  
Keywords: Thiocarbamates  
Keywords: Acetanilides -- chemistry  
Keywords: Carbon -- chemistry  
Keywords: Soil Pollutants -- chemistry  
Keywords: Environmental Studies  
Keywords: Pesticides -- chemistry  
Keywords: Soil Pollutants  
Keywords: Soil  
Keywords: Chlorpyrifos -- analysis  
Keywords: Carbon  
Keywords: mecarzole  
Keywords: carbamothioic acid, S,S'-(2-(dimethylamino)-1,3-propanediyl) ester  
Keywords: Acetanilides  
Keywords: Thiocarbamates -- chemistry  
Keywords: Chlorpyrifos -- chemistry  
Keywords: Acetanilides -- analysis  
Keywords: Carbon -- metabolism  
Keywords: Biomass  
Keywords: Soil Pollutants -- analysis  
Keywords: Chlorpyrifos  
Keywords: Benzimidazoles  
Keywords: Soil Microbiology  
Keywords: Carbamates -- analysis  
Keywords: Thiocarbamates -- analysis  
Keywords: Benzimidazoles -- chemistry  
Keywords: Pesticides  
Keywords: Benzimidazoles -- analysis  
Keywords: Carbamates  
Keywords: Soil -- chemistry  
Keywords: pretilachlor  
Copyright - Springer Science+Business Media, LLC 2012  
Language of summary - English  
Pages - 538-42  
ProQuest ID - 927069579  
Document feature - References  
Last updated - 2012-05-19  
Place of publication - New York  
Corporate institution author - Kumar, Anjani; Nayak, A K; Shukla, Arvind K; Panda, B B; Raja, R; Shahid, Mohammad; Tripathi, Rahul; Mohanty, Sangita; Rath, P C  
DOI - 2606592571; 67905392; 108019; BVCX; 22310842; SPVLBVCX128884538  
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722. Kumar, P.; Chandel, Y. S., and Kumar, S. Evaluation of Some Insecticides for the Management of Agrotis segetum. SOIL; 2009; 79, (3): 235-239 (Publ as EcoRef 155367).   
Rec #: 2170  
Keywords: PUBL AS  
Call Number: NO PUBL AS (CPY,IMC,LCYT,PFF)  
Notes: Chemical of Concern: CPY,IMC,LCYT,PFF

723. Kumar, Pradeep; Singh, S P; Ahmad, Ah; Rao, Vdp, and Kumar, Pradeep. Determination of Chlorpyrifos Residues in Buffalo Meat Samples Using High Performance Liquid Chromatography. 2009 Feb 7; 1, (2): 189-199.   
Rec #: 41429  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos, an organophosphorous compound, is widely used to improve the yield of agricultural produce in India. Public concern over pesticide residues in foods has been increasing such that it has become a significant food safety issue. The present study was conducted to screen 254 buffalo meat samples collected from different slaughter houses for chlorpyrifos residues. The putative chlorpyrifos residues were extracted by homogenising and sonicating the samples with acetonitrile. The extract was cleaned up by performing alumina column chromatography. The cleaned up extract was subjected to high performance liquid chromatography. The residues were eluted in isocratic mobile phase consisting of acetonitrile:water (67:33) at the flow rate of 1 mlitre min â’ 1 and run time of 18 min. The wavelength of detection was set at 202 nm with 360 nm as the reference wavelength. Chlorpyrifos residues were detected in 18 (7.08% of the total samples) samples. Of these positive samples, only 2 (0.78% of the total samples) exceeded codex maximum residue limit of chlorpyrifos in meat.  
Keywords: Housing  
Keywords: Pesticide residues  
Keywords: Chromatography  
Keywords: Health & Safety Science Abstracts  
Keywords: Food contamination  
Keywords: Flow rates  
Keywords: India  
Keywords: Chlorpyrifos  
Keywords: Liquid chromatography  
Keywords: Pesticides  
Keywords: Residential areas  
Keywords: H 4000:Food and Drugs  
Keywords: Public concern  
Date revised - 2009-05-01  
Language of summary - English  
Location - India  
Pages - 189-199  
ProQuest ID - 20506580  
SubjectsTermNotLitGenreText - India; Chlorpyrifos; Pesticides; Liquid chromatography; Food contamination; Housing; Public concern; Residential areas; Chromatography; Pesticide residues; Flow rates  
Last updated - 2011-12-14  
British nursing index edition - International Journal of Food Safety Management. Vol. 1, no. 2, pp. 189-199. 7 Feb 2009.  
Corporate institution author - Kumar, Pradeep; Singh, S P; Ahmad, AH; Rao, VDP  
DOI - MD-0009425705; 9196160; 1479-3911; 1479-392X English

724. Kumar, Sumit. Effect of Soil Physicochemical Properties on Chlorpyrifos Tolerant Bacteria From Cultivated Soils. 2011; 4, 17-23.   
Rec #: 40079  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The present study investigated the effect of various soil physicochemical properties on the native chlorpyrifos-tolerant bacterial density in the cultivated soils of Rajkot district of Gujarat. Out of the four soil physical properties considered, bulk density showed negative correlation while the rest three viz. porosity, soil moisture and electrical conductivity showed positive correlation. However, except soil moisture (R^sup 2^ = 0.625), none of the soil physical properties showed significant effect on chlorpyrifos-tolerant bacterial density, as indicated by their lower values of R-square. Similarly, out of four soil chemical properties examined, only pH showed negative correlation and the remaining three viz. organic C, organic N and available P showed positive correlation. Except soil pH, the three other chemical properties of soil showed very significant effect on the abundance of chlorpyrifos-tolerant bacteria in the soil. The results of the present study can be utilized for the development of effective bioremediation process for chlorpyrifos-contaminated soil. [PUBLICATION ABSTRACT]  
Keywords: Environmental Studies  
Copyright - Copyright CTR Journals 2011  
Language of summary - English  
Pages - 17-23  
ProQuest ID - 870633514  
Document feature - Graphs; Tables; References  
Last updated - 2011-06-08  
Place of publication - Rijkot  
Corporate institution author - Kumar, Sumit  
DOI - 2369038381; 62086411; 111809; EJNV; INNNEJNV0000669102  
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Murugesan,A.G., Jeyasanthi, T. andMaheswari, S.:African J.Micro. Res., 4(1): 10-13 (2010)  
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Rani, M.S., Lakshmi, K.V., Devi, P.S.,Madhuri, R.J.,Aruna, S., Jyothi, K., Narasimha, G. and Venkateswarlu, K.:African J.Micro. Res., 2: 26-31(2008)  
Singh B.K.,WalkerA.,Morgan J.A.W. andWright D.J.:Appl. Env.Micro., 69(9): 5198-5206 (2003). English

725. Kunal and Sharma, P. Influence of Pesticide-Treated Seeds on Survival of Mesorhizobium sp. Cicer, Symbiotic Efficiency and Yield in Chickpea. SOIL; 2012; 48, (1): 37-43.   
Rec #: 2780  
Keywords: BENEFICIAL EFFECT  
Call Number: NO BENEFICIAL EFFECT (CPY,Captan,ES)  
Notes: EcoReference No.: 160348  
Chemical of Concern: CPY,Captan,ES

726. Kunz, Stefan; Minca, Mihaela; Luginb++hl, Edith; Bregy, Patrick, and Seebeck, Thomas. Chapter 189 - Cyclic Nucleotide Signaling in the Kinetoplastids. Ralph A. Bradshaw and Edward A. Dennis. Handbook of Cell Signaling (Second Edition). San Diego: Academic Press; 2010: 1543-1547.   
Rec #: 4170  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ISSN/ISBN: 978-0-12-374145-5 Publisher Summary

727. Kurt-Karakus, Perihan Binnur; Teixeira, Camilla; Small, Jeff; Muir, Derek, and Bidleman, Terry F. Current-Use Pesticides in Inland Lake Waters, Precipitation, and Air From Ontario, Canada. 2011 Jul; 30, (7): 1539-1548.   
Rec #: 43269  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Concentrations of current-use pesticides (CUPs) in water, zooplankton, precipitation, and air samples as well as stereoisomer fractions (SF; herbicidally active/total stereoisomers) of metolachlor were determined in water samples collected from 10 remote inland lakes in Ontario, Canada, between 2003 and 2005. The most frequently detected chemicals in lake water, precipitation, and air were Î±-endosulfan, atrazine, metolachlor, chlorpyrifos, chlorothalonil, and trifluralin, and Î±-endosulfan and chlorpyrifos were the chemicals detected frequently in zooplankton. Air concentrations of these CUPs were within the range of previously reported values for background sites in the Great Lakes basin. High detection frequency of CUPs in lake water and precipitation was attributed to high usage amounts, but some CUPs such as ametryn and disulfoton that were not used in Ontario were also detected. Mean bioaccumulation factors (wet wt) in zooplankton for endosulfan ranged from 160 to 590 and from 20 to 60 for chlorpyrifos. The overall median SF of metolachlor in precipitation samples (0.846) was similar to that of the commercial S-metolachlor (0.882). However, the median SF of metolachlor in water from all sampled inland lakes (0.806) was significantly lower compared with Ontario rivers (0.873) but higher compared with previous measurements in the Great Lakes (0.710). Lakes with smaller watershed areas showed higher SFs, supporting the hypothesis of stereoselective processing of deposited metolachlor within the watersheds, followed by transport to the lakes. Copyright Â© 2011 SETAC.  
Keywords: Pesticides -- analysis  
Keywords: 2921-88-2  
Keywords: Atmosphere -- chemistry  
Keywords: X0I01K05X2  
Keywords: Animals  
Keywords: 115-29-7  
Keywords: Air Pollutants -- metabolism  
Keywords: Water Pollutants, Chemical -- analysis  
Keywords: Zooplankton -- metabolism  
Keywords: Rain -- chemistry  
Keywords: Air Pollutants -- analysis  
Keywords: 1912-24-9  
Keywords: Chlorpyrifos -- analysis  
Keywords: Acetamides -- analysis  
Keywords: Water Pollutants, Chemical  
Keywords: Trifluralin -- metabolism  
Keywords: Fresh Water -- chemistry  
Keywords: Environmental Pollution -- statistics & numerical data  
Keywords: Climate  
Keywords: Air Pollutants  
Keywords: Atrazine -- analysis  
Keywords: metolachlor  
Keywords: 1582-09-8  
Keywords: Endosulfan  
Keywords: Acetamides  
Keywords: Ontario  
Keywords: Chlorpyrifos  
Keywords: Environmental Monitoring  
Keywords: Pesticides -- metabolism  
Keywords: 0  
Keywords: Canada  
Keywords: Endosulfan -- analysis  
Keywords: Endosulfan -- metabolism  
Keywords: Atrazine  
Keywords: Pesticides  
Keywords: Acetamides -- metabolism  
Keywords: Isomerism  
Keywords: Trifluralin  
Keywords: Atrazine -- metabolism  
Keywords: Trifluralin -- analysis  
Keywords: Water Pollutants, Chemical -- metabolism  
Keywords: Chlorpyrifos -- metabolism  
Date completed - 2011-09-16  
Date created - 2011-06-07  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 1539-1548  
ProQuest ID - 871003220  
Last updated - 2013-01-19  
British nursing index edition - Environmental toxicology and chemistry / SETAC, July 2011, 30(7):1539-1548  
Corporate institution author - Kurt-Karakus, Perihan Binnur; Teixeira, Camilla; Small, Jeff; Muir, Derek; Bidleman, Terry F  
DOI - MEDL-21472774; 21472774; 1552-8618 eng

728. Kuskova, Petra; Gingrich, Simone, and Krausmann, Fridolin. Long term changes in social metabolism and land use in Czechoslovakia, 1830Çô2000: An energy transition under changing political regimes. 2008 Dec 1-; 68, (1Çô2): 394-407.   
Rec #: 4160  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Industrialisation goes along with sweeping changes in society's interrelations with its environment. The transition from an agrarian to an industrial society leads to fundamentally new patterns in social metabolism, a process which has been described as socio-metabolic transition. This paper investigates this transition for the case of the current Czech and Slovak Republics and presents a dataset on the development of key variables related to social metabolism during the last 170-áyears. The dataset includes time series data on the extraction of biomass and fossil fuels, energy consumption and land use. Combining data on Bohemia and Moravia (1830Çô1915) with data on Czechoslovakia (1918Çô1992) and the Czech and Slovak Republics (1993Çô2002), the study covers a period of consecutive political and institutional changes. It includes the feudal regime of the late period of the Habsburg Empire and its disintegration with WWI, the short period of the Czechoslovak Republic in the interwar period, the era of a planned economy under a communist regime, the collapse of this regime and the subsequent turn towards a market economy and European integration in the 1990s. The period was characterized by economic and physical growth. It saw a doubling of population and a growth in GDP by a factor 20. Domestic energy consumption (DEC) increased by a factor 10 and the share of biomass in DEC declined from more than 98% to less than 20%. All in all the observed changes closely resemble the characteristic path of the socio-metabolic transition as observed in other Western European economies. Major political and economic changes did not result in fundamental alterations of the socio-metabolic transition until the mid-20th century. The communist era (1945Çô1989) was characterized by rapid physical growth and changes in the energy and land use system very similar to those of other Western European economies in the same period, however leading to DEC values substantially higher than those of other European countries at around 300-áGJ/cap in the mid-1980s. The disturbances caused by the Velvet Revolution resulted in short term turbulences in social metabolism and structural adaptations, and around the year 2000, the Czech and Slovak Republics show biophysical features very similar to those of other Western European countries. Social metabolism/ Energy flow analysis/ Land use/ Czechoslovakia/ Industrialization/ Physical economy

729. Kusvuran, Erdal; Yildirim, Deniz; Mavruk, Funda, and Ceyhan, Mehmet. Removal of chloropyrifos ethyl, tetradifon and chlorothalonil pesticide residues from citrus by using ozone. 2012 Nov 30-; 241Çô242, (0): 287-300.   
Rec #: 250  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: The removal of chloropyrifos ethyl, tetradifon and chlorothalonil pesticide residues from the lemon, orange and grapefruit matrices were achieved by ozonation. All of chlorothalonil residues adsorbed onto the orange matrix were completely removed after 5 min ozonation. The highest removal percentages of tetradifon and chloropyrifos ethyl were achieved as 98.6 and 94.2%, respectively for the lemon and grapefruit matrices. All of diffused chlorothalonil and chloropyrifos ethyl residues were completely removed from both orange and grapefruit matrices after 5 min ozonation. Increasing of applied ozone dosage was not significantly effect on the removal percentages of pesticides whereas increasing of ozonation temperature caused a negative effect on the removal percentages of pesticides. The washing of the matrices with tap water was not as effective as ozonation in the removal of residual pesticides. Our results show that ozone treatment has a great potential for removing of residual pesticides from lemon, orange and grapefruit matrices. Citrus/ Ozone/ Chloropyrifos ethyl/ Tetradifon/ Chlorothalonil

730. Kuswandi, Bambang; Fikriyah, Chulaifah Indah; Gani, Agus Abdul, and Kuswandi, Bambang. An Optical Fiber Biosensor for Chlorpyrifos Using a Single Sol-Gel Film Containing Acetylcholinesterase and Bromothymol Blue. 2008 Jan; 74, (4): 613-618.   
Rec #: 42359  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An optical fiber biosensor consisting of acetylcholinesterase (AChE) and bromothymol blue (BTB) doped sol-gel film was employed to detect organophosphate pesticide chlorpyrifos. The main advantage of this optical biosensor is the use of a single sol-gel film with immobilized AChE and BTB. The compatibility of this mixture (AChE and BTB) with the sol-gel matrix has prevented leaching of the film. The immobilization of the enzyme and indicator was simple without chemical modification. The biosensing element on single sol-gel film has been placed inside the flow-cell for flow system. In the presence of a constant AChE, a color change of the BTB and the measured reflected signal at wavelength 622 nm could be related to the pesticide concentration in the sample solutions. The performance of optical biosensor in the flow system has been optimized, including chemical and physical parameters. The response time of the biosensor is 8 min. A linear calibration curve of chlorpyrifos against the percentage inhibition of AChE was obtained from 0.05 to 2.0 mg/L of chlorpyrifos (18-80% inhibition, R super(2) = 0.9869, n = 6). The detection limit for chlorpyrifos was 0.04 mg/L. The results of the analysis of 0.5-1.5 mg/L of chlorpyrifos using this optical biosensor agreed well with chromatographic method.  
Keywords: Pesticides (organophosphorus)  
Keywords: Leaching  
Keywords: Acetylcholinesterase  
Keywords: Enzymes  
Keywords: Color  
Keywords: Biosensors  
Keywords: Chlorpyrifos  
Keywords: Fibers  
Keywords: Biotechnology and Bioengineering Abstracts  
Keywords: W 30955:Biosensors  
Keywords: Wavelength  
Keywords: Immobilization  
Keywords: Chemical modification  
Date revised - 2009-01-01  
Language of summary - English  
Pages - 613-618  
ProQuest ID - 19548752  
SubjectsTermNotLitGenreText - Chlorpyrifos; Biosensors; Acetylcholinesterase; Fibers; Color; Leaching; Chemical modification; Wavelength; Immobilization; Enzymes; Pesticides (organophosphorus)  
Last updated - 2011-12-14  
British nursing index edition - Talanta [Talanta]. Vol. 74, no. 4, pp. 613-618. Jan 2008.  
Corporate institution author - Kuswandi, Bambang; Fikriyah, Chulaifah Indah; Gani, Agus Abdul  
DOI - MD-0008899661; 8687966; 0039-9140 English

731. Kuwabara, K. and Kashimoto, T. Studies on Toxicity Tests of Environmental Pollutants Using the Artemia salina Dry Cyst and Adult. K.Kuwabara, Osaka Furitsu Koshu Eisei Kenkyusho, Osaka, Japan//: 1984; 7, (2): 33-39(JPN).   
Rec #: 1020  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

732. LacourcišRe, Y.; Taddei, S.; Konis, G.; Fang, H.; Severin, T., and Zhang, J. Clinic and Ambulatory Blood Pressure Lowering Effect of Aliskiren/Amlodipine/Hydrochlorothiazide Combination in Patients With Moderate-to-Severe Hypertension: a Randomized Active-Controlled Trial.   
Rec #: 50029  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: OBJECTIVES: To evaluate the clinic and ambulatory blood pressure (BP)-lowering efficacy and safety of an aliskiren/amlodipine/hydrochlorothiazide (HCT) triple combination compared with the component dual combinations, in patients with moderate-to-severe hypertension.  
ABSTRACT: METHODS: This 8-week, double-blind, randomized, active-controlled study, after 1-4 weeks single-blind placebo run-in period, randomized 1191 patients to receive once-daily aliskiren/amlodipine 150/5 mg (n&#8202;=&#8202;287), aliskiren/HCT 150/12.5 mg (n&#8202;=&#8202;298), amlodipine/HCT 5/12.5 mg (n&#8202;=&#8202;296), or aliskiren/amlodipine/HCT 150/5/12.5 mg (up-titrated from aliskiren/HCT 150/12.5 mg after initial 3 days) (n&#8202;=&#8202;310) for 4 weeks, followed by forced titration to double the initial dose for the next 4 weeks.  
ABSTRACT: RESULTS: Baseline mean sitting SBP and DBP (msSBP/msDBP) was comparable among treatment groups. The aliskiren/amlodipine/HCT combination resulted in significant least squares mean reduction in msSBP/msDBP from baseline to endpoints (week 4, -30.7/-15.9 &#8202;mmHg; week 8, -37.9/-20.6&#8202; mmHg), superior (P&#8202; < &#8202;0.001) to each of the dual combinations. The triple combination was associated with -27.8&#8202; mmHg reduction in msSBP at week 2, significantly better than the dual combinations (P&#8202; < &#8202;0.05). Significantly greater mean SBP/DBP-lowering effect for triple vs. dual combinations was also demonstrated through 24-h, daytime, and night-time ambulatory BP measurements. Significantly greater (P&#8202; < &#8202;0.001) BP control (msSBP/msDBP&#8202; < &#8202;140/90 &#8202;mmHg) was achieved with triple combination in patients with moderate-to-severe (62.3%) and severe (57.5%) hypertension.  
ABSTRACT: CONCLUSION: Aliskiren/amlodipine/HCT at 150/5/12.5 mg (week 4) and 300/10/25 mg (week 8) provided statistically superior reductions in msSBP/msDBP and greater BP control rates vs. the dual combinations, and was well tolerated. The improved efficacy of BP reduction was evident within 2 weeks of initiating triple therapy even at low dose.  
MESH HEADINGS: Aged  
MESH HEADINGS: Amides/administration &amp  
MESH HEADINGS: dosage/therapeutic use  
MESH HEADINGS: Amlodipine/administration &amp  
MESH HEADINGS: dosage/therapeutic use  
MESH HEADINGS: Antihypertensive Agents/administration &amp  
MESH HEADINGS: dosage/adverse effects/\*therapeutic use  
MESH HEADINGS: Double-Blind Method  
MESH HEADINGS: Drug Therapy, Combination  
MESH HEADINGS: Female  
MESH HEADINGS: Fumarates/administration &amp  
MESH HEADINGS: dosage/therapeutic use  
MESH HEADINGS: Humans  
MESH HEADINGS: Hydrochlorothiazide/administration &amp  
MESH HEADINGS: dosage/therapeutic use  
MESH HEADINGS: Hypertension/\*drug therapy/physiopathology  
MESH HEADINGS: Male  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: Placebos  
MESH HEADINGS: Severity of Illness Index  
MESH HEADINGS: Single-Blind Method eng

733. Lahr, Joost ; MăĽNier, Bernd; De Lange, Hendrika J; Faber, Jack F, and Să¸Rensen, Peter Borgen. Wildlife Vulnerability and Risk Maps for Combined Pollutants. 2010 Aug 15; 408, (18): 3891-3898.   
Rec #: 43919  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Ecological risk and vulnerability maps can be used to improve the analysis of pollutant risks and communication to stakeholders. Often, such maps are made for one pollutant at the time. We used the results of wildlife vulnerability analysis, a novel trait-based risk assessment approach, to map overall vulnerability of habitats in Denmark to various metals and one insecticide. These maps were combined with maps of estimated soil concentrations for the same compounds divided by their Maximum Permissible Concentrations. This combination yielded relative risk maps that can be used to assess where the highest risk conditions to wildlife from these individual pollutants in Denmark occur (hot spot identification). In order to show how cumulative risk maps can be made, the maps of the individual pollutants were combined assuming different mechanisms of joint toxicity: no addition, concentration addition, antagonism and synergism. The study demonstrated that with an accurate set of geographical and ecological data one can use the results of vulnerability analysis to make relevant ecological risk maps that show hot spot areas for risks of single or cumulative risks from soil pollutants. Copyright 2009 Elsevier B.V. All rights reserved.  
Keywords: 2921-88-2  
Keywords: Animals  
Keywords: Environmental Exposure -- statistics & numerical data  
Keywords: Nickel  
Keywords: Environmental Exposure -- analysis  
Keywords: Copper  
Keywords: Metals -- analysis  
Keywords: Chlorpyrifos -- analysis  
Keywords: Ecosystem  
Keywords: 7440-43-9  
Keywords: Insecticides  
Keywords: Zinc  
Keywords: Cadmium -- toxicity  
Keywords: Denmark  
Keywords: Cadmium  
Keywords: 7440-02-0  
Keywords: Geography  
Keywords: Insecticides -- toxicity  
Keywords: Metals  
Keywords: 7440-50-8  
Keywords: Nickel -- analysis  
Keywords: Cadmium -- analysis  
Keywords: Environmental Pollution -- statistics & numerical data  
Keywords: Zinc -- toxicity  
Keywords: Environmental Pollutants -- analysis  
Keywords: Risk Assessment -- methods  
Keywords: Insecticides -- analysis  
Keywords: Environmental Pollutants  
Keywords: Chlorpyrifos  
Keywords: Zinc -- analysis  
Keywords: 0  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Risk Factors  
Keywords: 7440-66-6  
Keywords: Copper -- analysis  
Keywords: Nickel -- toxicity  
Keywords: Geographic Information Systems  
Keywords: Copper -- toxicity  
Keywords: Environmental Monitoring -- methods  
Keywords: Metals -- toxicity  
Date completed - 2010-10-29  
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Date revised - 2012-12-20  
Language of summary - English  
Pages - 3891-3898  
ProQuest ID - 749020705  
Last updated - 2013-01-19  
British nursing index edition - The Science of the total environment, August 15, 2010, 408(18):3891-3898  
Corporate institution author - Lahr, Joost; MĂĽnier, Bernd; De Lange, Hendrika J; Faber, Jack F; SĂ¸rensen, Peter Borgen  
DOI - MEDL-20060570; 20060570; 1879-1026 eng

734. Lakshmi, C. V.; Kumar, M., and Khanna, S. Blotransformation of chlorpyrifos and bioremediation of contaminated soil. 2008; 62, (2): 204-209.   
Rec #: 63339  
Keywords: FATE  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Five aerobic consortia capable of degrading chlorpyrifos as a sole carbon source in aqueous medium showed degradation in the range of 46-72% after 20 days. Pseudomonas fluorescence, Brucella melitensis, Bacillus subtilis, Bacillus cereus. Klebsiella species, Serratia marcescens and Pseudomonas aeroginosa, isolated from these consortium, showed 75-87% degradation of chlorpyrifos as compared to 18% in control after 20 days of incubation. Bioremediation of chlorpyrifos-contaminated soil with P. fluorescence, B. melitensis, B. subtilis and P. aeroginosa individually showed 89%, 87%, 85% and 92% degradation, respectively, as compared to 34% in control after 30 days. Population dynamics of the introduced isolates based on antibiotic resistance survival and REP-PCR indicated 60-70% survival based on antibiotic resistance, but only 35-45% of the inoculated population based on REP-PCR. During bioremediation studies, 3,5,6-trichloro-2-pyridinol (TCP) was detected as metabolite of chlorpyrifos degradation by 1 aeroginosa after 20 days, which was utilized and disappeared after 30 days. Whole-cell studies also showed that P. aeroginosa gave TCP as the product of chlorpyrifos degradation, which was further metabolized to unknown polar metabolites. Scientific relevance: Potential application in sites for effective in situ bioremediation of chlorpyrifos, a neurotoxic insecticide widely used in India. (C) 2008 Elsevier Ltd. All rights reserved.  
Keywords: chlorpyrifos degradation, bioremediation, microcosm, REP-PCR, population  
ISI Document Delivery No.: 349XP

735. Lakshmi, C Vidya; Kumar, Mohit, and Khanna, Sunil. Biodegradation of Chlorpyrifos in Soil by Enriched Cultures. 2009 Jan; 58, (1): 35-38.   
Rec #: 41509  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Three aerobic bacterial consortia, AC, BC, and DC, developed from pesticide-contaminated soils of Punjab were able to degrade chlorpyrifos after 21 days of incubation in basal medium by 54, 46, and 61% and chlorpyrifos (50 mg/L) in soil after 30 days by 50, 56, and 64%. Pseudomonas aeruginosa, Bacillus cereus, Klebsiella sp., and Serratia marscecens obtained from these consortia showed 84, 84, 81, and 80% degradation of chlorpyrifos (50 mg/L) in liquid medium after 20 days and 92, 60, 56, and 37% degradation of chlorpyrifos (50 mg/L) in soil after 30 days. Populations of Bacillus cereus, Klebsiella sp., and Serratia marscecens remained steady in soil experiments except for P. aeruginosa, where the population showed a substantial increase. Formation of 3,5,6-trichloro-2-pyridinol, the major metabolite of chlorpyrifos degradation, was observed during the degradation of chlorpyrifos by P. aeruginosa, which disappeared to negligible amounts.  
Keywords: 2921-88-2  
Keywords: Pyridones -- metabolism  
Keywords: Bacteria, Aerobic -- classification  
Keywords: Bacteria, Aerobic -- metabolism  
Keywords: 6515-38-4  
Keywords: Chlorpyrifos  
Keywords: Soil Microbiology  
Keywords: 3,5,6-trichloro-2-pyridinol  
Keywords: 0  
Keywords: Pyridones  
Keywords: Biodegradation, Environmental  
Keywords: Bacteria, Aerobic -- isolation & purification  
Keywords: Time Factors  
Keywords: Chlorpyrifos -- metabolism  
Date completed - 2009-01-30  
Date created - 2008-12-16  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 35-38  
ProQuest ID - 66741554  
Last updated - 2013-01-19  
British nursing index edition - Current microbiology, January 2009, 58(1):35-38  
Corporate institution author - Lakshmi, C Vidya; Kumar, Mohit; Khanna, Sunil  
DOI - MEDL-18815830; 18815830; 1432-0991 eng

736. Lambert, M. R. K. Effects of Pesticides on Amphibians and Reptiles in Sub-Saharan Africa. 1997; 150, 31-73.   
Rec #: 180  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (CPY,CYF,DM,ES,FNT,MLN,PMR,TCF,TMP), NO REVIEW (CPY,CYF,DM,ES,FNT,MLN,PMR,TCF,TMP)  
Notes: Chemical of Concern: BDC,CPY,CYF,DDE,DDT,DLD,DM,ES,FNT,HCCH,HPT,MLN,PMR,PPCP,TCF,TMP,TXP

737. Lammer, E.; Carr, G. J.; Wendler, K.; Rawlings, J. M.; Belanger, S. E., and Braunbeck, T. Is the Fish Embryo Toxicity Test (FET) with the Zebrafish (Danio rerio) a Potential Alternative for the Fish Acute Toxicity Test? 2009; 149, (2): 196-209.   
Rec #: 1880  
Keywords: REVIEW  
Call Number: NO REVIEW (1Major ions,ACL,ATZ,BZO,C8OH,CBL,CPY,CuS,DCA,DZ,ETHN,FNV,Halides,IGS,MOL,NaCl,PCP,SCA,ZnS)  
Notes: EcoReference No.: 116394  
Chemical of Concern: 4CE,4NP,ACL,AN,ATZ,BZO,C8OH,CBL,CPY,Cd,CdCl,CuS,DCA,DEG,DZ,EN,ETHN,FNV,HCCH,Halides,IGS,IPA,K2Cr2O7,MOL,MOR,NaCl,PCP,PL,PPCP,SCA,TCC,TEG,Urea,ZnS

738. Land, L. F. and Brown, M. F. Water-Quality Assessment of the Trinity River Basin, Texas - Pesticides in Streams Draining an Urban and an Agricultural Area, 1993-95. 22603//: 1996: 22 p.   
Rec #: 1030  
Keywords: NO SPECIES  
Call Number: NO SPECIES (24D,24DXY,3HCF,ACR,ADC,ATZ,AZ,BMC,BT,BTY,CBL,CLNB,CPY,DCPA,DMB,DPP1,DS,DU,DZ,EP,EPTC,ES1,LNR,MCB,MCPB,MLN,MLT,MP,MTL,NATL,NFZ,OML,OYZ,PCPMR,PDM,PPG,PPN,PPX,PRO,PRT,SZ,TBC,TBO,TET,TFN)  
Notes: Chemical of Concern: 24D,24DB,24DXY,3HCF,ACF,ACR,ADC,AND,ATZ,AZ,BMC,BMN,BT,BTY,CBL,CLNB,CPR,CPY,DBN,DCPA,DMB,DPP1,DS,DU,DZ,DZE,EFL,EN,EP,EPRN,EPTC,ES1,FBL,FMU,FNF,FTPR,HCCH,HPT,LNR,MBZ,MCB,MCPA,MCPB,MLN,MLT,MP,MRX,MTL,MXC,NATL,NFZ,NPP,OML,OYZ,PCH,PCL,PCPMR,PDM,PEB,PPCP,PPG,PPN,PPX,PRN,PRO,PRPMR,PRT,SZ,TBC,TBO,TET,TFN,TRB,TRL,TXP

739. Landrigan, Philip J. What Causes Autism? Exploring the Environmental Contribution. 2010 Apr; 22, (2): 219-225.   
Rec #: 47979  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Autism is a biologically based disorder of brain development. Genetic factors--mutations, deletions, and copy number variants--are clearly implicated in causation of autism. However, they account for only a small fraction of cases, and do not easily explain key clinical and epidemiological features. This suggests that early environmental exposures also contribute. This review explores this hypothesis. Indirect evidence for an environmental contribution to autism comes from studies demonstrating the sensitivity of the developing brain to external exposures such as lead, ethyl alcohol and methyl mercury. But the most powerful proof-of-concept evidence derives from studies specifically linking autism to exposures in early pregnancy - thalidomide, misoprostol, and valproic acid; maternal rubella infection; and the organophosphate insecticide, chlorpyrifos. There is no credible evidence that vaccines cause autism. Expanded research is needed into environmental causation of autism. Children today are surrounded by thousands of synthetic chemicals. Two hundred of them are neurotoxic in adult humans, and 1000 more in laboratory models. Yet fewer than 20% of high-volume chemicals have been tested for neurodevelopmental toxicity. I propose a targeted discovery strategy focused on suspect chemicals, which combines expanded toxicological screening, neurobiological research and prospective epidemiological studies.  
Keywords: Autistic Disorder -- etiology  
Keywords: Humans  
Keywords: Adult  
Keywords: Environmental Exposure  
Keywords: Female  
Keywords: Prenatal Exposure Delayed Effects  
Keywords: Pregnancy  
Date completed - 2010-06-10  
Date created - 2010-03-19  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 219-225  
ProQuest ID - 733255197  
Last updated - 2013-01-19  
British nursing index edition - Current opinion in pediatrics, April 2010, 22(2):219-225  
Corporate institution author - Landrigan, Philip J  
DOI - MEDL-20087185; 20087185; 1531-698X eng

740. Larrayoz, I. M.; Pang, T.; Benicky, J.; Pavel, J.; S Nchez-Lemus, E., and Saavedra, J. M. Candesartan Reduces the Innate Immune Response to Lipopolysaccharide in Human Monocytes.   
Rec #: 50729  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Immunol Res. 2001;23(2-3):99-109 (medline /11444396)  
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COMMENTS: Cites: Diabetes. 2008 Nov;57(11):3090-8 (medline /18650365)  
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COMMENTS: Cites: Eur J Pharmacol. 1993 Oct 15;247(2):193-8 (medline /8282008)  
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COMMENTS: Cites: J Biol Chem. 1999 Mar 19;274(12):7611-4 (medline /10075645)  
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COMMENTS: Cites: Hypertension. 1999 Jul;34(1):113-7 (medline /10406833)  
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COMMENTS: Cites: J Immunol. 2000 Oct 1;165(7):3541-4 (medline /11034352)  
COMMENTS: Cites: J Clin Invest. 2001 Jan;107(1):7-11 (medline /11134171)  
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COMMENTS: Cites: Hypertension. 2001 Apr;37(4):1047-52 (medline /11304501)  
ABSTRACT: OBJECTIVE: Inhibition of angiotensin II receptor type 1 (AT1) reduces chronic inflammation associated with hypertension. We asked whether AT1 receptor inhibition would reduce the innate inflammatory response induced by bacterial lipopolysaccharide (LPS).  
ABSTRACT: METHODS: We used unstimulated human circulating monocytes obtained from healthy donors by counterflow centrifugal elutriation. Monocytes were studied in vitro after incubation with LPS (50 ng/ml) with and without 1 mumol/l candesartan, an AT1 receptor blocker. Angiotensin II receptor mRNA expression was determined by reverse transcriptase-PCR and receptor binding by autoradiography; inflammatory factor mRNA expression was studied by reverse transcriptase-PCR and cytokine release by ELISA.  
ABSTRACT: RESULTS: Human monocytes did not express detectable AT1 receptors, and angiotensin II did not induce inflammatory factor mRNA expression or cytokine release. However, candesartan substantially reduced the LPS-induced expression of the mRNAs for the LPS recognition protein cluster of differentiation 14, the proinflammatory cytokines tumor necrosis factor alpha, interleukin-1 beta and interleukin-6 and the lectin-like oxidized low-density lipoprotein receptor. In addition, candesartan reduced the activation of the nuclear factor kappa B pathway, the tumor necrosis factor alpha and interleukin-6 secretion, and the ROS formation induced by LPS, without affecting the secretion of interleukin-10.  
ABSTRACT: CONCLUSION: We hypothesize that the anti-inflammatory effects of candesartan in these cells are likely mediated by mechanisms unrelated to AT1 receptor blockade. Our results demonstrate that candesartan significantly reduces the innate immune response to LPS in human circulating monocytes. The anti-inflammatory effects of candesartan may be of importance not only in hypertension but also in other inflammatory disorders.  
MESH HEADINGS: Angiotensin II Type 1 Receptor Blockers/\*pharmacology  
MESH HEADINGS: Benzimidazoles/\*pharmacology  
MESH HEADINGS: Cells, Cultured  
MESH HEADINGS: Cytokines/genetics/metabolism  
MESH HEADINGS: Drug Therapy, Combination  
MESH HEADINGS: Gene Expression/drug effects  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunity, Innate/\*drug effects/physiology  
MESH HEADINGS: Lipopolysaccharides/\*pharmacology  
MESH HEADINGS: Monocytes/\*drug effects/immunology  
MESH HEADINGS: RNA, Messenger/metabolism  
MESH HEADINGS: Reactive Oxygen Species/metabolism  
MESH HEADINGS: Receptor, Angiotensin, Type 1/\*drug effects/genetics/metabolism  
MESH HEADINGS: Tetrazoles/\*pharmacology eng

741. Laskowski, Ryszard; Bednarska, Agnieszka J; Kramarz, Paulina E; Loureiro, Susana; Scheil, Volker; Kudĺ‚Ek, Joanna, and Holmstrup, Martin. Interactions Between Toxic Chemicals and Natural Environmental Factors--a Meta-Analysis and Case Studies. 2010 Aug 15; 408, (18): 3763-3774.   
Rec #: 43909  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The paper addresses problems arising from effects of natural environmental factors on toxicity of pollutants to organisms. Most studies on interactions between toxicants and natural factors, including those completed in the EU project NoMiracle (Novel Methods for Integrated Risk Assessment of Cumulative Stressors in Europe) described herein, showed that effects of toxic chemicals on organisms can differ vastly depending purely on external conditions. **We compiled data from 61 studies** on effects of temperature, moisture and dissolved oxygen on toxicity of a range of chemicals representing pesticides, polycyclic aromatic hydrocarbons, plant protection products of bacterial origin and trace metals. In 62.3% cases significant interactions (p< or =0.05 or less) between natural factors and chemicals were found, reaching 100% for the effect of dissolved oxygen on toxicity of waterborne chemicals. The meta-analysis of the 61 studies showed that the null hypothesis assuming no interactions between toxic chemicals and natural environmental factors should be rejected at p=2.7 x 10(-82) (truncated product method probability). In a few cases of more complex experimental designs, also second-order interactions were found, indicating that natural factors can modify interactions among chemicals. Such data emphasize the necessity of including information on natural factors and their variation in time and across geographic regions in ecological risk assessment. This can be done only if appropriate ecotoxicological test designs are used, in which test organisms are exposed to toxicants at a range of environmental conditions. We advocate designing such tests for the second-tier ecological risk assessment procedures. Copyright 2010 Elsevier B.V. All rights reserved.  
Keywords: 2921-88-2  
Keywords: Environment  
Keywords: Animals  
Keywords: Oligochaeta -- drug effects  
Keywords: Nickel  
Keywords: Complex Mixtures -- toxicity  
Keywords: Complex Mixtures -- chemistry  
Keywords: phenanthrene  
Keywords: Ecotoxicology  
Keywords: 7440-02-0  
Keywords: Nickel -- chemistry  
Keywords: Beetles -- drug effects  
Keywords: Environmental Pollutants -- toxicity  
Keywords: Chlorpyrifos -- chemistry  
Keywords: Temperature  
Keywords: Phenanthrenes -- chemistry  
Keywords: Environmental Pollutants  
Keywords: Chlorpyrifos  
Keywords: Complex Mixtures  
Keywords: Environmental Monitoring  
Keywords: Phenanthrenes  
Keywords: Phenanthrenes -- toxicity  
Keywords: 0  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Environmental Pollutants -- chemistry  
Keywords: Nickel -- toxicity  
Keywords: 448J8E5BST  
Date completed - 2010-10-29  
Date created - 2010-07-26  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 3763-3774  
ProQuest ID - 749019109  
Last updated - 2013-01-19  
British nursing index edition - The Science of the total environment, August 15, 2010, 408(18):3763-3774  
Corporate institution author - Laskowski, Ryszard; Bednarska, Agnieszka J; Kramarz, Paulina E; Loureiro, Susana; Scheil, Volker; KudĹ‚ek, Joanna; Holmstrup, Martin  
DOI - MEDL-20156639; 20156639; 1879-1026 eng

742. Lass, A.; Kujawa, M.; Mcconnell, E.; Paton, A. W.; Paton, J. C., and W¢Jcik, C. Decreased Er-Associated Degradation of Alpha-Tcr Induced by Grp78 Depletion With the Subab Cytotoxin.   
Rec #: 51109  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Trends Cell Biol. 2004 Sep;14(9):474-8 (medline /15350974)  
COMMENTS: Cites: J Chem Neuroanat. 2004 Sep;28(1-2):79-92 (medline /15363493)  
COMMENTS: Cites: Curr Opin Pediatr. 2005 Apr;17(2):200-4 (medline /15800412)  
COMMENTS: Cites: Methods. 2005 Apr;35(4):373-81 (medline /15804610)  
COMMENTS: Cites: Infect Immun. 2005 Jul;73(7):4432-6 (medline /15972544)  
COMMENTS: Cites: J Mol Biol. 2005 Dec 16;354(5):1021-7 (medline /16289116)  
COMMENTS: Cites: Cell Death Differ. 2006 Mar;13(3):374-84 (medline /16397578)  
COMMENTS: Cites: Cell Death Differ. 2006 Mar;13(3):363-73 (medline /16397583)  
COMMENTS: Cites: Exp Cell Res. 2006 Sep 10;312(15):2921-32 (medline /16822501)  
COMMENTS: Cites: Science. 2006 Jul 7;313(5783):104-7 (medline /16825573)  
COMMENTS: Cites: Mol Cell Biol. 2006 Aug;26(15):5688-97 (medline /16847323)  
COMMENTS: Cites: Mol Biol Cell. 2006 Nov;17(11):4606-18 (medline /16914519)  
COMMENTS: Cites: Cell. 2006 Aug 25;126(4):727-39 (medline /16923392)  
COMMENTS: Cites: Nature. 2006 Oct 5;443(7111):548-52 (medline /17024087)  
COMMENTS: Cites: Infect Immun. 2007 Jan;75(1):488-96 (medline /17101670)  
COMMENTS: Cites: Int J Cancer. 2007 Jul 15;121(2):431-41 (medline /17373661)  
COMMENTS: Cites: J Infect Dis. 2007 Oct 1;196(7):1093-101 (medline /17763334)  
COMMENTS: Cites: J Virol. 2008 Jan;82(1):31-9 (medline /17942541)  
COMMENTS: Cites: Biochem Biophys Res Commun. 2008 Jan 4;365(1):47-53 (medline /17971294)  
COMMENTS: Cites: J Cell Biol. 1990 Apr;110(4):973-86 (medline /2139038)  
COMMENTS: Cites: Science. 1990 Jan 5;247(4938):79-82 (medline /2294595)  
COMMENTS: Cites: Anal Biochem. 1987 Apr;162(1):156-9 (medline /2440339)  
COMMENTS: Cites: J Cell Biol. 1989 Jul;109(1):73-83 (medline /2663883)  
COMMENTS: Cites: J Biol Chem. 1995 Feb 24;270(8):4127-32 (medline /7876163)  
COMMENTS: Cites: J Cell Biol. 1993 Jul;122(1):67-78 (medline /8314847)  
COMMENTS: Cites: Eur J Cell Biol. 1996 Nov;71(3):311-8 (medline /8929570)  
COMMENTS: Cites: Immunity. 1997 Jul;7(1):113-22 (medline /9252124)  
COMMENTS: Cites: J Biol Chem. 1997 Aug 15;272(33):20800-4 (medline /9252404)  
COMMENTS: Cites: Anal Biochem. 1976 May 7;72:248-54 (medline /942051)  
COMMENTS: Cites: J Exp Med. 1998 Mar 16;187(6):835-46 (medline /9500786)  
COMMENTS: Cites: Mol Cell Biol. 1998 Dec;18(12):7499-509 (medline /9819435)  
COMMENTS: Cites: J Biol Chem. 1998 Dec 11;273(50):33741-9 (medline /9837962)  
COMMENTS: Cites: Nature. 1999 Jan 21;397(6716):271-4 (medline /9930704)  
COMMENTS: Cites: Mol Biol Cell. 1999 Nov;10(11):3787-99 (medline /10564271)  
COMMENTS: Cites: J Biol Chem. 1999 Dec 24;274(52):36852-8 (medline /10601236)  
COMMENTS: Cites: EMBO J. 2000 Jan 4;19(1):94-102 (medline /10619848)  
COMMENTS: Cites: Cell. 2000 Apr 28;101(3):249-58 (medline /10847680)  
COMMENTS: Cites: Nat Cell Biol. 2000 Jul;2(7):379-84 (medline /10878801)  
COMMENTS: Cites: Mol Cell. 2000 Apr;5(4):729-35 (medline /10882108)  
COMMENTS: Cites: J Cell Biol. 2000 Jul 10;150(1):77-88 (medline /10893258)  
COMMENTS: Cites: Anticancer Res. 2000 May-Jun;20(3A):1717-21 (medline /10928098)  
COMMENTS: Cites: J Biol Chem. 2001 May 11;276(19):16193-200 (medline /11278356)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2001 Dec 4;98(25):14422-7 (medline /11724934)  
COMMENTS: Cites: Nature. 2001 Dec 6;414(6864):652-6 (medline /11740563)  
COMMENTS: Cites: Cell. 2001 Dec 28;107(7):881-91 (medline /11779464)  
COMMENTS: Cites: Nat Rev Mol Cell Biol. 2002 Apr;3(4):246-55 (medline /11994744)  
COMMENTS: Cites: J Cell Sci. 2002 Jul 15;115(Pt 14):3007-14 (medline /12082160)  
COMMENTS: Cites: Apoptosis. 2002 Aug;7(4):335-45 (medline /12101393)  
COMMENTS: Cites: Annu Rev Cell Dev Biol. 2002;18:575-99 (medline /12142265)  
COMMENTS: Cites: EMBO Rep. 2002 Oct;3(10):944-50 (medline /12370207)  
COMMENTS: Cites: Cell Stress Chaperones. 2002 Apr;7(2):222-9 (medline /12380691)  
COMMENTS: Cites: Dev Cell. 2003 Feb;4(2):144-6 (medline /12586055)  
COMMENTS: Cites: Nat Rev Mol Cell Biol. 2003 Mar;4(3):181-91 (medline /12612637)  
COMMENTS: Cites: Mol Biol Cell. 2003 Mar;14(3):1268-78 (medline /12631739)  
COMMENTS: Cites: EMBO J. 2003 May 15;22(10):2309-17 (medline /12743025)  
COMMENTS: Cites: J Cell Biol. 2003 Jul 7;162(1):71-84 (medline /12847084)  
COMMENTS: Cites: FEBS Lett. 2003 Nov 20;554(3):439-42 (medline /14623108)  
COMMENTS: Cites: Apoptosis. 1997;2(5):455-62 (medline /14646528)  
COMMENTS: Cites: Nature. 2003 Dec 18;426(6968):891-4 (medline /14685249)  
COMMENTS: Cites: Genes Cells. 2004 May;9(5):457-69 (medline /15147274)  
COMMENTS: Cites: J Exp Med. 2004 Jul 5;200(1):35-46 (medline /15226357)  
ABSTRACT: HeLa cells stably expressing the alpha chain of T-cell receptor (alphaTCR), a model substrate of ER-associated degradation (ERAD), were used to analyze the effects of BiP/Grp78 depletion by the SubAB cytotoxin. SubAB induced XBP1 splicing, followed by JNK phosphorylation, eIF2alpha phosphorylation, upregulation of ATF3/4 and partial ATF6 cleavage. Other markers of ER stress, including elements of ERAD pathway, as well as markers of cytoplasmic stress, were not induced. SubAB treatment decreased absolute levels of alphaTCR, which was caused by inhibition of protein synthesis. At the same time, the half-life of alphaTCR was extended almost fourfold from 70 min to 210 min, suggesting that BiP normally facilitates ERAD. Depletion of p97/VCP partially rescued SubAB-induced depletion of alphaTCR, confirming the role of VCP in ERAD of alphaTCR. It therefore appears that ERAD of alphaTCR is driven by at least two different ATP-ase systems located at two sides of the ER membrane, BiP located on the lumenal side, while p97/VCP on the cytoplasmic side. While SubAB altered cell morphology by inducing cytoplasm vacuolization and accumulation of lipid droplets, caspase activation was partial and subsided after prolonged incubation. Expression of CHOP/GADD153 occurred only after prolonged incubation and was not associated with apoptosis.  
MESH HEADINGS: Animals  
MESH HEADINGS: COS Cells  
MESH HEADINGS: Cercopithecus aethiops  
MESH HEADINGS: Endoplasmic Reticulum/\*metabolism/ultrastructure  
MESH HEADINGS: Escherichia coli Proteins/\*pharmacology  
MESH HEADINGS: HeLa Cells  
MESH HEADINGS: Heat-Shock Proteins/\*metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Molecular Chaperones/\*metabolism  
MESH HEADINGS: Protein Biosynthesis/drug effects  
MESH HEADINGS: RNA Interference  
MESH HEADINGS: Receptors, Antigen, T-Cell/\*metabolism  
MESH HEADINGS: Subtilisins/\*pharmacology eng

743. Lassiter, T. L.; Padilla, S.; Chanda, S. M.; Das, K.; Haykal-Coates, N.; Hunter, D.; Marshall, R., and Barone, S. Dose Response Study of the Effects of Chlorpyrifos on Various Biochemical Measures in the Fetus and Dam During Late Gestation. 1998; 42, (1-S): 159-(ABS).   
Rec #: 1040  
Keywords: NOT PURSUING,ABSTRACT  
Call Number: NO ABSTRACT (CPY)  
Notes: Chemical of Concern: CPY

744. Lassiter, T Leon; Mackillop, Emiko a; Ryde, Ian T; Seidler, Frederic J, and Slotkin, Theodore a. Is Fipronil Safer Than Chlorpyrifos? Comparative Developmental Neurotoxicity Modeled in Pc12 Cells. 2009 Mar 30; 78, (6): 313-322.   
Rec #: 41329  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Fipronil, a GABA(A) receptor antagonist, is replacing many insecticide uses formerly fulfilled by organophosphates like chlorpyrifos. Few studies have addressed the potential for fipronil to produce developmental neurotoxicity. We compared the neurotoxicity of fipronil and chlorpyrifos in undifferentiated and differentiating neuronotypic PC12 cells, evaluating indices of cell replication, cell number, differentiation, and viability for short- and long-term exposures. Fipronil inhibited DNA and protein synthesis in undifferentiated PC12 cells and evoked oxidative stress to a greater extent than did chlorpyrifos, resulting in reduced cell numbers even though cell viability was maintained. In differentiating cells, fipronil displayed an even lower threshold for disruption of development, reducing cell numbers without impairing cell growth, and promoting emergence of neurotransmitter phenotypes; superimposed on this effect, the phenotypic balance was shifted in favor of dopamine as opposed to acetylcholine. Differentiation also enhanced the susceptibility to fipronil-induced oxidative stress, although antioxidant administration failed to provide protection from cell loss. At low concentrations maintained for prolonged periods, fipronil had a biphasic effect on cell numbers, increasing them slightly at low concentrations, implying interference with apoptosis, while nevertheless reducing cell numbers at higher concentrations. Our results suggest that fipronil is inherently a more potent disruptor of neuronal cell development than is chlorpyrifos. The neurodevelopmental effects are not predicated on GABA(A) antagonist properties, since PC12 cells lack the GABA(A) receptor. If fipronil is intended to provide greater safety than chlorpyrifos, then this will have to entail advantages from factors that are yet unexamined: exposure, persistence, pharmacokinetics.  
Keywords: 2921-88-2  
Keywords: Animals  
Keywords: Analysis of Variance  
Keywords: Pyrazoles  
Keywords: Neurons -- drug effects  
Keywords: EC 1.14.16.2  
Keywords: Tyrosine 3-Monooxygenase  
Keywords: Choline O-Acetyltransferase -- metabolism  
Keywords: DNA -- biosynthesis  
Keywords: Rats  
Keywords: Insecticides  
Keywords: Cell Survival -- drug effects  
Keywords: GABA-A Receptor Antagonists  
Keywords: Choline O-Acetyltransferase  
Keywords: Insecticides -- toxicity  
Keywords: Tyrosine 3-Monooxygenase -- metabolism  
Keywords: Cell Division -- drug effects  
Keywords: Neurogenesis -- drug effects  
Keywords: Chlorpyrifos  
Keywords: Pyrazoles -- toxicity  
Keywords: Protein Biosynthesis -- drug effects  
Keywords: 9007-49-2  
Keywords: 0  
Keywords: Chlorpyrifos -- toxicity  
Keywords: fipronil  
Keywords: QGH063955F  
Keywords: Neurons -- cytology  
Keywords: DNA  
Keywords: Oxidative Stress -- drug effects  
Keywords: EC 2.3.1.6  
Keywords: PC12 Cells  
Date completed - 2009-03-13  
Date created - 2009-02-02  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 313-322  
ProQuest ID - 66869824  
SuppNotes - Cites: Brain Res. 2000 Jun 30;869(1-2):85-97[10865062]; Cites: Toxicol Appl Pharmacol. 2000 Sep 15;167(3):246-52[10986016]; Cites: Mol Genet Metab. 2001 May;73(1):11-7[11350178]; Cites: Environ Health Perspect. 2001 Sep;109(9):909-13[11673119]; Cites: J Neurochem. 2002 May;81(3):497-505[12065658]; Cites: Rev Environ Contam Toxicol. 2003;176:1-66[12442503]; Cites: Brain Res Dev Brain Res. 2003 Dec 30;147(1-2):183-90[14741763]; Cites: Environ Health Perspect. 2004 Feb;112(2):148-55[14754568]; Cites: Neurotoxicology. 2004 Jun;25(4):631-40[15183016]; Cites: Chem Res Toxicol. 2004 Aug;17(8):983-98[15310231]; Cites: Brain Res Bull. 2004 Dec 15;64(4):309-17[15561465]; Cites: J Pharmacol Exp Ther. 2005 Jul;314(1):363-73[15701711]; Cites: Environ Health Perspect. 2005 May;113(5):527-31[15866758]; Cites: Environ Health Perspect. 2005 Aug;113(8):1027-31[16079074]; Cites: Neurotoxicology. 2005 Aug;26(4):573-87[16112323]; Cites: Clin Chim Acta. 2006 Apr;366(1-2):1-13[16337171]; Cites: Proc Natl Acad Sci U S A. 2006 Mar 28;103(13):5185-90[16537435]; Cites: Environ Health Perspect. 2006 May;114(5):667-72[16675418]; Cites: J Neural Transm. 2007 Jan;114(1):135-47[16906354]; Cites: J Environ Sci Health B. 2007 Jun-Jul;42(5):471-80[17562454]; Cites: Basic Clin Pharmacol Toxicol. 2008 Feb;102(2):228-36[18226078]; Cites: Environ Health Perspect. 2008 Jun;116(6):716-22[18560525]; Cites: Anal Biochem. 1971 Oct;43(2):588-600[4400965]; Cites: Arch Toxicol. 1983 Sep;54(1):71-82[6639354]; Cites: J Neurosci. 1994 Sep;14(9):5429-36[8083746]; Cites: Toxicology. 1995 Dec 15;104(1-3):129-40[8560491]; Cites: J Neurosci Res. 1996 Jul 1;45(1):1-12[8811508]; Cites: Proc Natl Acad Sci U S A. 1996 Nov 12;93(23):12764-7[8917493]; Cites: Biomed Environ Sci. 1996 Dec;9(4):359-69[8988804]; Cites: Biochem Biophys Res Commun. 1997 Dec 18;241(2):347-51[9425274]; Cites: Toxicol Appl Pharmacol. 1998 Jul;151(1):182-91[9705902]; Cites: Toxicol Lett. 1998 Nov 12;99(3):207-21[9862287]; Cites: Brain Res Dev Brain Res. 1999 Aug 5;116(1):9-20[10446342]; Cites: Brain Res. 2000 Feb 28;857(1-2):87-98[10700556]; Cites: Brain Res. 2000 Jun 9;867(1-2):29-39[10837795]; Cites: Behav Brain Res. 2000 Aug;113(1-2):21-34[10942029]; Cites: Neurotoxicology. 2001 Feb;22(1):49-62[11307851]; Cites: Brain Res Dev Brain Res. 2001 Sep 23;130(1):83-9[11557096]; Cites: Vet Hum Toxicol. 2002 Oct;44(5):301-3[12361121]; Cites: Brain Res Dev Brain Res. 2003 Mar 14;141(1-2):71-81[12644250]; Cites: Pediatrics. 2004 Apr;113(4 Suppl):1030-6[15060196]; Cites: Toxicol Appl Pharmacol. 2004 Jul 15;198(2):132-51[15236950]; Cites: Cell Mol Biol Lett. 2004;9(3):409-22[15332118]; Cites: Brain Res Dev Brain Res. 2005 Feb 8;154(2):239-46[15707677]; Cites: Toxicol Appl Pharmacol. 2005 Aug 1;206(1):17-26[15963341]; Cites: Neuropsychopharmacology. 2006 Aug;31(8):1647-58[16319912]; Cites: Environ Health Perspect. 2006 Jan;114(1):10-7[16393651]; Cites: Toxicol Sci. 2006 Jul;92(1):270-8[16611622]; Cites: Environ Health Perspect. 2007 Jan;115(1):93-101[17366826]; Cites: Environ Health Perspect. 2007 Sep;115(9):1306-13[17805420]; Cites: Neurosci Biobehav Rev. 1979 Winter;3(4):233-46[44355]; Cites: Brain Res. 1976 May 7;107(2):221-37[817786]; Cites: Neuroscience. 1986 Feb;17(2):399-407[2422585]; Cites: Environ Health Perspect. 1989 Mar;80:127-42[2647474]; Cites: Pediatr Res. 1988 Nov;24(5):583-7[2905035]; Cites: Dev Biol. 1965 Dec;12(3):451-66[5884354]; Cites: Teratology. 1984 Oct;30(2):211-24[6208628]; Cites: J Neurosci. 1994 Sep;14(9):5417-28[8083745]; Cites: Am J Obstet Gynecol. 1993 Dec;169(6):1418-23[8267039]; Cites: Toxicol Lett. 1994 Jan;70(1):71-6[8310459]; Cites: Toxicology. 1996 Aug 1;112(1):57-68[8792849]; Cites: Neurosci Lett. 1996 Aug 2;213(2):145-7[8858629]; Cites: Cell Calcium. 1996 Nov;20(5):441-6[8955559]; Cites: Neuroscience. 1997 Jan;76(1):159-66[8971768]; Cites: Brain Res. 1997 Sep 26;769(2):211-8[9374188]; Cites: Brain Res. 1998 Jan 1;779(1-2):359-63[9473725]; Cites: Environ Health Perspect. 1998 Apr;106 Suppl 2:505-10[9599699]; Cites: Toxicol Lett. 1998 Sep 15;98(3):139-46[9788582]; Cites: Environ Health Perspect. 1999 Feb;107 Suppl 1:71-80[10229709]; Cites: Neurochem Res. 1999 Nov;24(11):1431-41[10555784]; Cites: J Neurochem. 2000 Jan;74(1):1-20[10617101]; Cites: Brain Res. 2000 Apr 7;861(1):165-7[10751577]; Cites: Trends Neurosci. 2000 Jul;23(7):291-7[10856938]  
Last updated - 2013-01-19  
British nursing index edition - Brain research bulletin, March 30, 2009, 78(6):313-322  
Corporate institution author - Lassiter, T Leon; MacKillop, Emiko A; Ryde, Ian T; Seidler, Frederic J; Slotkin, Theodore A  
DOI - MEDL-18977280; 18977280; NIHMS95864; PMC2650714; 1873-2747 eng

745. Latif, M a; Razzaque, M a, and Rahman, M M. Impact of Some Selected Insecticides Application on Soil Microbial Respiration. 2008 Aug 15; 11, (16): 2018-2022.   
Rec #: 49309  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The aim of present study was to investigate the impact of selected insecticides used for controlling brinjal shoot and fruit borer on soil microorganisms and to find out the insecticides or nontoxic to soil microorganism the impact of nine selected insecticides on soil microbial respiration was studied in the laboratory. After injection of different insecticides solutions, the soil was incubated in the laboratory at room temperature for 32 days. The amount of CO2 evolved due to soil microbial respiration was determined at 2, 4, 8, 16, 24 and 32 days of incubation. Flubendiamide, nimbicidine, lambda-cyhalothrin, abamectin and thiodicarb had stimulatory effect on microbial respiration during the initial period of incubation. Chlorpyriphos, cartap and carbosulfan had inhibitory effect on microbial respiration and cypermethrin had no remarkable effect during the early stage of incubation. The negative effect of chlorpyriphos, cartap and carbosulfan was temporary, which was disappeared after 4 days of insecticides application. No effect of the selected insecticides on soil microorganisms was observed after 24 or 32 days of incubation.  
Keywords: Insecticides -- metabolism  
Keywords: Soil Microbiology  
Keywords: Oxygen  
Keywords: 0  
Keywords: Insecticides  
Keywords: Carbon Dioxide -- chemistry  
Keywords: Oxygen -- metabolism  
Keywords: 7782-44-7  
Keywords: 124-38-9  
Keywords: Time Factors  
Keywords: Carbon Dioxide  
Date completed - 2009-03-20  
Date created - 2009-03-09  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 2018-2022  
ProQuest ID - 66700478  
Last updated - 2013-01-19  
British nursing index edition - Pakistan journal of biological sciences: PJBS, August 15, 2008, 11(16):2018-2022  
Corporate institution author - Latif, M A; Razzaque, M A; Rahman, M M  
DOI - MEDL-19266909; 19266909; 1028-8880 eng

746. Latif, Yawar; Sherazi, S. T. H., and Bhanger, M. I. Assessment of pesticide residues in commonly used vegetables in Hyderabad, Pakistan. 2011 Nov; 74, (8): 2299-2303.   
Rec #: 5440  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: The aim of present study was to assess pesticide residues in vegetables in the Hyderabad region of Pakistan. The concentrations of six pesticides were determined by gas chromatography coupled with mass selective detector (GCÇôMSD) in locally produced vegetables purchased from wholesale markets. A total of 200 samples of eight vegetables viz. cauliflower, green chilli, eggplant, tomato, peas, bitter gourd, spinach and apple gourd were analyzed for pesticide residues. The results indicated that almost all samples were contained pesticides, only 39% contained pesticide residues at or below maximum residue limits (MRLs), and 61% contained pesticide residues above MRLs. From the six analyzed pesticides, carbofuran and chlorpyrifos were found above to MRLs with concentrations ranging from 0.01Çô0.39 and 0.05Çô0.96 mg/kg, respectively. The results provided important information on the current pesticide contamination status of some commonly used vegetables and pointed an urgent need to control the use of some excessively applied and potentially persistent pesticides, such as carbofuran and chlorpyrifos. Pesticide residues/ Vegetables/ Ultrasonic assisted extraction/ GCÇôMS

747. Latif, Yawar; Sherazi, Syed Tufail Hussain; Bhanger, Muhammad Iqbal; Nizamani, Shafi, and Latif, Yawar. Evaluation of Pesticide Residues in Human Blood Samples of Agro Professionals and Non-Agro Professionals. 2012 Aug; 3, (8): 587.   
Rec #: 42609  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The aim of the present study was to evaluate the pesticide residues in human blood samples of volunteers related to Hyderabad and Mirpurkhas districts, Pakistan. The volunteers of both districts were divided into four groups on the ba- sis of their exposure period to pesticides i.e. Group A-5 to 9 years, Group B-10 to 14 years, Group C-15 to19 years and Group D-above 20 years. Out of total 188 volunteers, 145 volunteers (77.1%) were agro professionals and 43 volunteers (32.9%) were non-agro professionals. Chlorpyrifos, endosulfan, 1,1,1-trichloro-2,2-bis (p-chorophenyl) eth-ane (p,p'-DDT) and parathion residues were detected in many samples. The predominant pesticides found in blood samples of both district volunteers were chlorpyrifos (with highest mean concentration of 0.37 mg.kg-1 in the D group of Mirpurkhas) and endosulfan (with highest mean concentration of 0.30 mg.kg-1 in the D group of Hyderabad). The quantity of pesticide residues detected in some blood samples of agro professionals was found to be at the alarming level.  
Keywords: Chlorpyrifos  
Keywords: Pakistan  
Keywords: P 9999:GENERAL POLLUTION  
Keywords: India, Andhra Pradesh, Hyderabad  
Keywords: Pesticide residues  
Keywords: Pesticides  
Keywords: Pollution Abstracts  
Keywords: Parathion  
Keywords: Endosulfan  
Date revised - 2012-12-01  
Language of summary - English  
Location - Pakistan; India, Andhra Pradesh, Hyderabad  
Pages - 587  
ProQuest ID - 1238116671  
SubjectsTermNotLitGenreText - Chlorpyrifos; Pesticide residues; Pesticides; Parathion; Endosulfan; Pakistan; India, Andhra Pradesh, Hyderabad  
Last updated - 2012-12-28  
British nursing index edition - American Journal of Analytical Chemistry. Vol. 3, no. 8, 587 p. Aug 2012.  
Corporate institution author - Latif, Yawar; Bhanger, Muhammad Iqbal; Nizamani, Shafi  
DOI - cd0060b7-e304-444c-a0b7mfgefd101; 17152878; 2156-8251; 2156-8278 English

748. Lavado, R. and Schlenk, D. Microsomal Biotransformation of Chlorpyrifos, Parathion and Fenthion in Rainbow Trout (Oncorhynchus mykiss) and Coho Salmon (Oncorhynchus kisutch): Mechanistic Insights into Interspecific Differences in Toxicity. 2011; 101, (1): 57-63.   
Rec #: 2100  
Keywords: IN VITRO  
Call Number: NO IN VITRO (CPY)  
Notes: Chemical of Concern: CPY,EPRN,FNTH,PRN

749. Lavin, K. S.; Hageman, K. J.; Marx, S. K.; Dillingham, P. W., and Kamber, B. S. Using Trace Elements in Particulate Matter To Identify the Sources of Semivolatile Organic Contaminants in Air at an Alpine Site. 2012; 46, (1): 268-276.   
Rec #: 63449  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An approach using trace elements in particulate matter (PM) to identify the geographic sources of atmospherically transported semivolatile organic contaminants (SOCs) was investigated. Daily samples of PM and SOCs were collected with high-volume air samplers from 16 January to 16 February 2009 at Temple Basin, a remote alpine site in New Zealand's Southern Alps. The most commonly detected pesticides were dieldrin, transchlordane, endosulfan I, and chlorpyrifos. Polycyclic aromatic hydrocarbons and polychlorinated biphenyls were also detected. For each sampling day, the relative contribution of PM from regional New Zealand versus long-range Australian sources was determined using trace element profiles and a binary mixing model. The PM approach indicated that endosulfan I, indeno[1,2,3-c,d]pyrene, and benzo[g,h,i]perylene found at Temple Basin were largely of Australian origin. Local wind observations indicated that the chlorpyrifos found at Temple Basin primarily came from the Canterbury Plains in New Zealand.  
Keywords: POLYCYCLIC AROMATIC-HYDROCARBONS, CURRENT-USE PESTICIDES, WESTERN  
ISI Document Delivery No.: 871UJ

750. Laviola, G. ; Ognibene, E.; Romano, E.; Adriani, W., and Keller, F. Gene-environment interaction during early development in the heterozygous reeler mouse: Clues for modelling of major neurobehavioral syndromes. 2009; 33, (4): 560-572.   
Rec #: 63459  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Autism and schizophrenia are multifactorial disorders with increasing prevalence in the young population. Among candidate molecules, reelin (RELN) is a protein of the extracellular matrix playing a key role in brain development and synaptic plasticity. The heterozygous (HZ) reeler mouse provides a model for studying the role of reelin deficiency for the onset of these syndromes. We investigated whether early indices of neurobehavioral disorders can be identified in the infant reeler, and whether the consequences of ontogenetic adverse experiences may question or support the suitability of this model. A first study focused on the link between early exposure to Chlorpyryfos and its enduring neurobehavioral consequences. Our data are interesting in view of recently discovered cholinergic abnormalities in autism and schizophrenia, and may suggest new avenues for early pharmacological intervention. In a second study, we analyzed the consequences of repeated maternal separation early in ontogeny. The results provide evidence of how unusual stress early in development are converted into altered behavior in some, but not all, individuals depending on gender and genetic background. A third study aimed to verify the reliability of the model at critical age windows. Data suggest reduced anxiety, increased impulsivity and disinhibition, and altered pain threshold in response to morphine for HZ, supporting a differential organization of brain dopaminergic, serotonergic and opioid systems in this genotype. In conclusion, HZ exhibited a complex behavioral and psycho-pharmacological phenotype, and differential responsivity to ontogenetic adverse conditions. HZ may be used to disentangle interactions between genetic vulnerability and environmental factors. Such an approach could help to model the pathogenesis of neurodevelopmental psychiatric diseases. (C) 2008 Elsevier Ltd. All rights reserved.  
Keywords: Psychiatry, Autism, Schizophrenia, Early adversity, Genetic  
ISI Document Delivery No.: 431ST

751. Lazarevi-ç-Pa+íti, Tamara; Nastasijevi-ç, Branislav, and Vasi-ç, Vesna. Oxidation of chlorpyrifos, azinphos-methyl and phorate by myeloperoxidase. 2011 Nov; 101, (3): 220-226.   
Rec #: 2060  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: The present paper deals with the investigations of optimal conditions for the myeloperoxidase (MPO) mediated oxidation of chlorpyrifos, azinphos-methyl and phorate, organophosphorous pesticides (OPs) containing phosphorothionate group, from thio- to oxo-forms, in the presence of hydrogen peroxide. The aim of the work was to apply this oxidation method in the AChE based bioanalytical tests for OPs determination. The maximum concentration of oxo-forms for all tested pesticides was achieved after 10 min incubation of OPs in 50 mM phosphate buffer (pH 6.0) with 100 nM MPO in the presence of 50 ++M H2O2. Optimal temperature for obtaining maximal concentration of oxo-forms was 37 -\_C. Only the parent compounds and their oxo-forms were identified chromatographically in the OPs samples after their exposure to MPO. Moreover, no hydrolysis products were detected in the time interval of 1 h after the MPO catalyzed reaction was stopped by catalase. The efficiency of OPs transformation from thio- to oxo-forms was measured using acethylcholinesterase (AChE) test, by comparison of percent of AChE inhibition before and after exposure to the oxidized sample. Organophosphate/ Pesticide/ Oxidation/ Myeloperoxidase/ Acetylcholinesterase

752. Lazarevi-ç-Pa+íti, Tamara D.; Bond++i-ç, Aleksandra M.; Pa+íti, Igor A., and Vasi-ç, Vesna M. Indirect electrochemical oxidation of organophosphorous pesticides for efficient detection via acetylcholinesterase test. 2012 Nov; 104, (3): 236-242.   
Rec #: 4710  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Organothiophosphorous pesticides diazinon, malathion, chlorpyrifos, azinphos-methyl and phorate, have been indirectly electrochemically oxidized in aqueous media using anodically evolved Cl2, Br2 or I2 as a pre-step for their detection via acetylcholinesterase-based test. The presence of single oxidation product, corresponding oxo-form, was confirmed by UPLC analysis, as well as its stability with respect to hydrolysis. Comparing different halogens, the best results were obtained using Br2 as the oxidant due to high reactivity of HOBr, which is formed upon chemical reaction of anodically formed Br2 with water. Limits of detection of five analyzed pesticides were lowered upon indirect electrochemical oxidation with Br2 for two orders of magnitude or more, comparing to unoxidized parental thio-forms. In fact, the lowest possible detection limits for all five pesticides using proposed analytical procedure were achieved, as being determined by detection limits of corresponding oxo forms. Comparison of here proposed electrochemical oxidation pre-step with earlier reported ones is provided and discussed. Organophosphate/ Pesticide/ Oxidation/ Halogen/ Acetylcholinesterase/ Myeloperoxidase

753. LazareviĂ„â€ˇ PaĂ…Âˇti, Tamara; MomiĂ„â€ˇ, Tatjana; Onjia, Antonije; VujisiĂ„â€ˇ, Ljubodrag, and VasiĂ„â€ˇ, Vesna. Myeloperoxidase-mediated oxidation of organophosphorus pesticides as a pre-step in their determination by AChE based bioanalytical methods. 2010; 170, (3-4): 289-297.   
Rec #: 53429  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In order to improve the sensitivity of assays for inhibitors of the enzyme acetylcholine esterase (AChE), an effective method was developed for the conversion of the organophosphate pesticides (OPs) diazinon, malathion, chlorpyrifos, azinphos-methyl and phorate into more toxic inhibitors. This was accomplished by converting them from the thio form into their oxo form using the enzyme myeloperoxidase. The oxo forms, which are the only products of conversion, were determined by AChE bioassays, using either the free enzyme, or a flow injection analysis manifold with immobilized AChE and spectrophotometric detection. All modified OPs exhibited inhibitory power at ppb levels and within 10 min. The method is considered to represent an excellent means for improving the sensitivity of assays for determination of OPs.  
Keywords: Myeloperoxidase  
Vienna : Springer Vienna

754. Lear, G.; Song, B.; Gault, A. G.; Polya, D. A., and Lloyd, J. R. Molecular Analysis of Arsenate-Reducing Bacteria Within Cambodian Sediments Following Amendment With Acetate.   
Rec #: 51449  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: The health of millions is threatened by the use of groundwater contaminated with sediment-derived **arsenic** for drinking water and irrigation purposes in Southeast Asia. The microbial reduction of sorbed As(V) to the potentially more mobile As(III) has been implicated in release of arsenic into groundwater, but to date there have been few studies of the microorganisms that can mediate this transformation in aquifers. With the use of stable isotope probing of nucleic acids, we present evidence that the introduction of a proxy for organic matter ((13)C-labeled acetate) stimulated As(V) reduction in sediments collected from a Cambodian aquifer that hosts arsenic-rich groundwater. This was accompanied by an increase in the proportion of prokaryotes closely related to the dissimilatory As(V)-reducing bacteria Sulfurospirillum strain NP-4 and Desulfotomaculum auripigmentum. As(V) respiratory reductase genes (arrA) closely associated with those found in Sulfurospirillum barnesii and Geobacter uraniumreducens were also detected in active bacterial communities utilizing (13)C-labeled acetate in microcosms. This study suggests a direct link between inputs of organic matter and the increased prevalence and activity of organisms which transform As(V) to the potentially more mobile and thus hazardous As(III) via dissimilatory As(V) reduction.  
MESH HEADINGS: Acetates/\*pharmacology  
MESH HEADINGS: Arsenates/\*metabolism  
MESH HEADINGS: Bacteria/classification/\*drug effects/genetics/metabolism  
MESH HEADINGS: Geologic Sediments/\*microbiology  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: RNA, Ribosomal, 16S/analysis  
MESH HEADINGS: Water Microbiology  
MESH HEADINGS: Water Pollution, Chemical eng

755. Lebeau, Alex Lance and Harbison, Raymond D. Evaluation of Urinary Pesticide Biomarkers Among a Sample of the Population in the United States. 2012.  
Rec #: 51619  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticide use in the United States continues to attract negative public attention. In recent years, this attention has focused on the effects that chronic, low-level pesticides may have, especially on children and various sub-populations. Over the past decade, studies have attempted to correlate negative health effects with detections of pesticide biomarkers in biological media. The current research investigates biomarker of exposure levels in a sample of the United States population. Data from the 2001-2002 NHANES dataset (n=11,039) was evaluated. The detection frequency of urinary biomarkers of exposure and the geometric mean from the NHANES pesticide dataset (n=3,152) were determined. Of the 18 specific pesticide biomarkers, three were detected in more than 50% of the sample: 79% had a detectable level of 3,5,6-trichloropyridinol, a biomarker of chlorpyrifos, with a geometric mean of 2.07 Î¼g/L (C.I: 1.98-2.17); 53% had a detectable level of paranitrophenol, a biomarker of methyl parathion, with a geometric mean of 0.367 Î¼g/L (C.I.: 0.346-0.389); and 77% had a detectable level of 3-phenoxybenzoic acid, a biomarker of permethrin, with a geometric mean of 0.336 Î¼g/L (C.I.: 0.320-0.352). These levels fall within the range of other epidemiological and biomonitoring studies investigating background levels of biomarkers in the general population. The association between the detection of a biomarker and variations in mean height and weight of children aged 6-11 was evaluated. No significant results were found when evaluating these differences for 3,5,6-trichloropyridinol exposure. Paranitrophenol associated with shorter children at age 8 [Non-Detect=134.3 cm and Detect: 130.9 cm (p=0.046)] and taller children at age 11 [Detect=153.7 cm and Non-Detect=149.9 cm (p=0.022)]. Heavier children associated with 3-Phenoxybenzoic Acid at age 7: [Detect=28.61 kg and Non-Detect=25.26 kg (p=0.009)]. Clinical chemistry biochemical concentration comparisons were made between individuals that had a detectable level of the biomarker in urine and those that did not. Two biochemicals had a significant difference across all three biomarkers: cholesterol and sodium. The biochemical levels with significant difference between detects and non-detects for the biomarkers were not elevated above clinical reference values. Overall, there is insufficient evidence to suggest a relationship between background pesticide exposures in this sample and negative health effects.  
Start Page: 160  
ISSN/ISBN: 9781267287021  
Keywords: 0383:Surgery  
Keywords: Pyrethroid  
Keywords: Residential  
Keywords: 0573:Public health  
Keywords: 0383:Toxicology  
Keywords: Urinary pesticide  
Keywords: Background  
Keywords: Organophsophate  
Keywords: Biomarkers  
Keywords: Health and environmental sciences  
Keywords: Children  
2012-05-24  
Pyrethroid  
1011473174  
2653908331  
Residential  
0573: Public health  
Urinary pesticide  
Background  
Biomarkers  
0383: Toxicology  
66569  
LeBeau, Alex Lance  
0383: Surgery  
Children  
n/a  
English  
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Organophsophate  
3504908  
Health and environmental sciences English

756. Lebeda, Ond+Öej; van Lier, Erik J.; +átursa, Jan; R+íli+í, Jan, and Zyuzin, Alexander. Assessment of radionuclidic impurities in cyclotron produced 99mTc. 2012 Nov; 39, (8): 1286-1291.   
Rec #: 4210  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Introduction Technetium-99&#xa0;m/ Cyclotron/ Proton irradiation/ Radionuclidic impurities

757. Leblanc, H. M. K. and LeBlanc, H. M. K. Single and Combined Effects of the Agricultural Insecticides Chlorpyrifos, Imidacloprid and Dimethoate on Freshwater Insect Larvae. 2011: 113 p. (UMI# MR89089) (Publ As 160293).   
Rec #: 2590  
Keywords: PUBL AS  
Notes: Chemical of Concern: CPY,DMT,IMC

758. Leblanc, Lawrence a; Kuivila, Kathryn M, and LeBlanc, Lawrence A. Occurrence, Distribution and Transport of Pesticides Into the Salton Sea Basin, California, 2001-2002. 2008 Jun; 604, (1): 151-172.   
Rec #: 45879  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The Salton Sea is a hypersaline lake located in southeastern California. Concerns over the ecological impacts of sediment quality and potential human exposure to dust emissions from exposed lakebed sediments resulting from anticipated shrinking of shoreline led to a study of pesticide distribution and transport within the Salton Sea Basin, California, in 2001-2002. Three sampling stations-upriver, river mouth, and offshore-were established along each of the three major rivers that discharge into the Salton Sea. Large-volume water samples were collected for analysis of pesticides in water and suspended sediments at the nine sampling stations. Samples of the bottom sediment were also collected at each site for pesticide analysis. Sampling occurred in October 2001, March-April 2002, and October 2002, coinciding with the regional fall and spring peaks in pesticide use in the heavily agricultural watershed. Fourteen current-use pesticides were detected in water and the majority of dissolved concentrations ranged from the limits of detection to 151 ng/l. Diazinon, EPTC and malathion were detected at much higher concentrations (940-3,830 ng/l) at the New and Alamo River upriver and near-shore stations. Concentrations of carbaryl, dacthal, diazinon, and EPTC were higher in the two fall sampling periods, whereas concentrations of atrazine, carbofuran, and trifluralin were higher during the spring, which matched seasonal use patterns of these pesticides. Current-use pesticides were also detected on suspended and bed sediments in concentrations ranging from detection limits to 106 ng/g. Chlorpyrifos, dacthal, EPTC, trifluralin, and DDE were the most frequently detected pesticides on sediments from all three rivers. The number of detections and concentrations of suspended sediment-associated pesticides were often similar for the river upriver and near-shore sites, consistent with downstream transport of pesticides via suspended sediment. While detectable suspended sediment pesticide concentrations were more sporadic than detected aqueous concentrations, seasonal trends were similar to those for dissolved concentrations. Generally, the pesticides detected on suspended sediments were the same as those on the bed sediments, and concentrations were similar, especially at the Alamo River upriver site. With a few exceptions, pesticides were not detected in suspended or bed sediments from the off-shore sites. The partitioning of pesticides between water and sediment was not predictable from solely the physical-chemical properties of individual pesticide compounds, but appear to be a complicated function of the quantity of pesticide applied in the watershed, residence time of sediments in the water, and compound solubility and hydrophobicity. Sediment concentrations of most pesticides were found to be 100-1,000 times lower than the low-effects levels determined in human health risk assessment studies. However, maximum concentrations of chlorpyrifos on suspended sediments were approximately half the low-effects level, suggesting the need for further sediment characterization of lake sediments proximate to riverine inputs.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Residence time  
Keywords: Bed Load  
Keywords: SW 3030:Effects of pollution  
Keywords: Basins  
Keywords: Carbaryl  
Keywords: Watersheds  
Keywords: Aqualine Abstracts; Pollution Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Water Resources Abstracts  
Keywords: Public health  
Keywords: Resuspended sediments  
Keywords: Lakes  
Keywords: Agricultural Chemicals  
Keywords: Insecticides  
Keywords: Sulfur dioxide  
Keywords: Public Health  
Keywords: INE, USA, California  
Keywords: Water springs  
Keywords: Sampling  
Keywords: Seasonal variations  
Keywords: USA, California, Salton Sea  
Keywords: Rivers  
Keywords: Sediment Transport  
Keywords: Sediment pollution  
Keywords: Suspended Sediments  
Keywords: P 0000:AIR POLLUTION  
Keywords: DDE  
Keywords: River discharge  
Keywords: AQ 00003:Monitoring and Analysis of Water and Wastes  
Keywords: Lake deposits  
Keywords: Chlorpyrifos  
Keywords: Pesticides  
Keywords: Trifluralin  
Keywords: Diazinon  
Keywords: Biology  
Date revised - 2008-11-01  
Language of summary - English  
Location - USA, California, Salton Sea; INE, USA, California  
Pages - 151-172  
ProQuest ID - 290145642  
SubjectsTermNotLitGenreText - Pesticides; Agricultural Chemicals; Suspended Sediments; Sediment Transport; Rivers; Sampling; Bed Load; Diazinon; Public Health; USA, California, Salton Sea; INE, USA, California; Sediment pollution; Resuspended sediments; Chlorpyrifos; Watersheds; Trifluralin; Lakes; Basins; Sulfur dioxide; Seasonal variations; Carbaryl; Insecticides; Water springs; Lake deposits; Public health; DDE; River discharge; Residence time  
Last updated - 2011-10-25  
Corporate institution author - LeBlanc, Lawrence A; Kuivila, Kathryn M  
DOI - OB-MD-0008067135; 8168576; CS0844046; 0018-8158; 1573-5117 English

759. Lee, Jeong Eun; Park, Jae Hyeon; Shin, in Chul, and Koh, Hyun Chul. Reactive Oxygen Species Regulated Mitochondria-Mediated Apoptosis in Pc12 Cells Exposed to Chlorpyrifos. 2012 Sep 1; 263, (2): 148-162.   
Rec #: 38599  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Reactive oxidative species (ROS) generated by environmental toxicants including pesticides could be one of the factors underlying the neuronal cell damage in neurodegenerative diseases. In this study we found that chlorpyrifos (CPF) induced apoptosis in dopaminergic neuronal components of PC12 cells as demonstrated by the activation of caspases and nuclear condensation. Furthermore, CPF also reduced the tyrosine hydroxylase-positive immunoreactivity in substantia nigra of the rat. In addition, CPF induced inhibition of mitochondrial complex I activity. Importantly, N-acetyl cysteine (NAC) treatment effectively blocked apoptosis via the caspase-9 and caspase-3 pathways while NAC attenuated the inhibition of mitochondrial complex I activity as well as the oxidative metabolism of dopamine (DA). These results demonstrated that CPF-induced apoptosis was involved in mitochondrial dysfunction through the production of ROS. In the response of cellular antioxidant systems to CPF, we found that CPF treatment increased HO-1 expression while the expression of CuZnSOD and MnSOD was reduced. In addition, we found that CPF treatment activated MAPK pathways, including ERK 1/2, the JNK, and the p38 MAP kinase in a time-dependent manner. NAC treatment abolished MAPK phosphorylation caused by CPF, indicating that ROS are upstream signals of MAPK. Interestingly, MAPK inhibitors abolished cytotoxicity and reduced ROS generation by CPF treatment. Our results demonstrate that CPF induced neuronal cell death in part through MAPK activation via ROS generation, suggesting its potential to generate oxidative stress via mitochondrial damage and its involvement in oxidative stress-related neurodegenerative disease. Crown Copyright Â© 2012. Published by Elsevier Inc. All rights reserved.  
Keywords: 2921-88-2  
Keywords: Reactive Oxygen Species -- metabolism  
Keywords: Superoxide Dismutase  
Keywords: Animals  
Keywords: Antioxidants  
Keywords: EC 2.7.11.24  
Keywords: Superoxide Dismutase -- metabolism  
Keywords: Rats  
Keywords: Mitogen-Activated Protein Kinases -- drug effects  
Keywords: Insecticides  
Keywords: Mitochondria -- drug effects  
Keywords: Apoptosis -- drug effects  
Keywords: Acetylcysteine  
Keywords: Gene Expression Regulation -- drug effects  
Keywords: Mitogen-Activated Protein Kinases  
Keywords: Time Factors  
Keywords: Heme Oxygenase-1  
Keywords: EC 1.15.1.1  
Keywords: Insecticides -- toxicity  
Keywords: Mitogen-Activated Protein Kinases -- metabolism  
Keywords: Mitochondria -- pathology  
Keywords: Substantia Nigra -- drug effects  
Keywords: Dopamine -- metabolism  
Keywords: Acetylcysteine -- pharmacology  
Keywords: Heme Oxygenase-1 -- genetics  
Keywords: Reactive Oxygen Species  
Keywords: 616-91-1  
Keywords: Phosphorylation -- drug effects  
Keywords: Chlorpyrifos  
Keywords: Substantia Nigra -- metabolism  
Keywords: Antioxidants -- metabolism  
Keywords: Rats, Sprague-Dawley  
Keywords: 0  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Oxidative Stress -- drug effects  
Keywords: Mitochondria -- metabolism  
Keywords: EC 1.14.99.3  
Keywords: Female  
Keywords: PC12 Cells  
Date completed - 2012-10-22  
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Language of summary - English  
Pages - 148-162  
ProQuest ID - 1034198827  
Last updated - 2013-01-19  
British nursing index edition - Toxicology and applied pharmacology, September 1, 2012, 263(2):148-162  
Corporate institution author - Lee, Jeong Eun; Park, Jae Hyeon; Shin, In Chul; Koh, Hyun Chul  
DOI - MEDL-22714038; 22714038; 1096-0333 eng

760. Lee, Jiun-Chang; Lin, Kuang-Lin; Lin, Jainn-Jim; Hsia, Shao-Hsuan; Wu, Chang-Teng, and Lin, Kuang-Lin. Non-Accidental Chlorpyrifos Poisoning--an Unusual Cause of Profound Unconsciousness. 2010 Apr; 169, (4): 509-511.   
Rec #: 40659  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos is an organophosphorus anticholinesterase insecticide, and organophosphate intoxication can induce symptoms such as miosis, urination, diarrhea, diaphoresis, lacrimation, excitation of central nervous system, salivation, and consciousness disturbance (MUDDLES). Although accidental poisoning of children with drugs and chemicals is a common cause for consciousness disturbance in children, the possibility of deliberate poisoning is rarely considered. We report on a healthy 5-year 6-month-old boy with recurrent organophosphate intoxication. Reports of chlorpyrifos intoxication in children are quite rare. This case report demonstrates decision-making process and how to disclose deliberate chlorpyrifos poisoning of the toddler by the stepmother, another example of Munchausen syndrome by proxy.  
Keywords: Intoxication  
Keywords: Central nervous system  
Keywords: Diarrhea  
Keywords: Urination  
Keywords: Poisoning  
Keywords: organophosphates  
Keywords: Children  
Keywords: Chlorpyrifos  
Keywords: Decision making  
Keywords: Accidental poisoning  
Keywords: Consciousness  
Keywords: Insecticides  
Keywords: Case reports  
Keywords: X 24330:Agrochemicals  
Keywords: Drugs  
Keywords: Toxicology Abstracts  
Date revised - 2012-09-01  
Language of summary - English  
Pages - 509-511  
ProQuest ID - 1038605728  
SubjectsTermNotLitGenreText - Intoxication; Central nervous system; Diarrhea; Urination; Poisoning; organophosphates; Children; Chlorpyrifos; Accidental poisoning; Decision making; Consciousness; Insecticides; Case reports; Drugs  
Last updated - 2012-09-10  
British nursing index edition - European Journal of Pediatrics [Eur. J. Pediatr.]. Vol. 169, no. 4, pp. 509-511. Apr 2010.  
Corporate institution author - Lee, Jiun-Chang; Lin, Kuang-Lin; Lin, Jainn-Jim; Hsia, Shao-Hsuan; Wu, Chang-Teng  
DOI - b9aa40d8-3832-496e-a9bbmfgefd101; 14235748; 0340-6199; 1432-1076 English

761. Lee, Kwang-Geun; Lee, Suk-Kyung, and Lee, Kwang-Geun. Monitoring and Risk Assessment of Pesticide Residues in Yuza Fruits (Citrus Junos Sieb. Ex Tanaka) and Yuza Tea Samples Produced in Korea. 2012 Dec 15; 135, (4): 2930-2933.   
Rec #: 42389  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The objective of this study was to establish an analytical method to measure pesticides used to cultivate yuza (Citrus junos Sieb. ex Tanaka) and to analyze pesticide residue levels of yuza and yuza tea samples. Risk assessments were also performed by calculating estimated daily intake (EDI) and acceptable daily intake (ADI). An excellent linear correlation was achieved with coefficient correlation values of 0.9750-0.9999. Percent recoveries were 80.4-109.9% for most pesticides with a <6.9% relative standard deviation (RSD). The limits of quantification for the method were 0.10-0.67 Amg/ml. The RSD of intra-day and inter-day variability was <15.3%. Seven pesticides in yuza (n = 80) and yuza tea (n = 75) were analyzed with the optimized analytical method. Acequinocyl, spirodiclofen and carbendazim were detected in yuza samples in the concentration range of 0.07-0.15 Amg/g, 0.11-1.89 Amg/g, and 0.03-5.15 Amg /g, respectively, whereas chlorpyrifos, prothiofos, phosalone, and deltamethrin were not detected in yuza or yuza tea. The concentrations of acequinocyl, spirodiclofen and carbendazim ranged from 0.18-1.05 Amg/g, 0.13-0.29 Amg/g, and 0.17-2.36 Amg/g, respectively, in yuza tea samples. The percent ratios of EDI to ADI for acequinocyl, spirodiclofen, and carbendazim were 24.6%, 22.7%, and 58.5%, respectively.  
Keywords: Citrus  
Keywords: Risk assessment  
Keywords: Pollution Abstracts; Toxicology Abstracts; Risk Abstracts; Health & Safety Science Abstracts  
Keywords: Fruits  
Keywords: phosalone  
Keywords: Pesticide residues  
Keywords: X 24320:Food Additives & Contaminants  
Keywords: Deltamethrin  
Keywords: Chlorpyrifos  
Keywords: Standard deviation  
Keywords: P 9999:GENERAL POLLUTION  
Keywords: Tea  
Keywords: H 5000:Pesticides  
Keywords: Pesticides  
Keywords: Korea, Rep.  
Keywords: Carbendazim  
Keywords: R2 23010:General: Models, forecasting  
Date revised - 2012-11-01  
Language of summary - English  
Location - Korea, Rep.  
Pages - 2930-2933  
ProQuest ID - 1171890243  
SubjectsTermNotLitGenreText - Chlorpyrifos; Risk assessment; Fruits; Standard deviation; phosalone; Pesticide residues; Tea; Pesticides; Carbendazim; Deltamethrin; Citrus; Korea, Rep.  
Last updated - 2012-12-28  
British nursing index edition - Food Chemistry [Food Chem.]. Vol. 135, no. 4, pp. 2930-2933. 15 Dec 2012.  
Corporate institution author - Lee, Kwang-Geun; Lee, Suk-Kyung  
DOI - 861531cf-baff-4ca4-a4de-5584dff81dc9; 17267625; 0308-8146 English

762. Lee, S; Busby, Al; Timchalk, C; Poet, T S, and Lee, S. Effects of Nicotine Exposure on in Vitro Metabolism of Chlorpyrifos in Male Sprague-Dawley Rats. 2009; 72, (1-2): 74-82.   
Rec #: 41659  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The routine use of tobacco products may modify key metabolizing systems, which will further impact the metabolism of environmental contaminants. The objective of this study was to quantify the effect of repeated in vivo exposures to nicotine, a major pharmacologically active component of cigarette smoke, on in vitro metabolism of chlorpyrifos (CPF). CPF is an organophos phorus (OP) insecticide that is metabolized by cytochrome P-450 (CYP450) to its major metabolites, chlorpyrifos-oxon (CPF-oxon) and 3,5,6-trichloro-2-pyridinoI (TCP). Male Sprague-Dawley rats were dosed subcutaneously with 1 mg nicotine/kg for 1,7, or 10 d. Rats were sacrificed 4 or 24 h after the last nicotine treatment, and liver microsomes were prepared. **The microsomes were incubated with varying concentrations of CPF and the production of the metabolites CPF-oxon and TCP were measured.** The metabolism of CPF to the active oxon metabolite did not show significant changes following repeated nicotine treatments, evidenced by the unchanged pseudo first-order clearance rate of V sub(max)/K sub(mapp). The V sub(max) describing the metabolism of CPF to the inactive metabolite, TCP was increased in 24-h postdosing groups, after both single and repeated treatments of nicotine. In contrast, the metabolism to TCP was unchanged in groups evaluated at 4 h (single or repeated) post nicotine dosing. Some basic marker substrate activities were also investigated to ensure that nicotine exerted effects on CYP450 activities. Total P450 reduced spectra were not altered by nicotine treatment, but marker substrate activities for CYP1A and CYP2E1 were increased at 24 h after the single treatment, and marker substrate activity for CYP2B was decreased 4 h after 7 d of treatment Results of this in vitro study suggest that repeated nicotine exposure may result in altered metabolism of CPF. Future in vivo experiments based on these results need to be conducted to ascertain the impact of in vivo nicotine exposures on CPF metabolism in rats.  
Keywords: Cytochromes  
Keywords: Microsomes  
Keywords: males  
Keywords: Cigarette smoke  
Keywords: Metabolites  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Rats  
Keywords: Chlorpyrifos  
Keywords: X 24380:Social Poisons & Drug Abuse  
Keywords: Insecticides  
Keywords: CYP1A protein  
Keywords: Toxicology Abstracts; Environment Abstracts  
Keywords: Nicotine  
Keywords: Pesticides  
Keywords: Liver  
Keywords: Tobacco  
Keywords: Cytochrome P450  
Keywords: Contaminants  
Keywords: Metabolism  
Date revised - 2009-03-01  
Language of summary - English  
Pages - 74-82  
ProQuest ID - 20374631  
SubjectsTermNotLitGenreText - Nicotine; Metabolism; Rats; Metabolites; Chlorpyrifos; Pesticides; Tobacco; Liver; males; Microsomes; Cytochrome P450; Contaminants; CYP1A protein; Cytochromes; Insecticides; Cigarette smoke  
Last updated - 2011-12-14  
British nursing index edition - Journal of Toxicology and Environmental Health, Part A: Current Issues [J. Toxicol. Environ. Health, A: Curr. Iss.]. Vol. 72, no. 1-2, pp. 74-82. 2009.  
Corporate institution author - Lee, S; Busby, AL; Timchalk, C; Poet, T S  
DOI - MD-0009353953; 9053419; 1528-7394 English

763. Lee, S. E. Purification and characterisation of a carboxylesterase from a chlorpyrifos-methyl-resistant strain of Oryzaephilus surinamensis (Coleoptera: Silvanidae). 2011; 50, 187-194.   
Rec #: 63589  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Carboxylesterases from a chlorpyrifos-methyl-resistant strain (VOSCM) of the saw-toothed grain beetle, **Oryzaephilus surinamensis** (L.), are presumed to play a role in conferring resistance to **chlorpyrifos-methyl**. **Colorimetric assays using substrate**s of p-nitrophenyl acetate, alpha-naphthyl acetate and beta-naphthyl acetate showed 4.8, 7.8 and 7.5 times higher carboxylesterase hydrolytic activities in VOSCM than those in VOS48, an organophosphorus insecticide-susceptible strain. Carboxylesterase zymograms showed different banding patterns between VOSCM and VOS48. A primary carboxylesterase in the VOSCM strain, not detected in VOS48, was purified and characterised by chromatographic and electrophoretic techniques. On the basis of native and SDS-polyacrylamide gel electrophoresis, the molecular mass of the purified carboxylesterase from VOSCM was 120 kDa and consisted of two 60 kDa subunits. **The purified carboxylesterase activity was totally inhibited by 10(-1) mM chlorpyrifos-methyl and by 10(-3) mM chlorpyrifps-methyl oxon.** The purified enzyme did not hydrolyse insecticide substrates. Therefore, these results indicate that the purified carboxylesterase may play an important role in chlorpyrifos-methyl detoxification by sequestration.  
Keywords: carboxylesterase, chlorpyrifos-methyl, Oryzaephilus surinamensis,  
ISI Document Delivery No.: 766YB

764. Lein, P. J.; Bonner, M. R.; Farahat, F. M.; Olson, J. R.; Rohlman, D. S.; Fenske, R. A.; Lattal, K. M.; Lasarev, M. R.; Galvin, K.; Farahat, T. M., and Anger, W. K. Experimental strategy for translational studies of organophosphorus pesticide neurotoxicity based on real-world occupational exposures to chlorpyrifos. 2012; 33, (4): 660-668.   
Rec #: 63629  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Translational research is needed to understand and predict the neurotoxic consequences associated with repeated occupational exposures to organophosphorus pesticides (OPs). In this report, we describe a research strategy for identifying biomarkers of OP neurotoxicity, and we characterize pesticide application workers in Egypt's Menoufia Governorate who serve as our anchor human population for developing a parallel animal model with similar exposures and behavioral deficits and for examining the influence of human polymorphisms in cytochrome P450 (CYP) and paraoxonase 1 (PON1) enzymes on OP metabolism and toxicity. This population has previously been shown to have high occupational exposures and to exhibit a broad range of neurobehavioral deficits. In addition to observational studies of work practices in the field, questionnaires on demographics, lifestyle and work practices were administered to 146 Egyptian pesticide application workers applying pesticides to the cotton crop. Survey results indicated that the application workforce uses standard operating procedures and standardized equipment provided by Egypt's Ministry of Agriculture, which provides a workforce with a stable work history. We also found that few workers report using personal protective equipment (PPE), which likely contributes to the relatively high exposures reported in these application workers. In summary, this population provides a unique opportunity for identifying biomarkers of OP-induced neurotoxicity associated with occupational exposure. (C) 2012 Elsevier Inc. All rights reserved.  
Keywords: Biomarkers, Chlorpyrifos, Occupational exposure, Organophosphorus  
ISI Document Delivery No.: 990FU

765. Leoni, Claudia; Balduzzi, Maria; Buratti, Franca Maria, and Testai, Emanuela. The contribution of human small intestine to chlorpyrifos biotransformation. 2012 Nov 23-; 215, (1): 42-48.   
Rec #: 1040  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Despite the oral intake is the major route of exposure to chlorpyrifos for the general population, few data are available on human intestine biotransformation. In this study the contribution of chlorpyrifos (CPF) metabolism in human small intestine was investigated in microsomes from duodenum (HDM) and ileum/jejunum (HS2M) from 11 individual donors. Samples were characterized for testosterone hydroxylated metabolite formation and CYP content quantification by means of Western blotting. The two methods gave consistent results, evidencing the presence of CY3A4 and its-related activity in 10/11 samples, among which one showed also the presence of CYP2C9. Analogously, although with high interindividual variability (about 10 fold), CPF bioactivation to chlorpyrifos-oxon (CPFO) was observed in 10/11 HDM: intrinsic clearance highest value was 0.75 pmol CPFO/(mg protein min ++M). Detoxication to 3,5,6-trichloropyrin-2-ol formation was negligible. The comparison between HDM and HS2M indicates that most CPF bioactivation was confined in the duodenum, declining toward the distal ileum. Results suggest that following oral exposure, the small intestine CPF bioactivation, although much lower when compared to the total hepatic metabolism, could play a role in the pre-systemic CPF clearance, with CPFO transported into the lumen by the efflux P-glycoprotein and further metabolized by esterases. Organophosphorothionate pesticide/ Chlorpyrifos/ CYP3A4/ Human small intestine metabolism

766. Lesmes-Fabian, C.; Garcia-Santos, G.; Leuenberger, F.; Nuyttens, D., and Binder, C. R. Dermal exposure assessment of pesticide use: The case of sprayers in potato farms in the Colombian highlands. 2012; 430, 202-208.   
Rec #: 63689  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Quantifying dermal exposure to pesticides in farming systems in developing countries is of special interest for the estimation of potential health risks, especially when there is a lack of occupational hygiene regulations. In this paper we present the results of a dermal exposure assessment for the potato farming system in the highlands of Colombia, where farmers apply pesticides with hand pressure sprayers without any personal protective equipment. The fractioning of the pesticide, in terms of potential and actual dermal exposure, was determined via the whole-body dosimetry methodology. using the tracer uranine as pesticide surrogate, and luminescence spectrometry as analytical method. We assessed the three activities involved in pesticide management: preparation, application, and cleaning; analyzed three types of nozzles: one with a standard discharge and two modified by farmers to increase the discharge; and derived the protection factor given by work clothing. Our results suggest that to reduce the health risk, three aspects have to be considered: (i) avoiding the modification of nozzles, which affects the droplet size spectrum and increases the level of dermal exposure; (ii) using adequate work clothing made of thick fabrics, especially on the upper body parts; and (iii) cleaning properly the tank sprayer before the application activity. (C) 2012 Published by Elsevier B.V.  
Keywords: Occupational hygiene, Pesticides, Developing countries, Potato, Hand  
ISI Document Delivery No.: 976KO

767. Leticia, a G; Gerardo, G B, and Leticia, A G. Determination of Esterase Activity and Characterization of Cholinesterases in the Reef Fish Haemulon Plumieri. 2008 Nov; 71, (3): 787-797.   
Rec #: 45439  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: White grunt (Haemulon plumieri) has been proposed by the Mesoamerican Barrier Reef System (MBRS) Synoptic Monitoring Program as a bioindicator species. It is in this sense that the present study has a main goal to evaluate this organism's suitability as an indicator species. Individuals were captured during three seasons at the port of Sisal, Yucatan, Mexico which is located in an area that is considered to be weakly impacted by human activities such as agriculture or industry. Both cholinesterase (ChE) and carboxylesterase (CbE) activities were measured in brain, muscle, liver and eye of sampled individuals. Results indicated that ChE and CbE activities were greatest in the brain (256.3+/-43) and in the liver (191+/-21), respectively. Furthermore, ChEs detected in brain, liver and muscle were characterized, and results suggested that the acetylcholinesterase (AChE) type was more abundant relative to pseudocholinesterase (BChE) which was rare. In addition, K sub(m) and V sub(m) sub(a) sub(x) and IC sub(5) sub(0) values were calculated from the Michaelis-Menten equation. Finally, an additional experiment in vitro showed a significant decrease in both ChE and CbE activities when different tissues were exposed to model xenobiotics, such as benzo[a]pyrene and Chlorpyrifos. In conclusion, findings from this study confirm the potential suitability of H. plumieri as an organic pollution bioindicator species, and thus of practical use for environmental biomonitoring purposes.  
Keywords: Agriculture  
Keywords: Reefs  
Keywords: Eye  
Keywords: Acetylcholinesterase  
Keywords: esterase  
Keywords: Man-induced effects  
Keywords: Xenobiotics  
Keywords: Cholinesterase  
Keywords: Barrier reefs  
Keywords: Models  
Keywords: Oceanic Abstracts; ASFA 1: Biological Sciences & Living Resources; Toxicology Abstracts  
Keywords: Aromatic hydrocarbons  
Keywords: biomonitoring  
Keywords: Cholinesterase inhibitors  
Keywords: X 24330:Agrochemicals  
Keywords: Pollution  
Keywords: Mathematical models  
Keywords: Q1 01341:General  
Keywords: Muscles  
Keywords: Brain  
Keywords: Carboxylesterase  
Keywords: Enzymes  
Keywords: Chlorpyrifos  
Keywords: O 4095:Instruments/Methods  
Keywords: Mexico  
Keywords: ASW, Mexico, Yucatan  
Keywords: Pesticides  
Keywords: Liver  
Keywords: Benzo(a)pyrene  
Keywords: Reef fish  
Keywords: Indicator species  
Keywords: Haemulon plumieri  
Date revised - 2008-11-01  
Language of summary - English  
Location - Mexico; ASW, Mexico, Yucatan  
Pages - 787-797  
ProQuest ID - 19312024  
SubjectsTermNotLitGenreText - Pesticides; Brain; Aromatic hydrocarbons; Man-induced effects; Enzymes; Cholinesterase inhibitors; Reef fish; Barrier reefs; Indicator species; Agriculture; Reefs; Mathematical models; Eye; Acetylcholinesterase; esterase; Muscles; Carboxylesterase; Xenobiotics; Cholinesterase; Models; Chlorpyrifos; Liver; biomonitoring; Benzo(a)pyrene; Pollution; Haemulon plumieri; Mexico; ASW, Mexico, Yucatan  
Last updated - 2011-12-14  
British nursing index edition - Ecotoxicology and Environmental Safety [Ecotoxicol. Environ. Saf.]. Vol. 71, no. 3, pp. 787-797. Nov 2008.  
Corporate institution author - Leticia, A G; Gerardo, G B  
DOI - MD-0008815657; 8578926; CS0866991; 0147-6513 English

768. Levin, E.; Timofeeva, O.; Seidler, F., and Slotkin, T. Long-Term Cognitive Effects of Low-Level Developmental Organophosphate Pesticide Exposure: Divergent Effects of Chlorpyrifos, Diazinion and Parathion. 2008; 30, 251-(ABS).   
Rec #: 190  
Keywords: ABSTRACT  
Call Number: NO ABSTRACT (CPY,DZ)  
Notes: Chemical of Concern: CPY,DZ,EPRN,PRN

769. Levin, E. D.; Aschner, M.; Heberlein, U.; Ruden, D.; Welsh-Bohmer, K. A.; Bartlett, S.; Berger, K.; Chen, L.; Corl, A. B.; Eddins, D.; French, R.; Hayden, K. M.; Helmcke, K.; Hirsch, H. V. B.; Linney, E.; Lnenicka, G.; Page, G. P.; Possidente, D.; Possidente, B., and Kirshner, A. Genetic aspects of behavioral neurotoxicology. 2009; 30, (5): 741-753.   
Rec #: 63729  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Considerable progress has been made over the past couple of decades concerning the molecular bases of neurobehavioral function and dysfunction. The field of neurobehavioral genetics is becoming mature. Genetic factors contributing to neurologic diseases such as Alzheimer's disease have been found and evidence for genetic factors contributing to other diseases such as schizophrenia and autism are likely. This genetic approach can also benefit the field of behavioral neurotoxicology. It is clear that there is substantial heterogeneity of response with behavioral impairments resulting from neurotoxicants. Many factors contribute to differential sensitivity, but it is likely that genetic variability plays a prominent role. Important discoveries concerning genetics and behavioral neurotoxicity are being made on a broad front from work with invertebrate and piscine mutant models to classic mouse knockout models and human epidemiologic studies of polymorphisms. Discovering genetic factors of susceptibility to neurobehavioral toxicity not only helps identify those at special risk, it also advances our understanding of the mechanisms by which toxicants impair neurobehavioral function in the larger population. **This symposium organized by Edward Levin and Annette Kirshner, brought together researchers from the laboratories of Michael Aschner, Douglas Ruden, Ulrike Heberlein, Edward Levin and Kathleen Welsh-Bohmer conducting studies with Caenorhabditis elegans, Drosophila, fish, rodents and humans studies to determine the role of genetic factors in susceptibility to behavioral impairment from neurotoxic exposure.** (C) 2009 Elsevier Inc. All rights reserved.  
Keywords: Genetics, Behavioral neurotoxicology, C. elegans, Drosophilia,  
ISI Document Delivery No.: 513AC

770. Levin, Edward. Using zebrafish to investigate persisting cognitive and sensorimotor effects of early developmental chlorpyrifos exposure. 2010 Jul; 32, (4): 503.   
Rec #: 2460  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

771. Levin, Edward; Cauley, Marty; Johnson, Joshua; Sexton, Hannah; Gordon, Karen; Seidler, Frederic, and Slotkin, Theodore. Does pharmacotherapy of preterm labor sensitize the brain to neurotoxicants? Sequential exposure to dexamethasone and chlorpyrifos. 2012 May; 34, (3): 368.   
Rec #: 2630  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY

772. Li, A. A.; Levine, T. E.; Burns, C. J., and Anger, W. K. Integration of epidemiology and animal neurotoxicity data for risk assessment. 2012; 33, (4): 823-832.   
Rec #: 63759  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Most human health risk assessments are based on animal studies that can be conducted under conditions where exposure to multiple doses of a single chemical can be controlled. Data from epidemiology studies also provide valuable information about human exposure and response to pesticides. Human studies have the potential of evaluating neurobehavioral and other outcomes that may be more difficult to evaluate in animals. The human data together with animal data can contribute to a weight-of-evidence analysis in the characterization of human health risks. Epidemiology data do, however, pose challenges with respect to characterizing human health risks. Similarly, animal data at high doses or routes of exposure not typical for humans also pose challenges to dose-response evaluations needed for risk assessments. This paper summarizes some of the presentations given at a symposium held at the Xi'an, China, International Neurotoxicology Conference held in June 2011. This symposium brought together scientists from government, industry and academia to discuss approaches to evaluating and conducting animal and human neurotoxicity studies for risk assessment purposes, using the pesticides paraquat and chlorpyrifos as case studies. (C) 2012 Elsevier Inc. All rights reserved.  
Keywords: Chlorpyrifos, Pesticides, Organophosphates, Neurotoxicity, Epidemiology,  
ISI Document Delivery No.: 990FU

773. Li, Abby a; Lowe, Kimberly a; Mcintosh, Laura J; Mink, Pamela J, and Li, Abby A. Evaluation of Epidemiology and Animal Data for Risk Assessment: Chlorpyrifos Developmental Neurobehavioral Outcomes. 2012 Feb 1; 15, (2): 109-184.   
Rec #: 39049  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: **Developmental neurobehavioral outcomes attributed to exposure to chlorpyrifos (CPF) obtained from epidemiologic and animal studies published before June 2010 were reviewed for risk assessment purposes.** For epidemiological studies, this review considered (1) overall strength of study design, (2) specificity of CPF exposure biomarkers, (3) potential for bias, and (4) Hill guidelines for causal inference. In the case of animal studies, this review focused on evaluating the consistency of outcomes for developmental neurobehavioral endpoints from in vivo mammalian studies that exposed dams and/or offspring to CPF prior to weaning. Developmental neuropharmacologic and neuropathologic outcomes were also evaluated. Experimental design and methods were examined as part of the weight of evidence. There was insufficient evidence that human developmental exposures to CPF produce adverse neurobehavioral effects in infants and children across different cohort studies that may be relevant to CPF exposure. In animals, few behavioral parameters were affected following gestational exposures to 1 mg/kg-d but were not consistently reported by different laboratories. For postnatal exposures, behavioral effects found in more than one study at 1 mg/kg-d were decreased errors on a radial arm maze in female rats and increased errors in males dosed subcutaneously from postnatal day (PND) 1 to 4. A similar finding was seen in rats exposed orally from PND 1 to 21 with incremental dose levels of 1, 2, and 4 mg/kg-d, but not in rats dosed with constant dose level of 1 mg/kg-d. Neurodevelopmental behavioral, pharmacological, and morphologic effects occurred at doses that produced significant brain or red blood cell acetylcholinesterase inhibition in dams or offspring.  
Keywords: Risk assessment  
Keywords: H 6000:Natural Disasters/Civil Defense/Emergency Management  
Keywords: Data processing  
Keywords: Acetylcholinesterase  
Keywords: Erythrocytes  
Keywords: Guidelines  
Keywords: Brain  
Keywords: Weaning  
Keywords: Risk Abstracts; Environment Abstracts; Health & Safety Science Abstracts; Toxicology Abstracts  
Keywords: Offspring  
Keywords: Children  
Keywords: biomarkers  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Rats  
Keywords: Epidemiology  
Keywords: Dams  
Keywords: Reviews  
Keywords: Pesticides  
Keywords: Neurotoxicity  
Keywords: R2 23060:Medical and environmental health  
Keywords: Progeny  
Keywords: X 24330:Agrochemicals  
Keywords: Infants  
Date revised - 2012-12-01  
Language of summary - English  
Pages - 109-184  
ProQuest ID - 1257787020  
SubjectsTermNotLitGenreText - Risk assessment; Data processing; Acetylcholinesterase; Erythrocytes; Brain; Weaning; Children; biomarkers; Chlorpyrifos; Epidemiology; Reviews; Progeny; Infants; Rats; Dams; Guidelines; Pesticides; Neurotoxicity; Offspring  
Last updated - 2013-02-08  
British nursing index edition - Journal of Toxicology and Environmental Health, Part B: Critical Reviews [J. Toxicol. Environ. Health, Pt. B Crit. Rev.]. Vol. 15, no. 2, pp. 109-184. 1 Feb 2012.  
Corporate institution author - Li, Abby A; Lowe, Kimberly A; McIntosh, Laura J; Mink, Pamela J  
DOI - 2a999589-e82f-43c4-8ed5mfgefd109; 17487701; 1093-7404; 1521-6950 English

774. Li, Bin; Ricordel, Ivan; Schopfer, Lawrence M; Baud, Frederic; Megarbane, Bruno; Masson, Patrick; Lockridge, Oksana, and Li, Bin. Dichlorvos, Chlorpyrifos Oxon and Aldicarb Adducts of Butyrylcholinesterase, Detected by Mass Spectrometry in Human Plasma Following Deliberate Overdose. 2010 Aug 1; 30, (6): 559-565.   
Rec #: 40439  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The goal of this study was to develop a method to detect pesticide adducts in tryptic digests of butyrylcholinesterase in human plasma from patients poisoned by pesticides. Adducts to butyrylcholinesterase in human serum may serve as biomarkers of pesticide exposure because organophosphorus and carbamate pesticides make a covalent bond with the active site serine of butyrylcholinesterase. Serum samples from five attempted suicides (with dichlorvos, Aldicarb, Baygon and an unknown pesticide) and from one patient who accidentally inhaled dichlorvos were analyzed. Butyrylcholinesterase was purified from 2 ml serum by ion exchange chromatography at pH 4, followed by procainamide affinity chromatography at pH 7. The purified butyrylcholinesterase was denatured, digested with trypsin and the modified peptide isolated by HPLC. The purified peptide was analyzed by multiple reaction monitoring in a QTRAP 4000 mass spectrometer. This method successfully identified the pesticide-adducted butyrylcholinesterase peptide in four patients whose butyrylcholinesterase was inhibited 60-84%, but not in two patients whose inhibition levels were 8 and 22%. It is expected that low inhibition levels will require analysis of larger serum plasma volumes. In conclusion, a mass spectrometry method for identification of exposure to live toxic pesticides has been developed, based on identification of pesticide adducts on the active site serine of human butyrylcholinesterase.  
Keywords: High-performance liquid chromatography  
Keywords: Suicide  
Keywords: Mass spectrometry  
Keywords: Environment Abstracts; Pollution Abstracts; Toxicology Abstracts  
Keywords: Mass spectroscopy  
Keywords: pH effects  
Keywords: Ion exchange  
Keywords: X 24330:Agrochemicals  
Keywords: Dichlorvos  
Keywords: Serine  
Keywords: suicide  
Keywords: pH  
Keywords: Bioindicators  
Keywords: Trypsin  
Keywords: Chromatography  
Keywords: Adducts  
Keywords: dichlorvos  
Keywords: Aldicarb  
Keywords: Pesticides (carbamates)  
Keywords: biomarkers  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Affinity chromatography  
Keywords: Overdose  
Keywords: Pesticides  
Keywords: P 1000:MARINE POLLUTION  
Date revised - 2011-05-01  
Language of summary - English  
Pages - 559-565  
ProQuest ID - 869591083  
SubjectsTermNotLitGenreText - High-performance liquid chromatography; Trypsin; Adducts; Suicide; Aldicarb; Pesticides (carbamates); biomarkers; Mass spectroscopy; Affinity chromatography; Chlorpyrifos; Overdose; Pesticides; pH effects; Ion exchange; Dichlorvos; Serine; Bioindicators; Chromatography; dichlorvos; Mass spectrometry; suicide; pH  
Last updated - 2012-03-29  
British nursing index edition - Journal of Applied Toxicology [J. Appl. Toxicol.]. Vol. 30, no. 6, pp. 559-565. 1 Aug 2010.  
Corporate institution author - Li, Bin; Ricordel, Ivan; Schopfer, Lawrence M; Baud, Frederic; Megarbane, Bruno; Masson, Patrick; Lockridge, Oksana  
DOI - 1f40a5db-07bc-4e56-b55dcsaobj201; 14821355; 1099-1263 English

775. Li, Bin; Ricordel, Ivan; Schopfer, Lawrence M; Baud, Frederic; Megarbane, Bruno; Nachon, Florian; Masson, Patrick; Lockridge, Oksana, and Li, Bin. Detection of Adduct on Tyrosine 411 of Albumin in Humans Poisoned by Dichlorvos. 2010 Jul; 116, (1): 23-31.   
Rec #: 44069  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Studies in mice and guinea pigs have shown that albumin is a new biomarker of organophosphorus toxicant (OP) and nerve agent exposure. Our goal was to determine whether OP-labeled albumin could be detected in the blood of humans exposed to OP. Blood from four OP-exposed patients was prepared for mass spectrometry analysis by digesting 0.010 ml of serum with pepsin and purifying the labeled albumin peptide by offline high performance liquid chromatography. Dimethoxyphosphate-labeled tyrosine 411 was identified in albumin peptides VRY411TKKVPQVSTPTL and LVRY411TKKVPQVSTPTL from two patients who had attempted suicide with dichlorvos. The butyrylcholinesterase activity in these serum samples was inhibited 80%. A third patient whose serum BChE activity was inhibited 8% by accidental inhalation of dichlorvos had undetectable levels of adduct on albumin. A fourth patient whose BChE activity was inhibited 60% by exposure to chlorpyrifos had no detectable adduct on albumin. This is the first report to demonstrate the presence of OP-labeled albumin in human patients. It is concluded that tyrosine 411 of human albumin is covalently modified in the serum of humans poisoned by dichlorvos and that the modification is detectable by mass spectrometry. The special reactivity of tyrosine 411 with OP suggests that other proteins may also be modified on tyrosine. Identification of other OP-modified proteins may lead to an understanding of neurotoxic symptoms that appear long after the initial OP exposure.  
Keywords: Inhalation  
Keywords: High-performance liquid chromatography  
Keywords: nerve agents  
Keywords: Toxicants  
Keywords: Adducts  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: Toxicology Abstracts; CSA Neurosciences Abstracts  
Keywords: Pepsin A  
Keywords: Suicide  
Keywords: Tyrosine  
Keywords: biomarkers  
Keywords: Mass spectroscopy  
Keywords: Chlorpyrifos  
Keywords: Blood  
Keywords: Neurotoxicity  
Keywords: Albumin  
Keywords: X 24330:Agrochemicals  
Keywords: Dichlorvos  
Date revised - 2010-08-01  
Language of summary - English  
Pages - 23-31  
ProQuest ID - 754534068  
SubjectsTermNotLitGenreText - nerve agents; High-performance liquid chromatography; Inhalation; Toxicants; Adducts; Pepsin A; Tyrosine; Suicide; biomarkers; Mass spectroscopy; Chlorpyrifos; Blood; Neurotoxicity; Albumin; Dichlorvos  
Last updated - 2012-03-29  
British nursing index edition - Toxicological Sciences [Toxicol. Sci.]. Vol. 116, no. 1, pp. 23-31. Jul 2010.  
Corporate institution author - Li, Bin; Ricordel, Ivan; Schopfer, Lawrence M; Baud, Frederic; Megarbane, Bruno; Nachon, Florian; Masson, Patrick; Lockridge, Oksana  
DOI - 5031d47e-e6c1-4ca2-878acsamfg201; 13237185; 1096-6080 English

776. Li, Bin; Schopfer, Lawrence M; Grigoryan, Hasmik; Thompson, Charles M; Hinrichs, Steven H; Masson, Patrick, and Lockridge, Oksana. Tyrosines of Human and Mouse Transferrin Covalently Labeled by Organophosphorus Agents: a New Motif for Binding to Proteins That Have No Active Site Serine. 2009 Jan; 107, (1): 144-155.   
Rec #: 48989  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The expectation from the literature is that organophosphorus (OP) agents bind to proteins that have an active site serine. However, transferrin, a protein with no active site serine, was covalently modified in vitro by 0.5mM 10-fluoroethoxyphosphinyl-N-biotinamido pentyldecanamide, chlorpyrifos oxon, diisopropylfluorophosphate, dichlorvos, sarin, and soman. The site of covalent attachment was identified by analyzing tryptic peptides in the mass spectrometer. Tyr 238 and Tyr 574 in human transferrin and Tyr 238, Tyr 319, Tyr 429, Tyr 491, and Tyr 518 in mouse transferrin were labeled by OP. Tyrosine in the small synthetic peptide ArgTyrThrArg made a covalent bond with diisopropylfluorophosphate, chlorpyrifos oxon, and dichlorvos at pH 8.3. These results, together with our previous demonstration that albumin and tubulin bind OP on tyrosine, lead to the conclusion that OP bind covalently to tyrosine, and that OP binding to tyrosine is a new OP-binding residue. The OP-reactive tyrosines are activated by interaction with Arg or Lys. It is suggested that many proteins in addition to those already identified may be modified by OP on tyrosine. The extent to which tyrosine modification by OP can occur in vivo and the toxicological implications of such modifications require further investigation.  
Keywords: Animals  
Keywords: 96-64-0  
Keywords: Biotin -- analogs & derivatives  
Keywords: Soman -- metabolism  
Keywords: Humans  
Keywords: Tyrosine  
Keywords: Organophosphorus Compounds  
Keywords: Organophosphorus Compounds -- metabolism  
Keywords: Transferrin -- physiology  
Keywords: Tyrosine -- metabolism  
Keywords: Biotin  
Keywords: Biotin -- metabolism  
Keywords: 55520-40-6  
Keywords: Mice  
Keywords: 58-85-5  
Keywords: Tandem Mass Spectrometry  
Keywords: Binding Sites  
Keywords: Transferrin -- metabolism  
Keywords: Blotting, Western  
Keywords: Transferrin  
Keywords: 0  
Keywords: Soman  
Keywords: Spectrometry, Mass, Matrix-Assisted Laser Desorption-Ionization  
Keywords: Models, Chemical  
Keywords: 10-(fluoroethoxyphosphinyl)-N-(biotinamidopentyl)decanamide  
Date completed - 2009-08-07  
Date created - 2008-12-16  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 144-155  
ProQuest ID - 66739943  
SuppNotes - Cites: J Biol Chem. 1973 May 10;248(9):3228-32[4735577]; Cites: Chem Res Toxicol. 2008 Sep;21(9):1787-94[18707141]; Cites: Proc Natl Acad Sci U S A. 1982 Apr;79(8):2504-8[6953407]; Cites: Toxicol Appl Pharmacol. 1997 Oct;146(2):227-36[9344890]; Cites: Electrophoresis. 1999 Dec;20(18):3551-67[10612281]; Cites: Toxicol Lett. 2001 Feb 3;119(1):21-6[11275418]; Cites: J Appl Toxicol. 2001 Dec;21 Suppl 1:S103-7[11920929]; Cites: Toxicol Appl Pharmacol. 2002 Jul 15;182(2):176-85[12140181]; Cites: Toxicology. 2003 May 3;187(2-3):195-203[12699908]; Cites: Biochem J. 1957 Jun;66(2):237-42[13445678]; Cites: Arch Toxicol. 2004 Sep;78(9):508-24[15170525]; Cites: Toxicol Sci. 2004 Dec;82(2):545-54[15342957]; Cites: Toxicol Sci. 2005 Feb;83(2):303-12[15525694]; Cites: Toxicol Sci. 2005 Aug;86(2):291-9[15888665]; Cites: Biochem Pharmacol. 2005 Nov 25;70(11):1673-84[16213467]; Cites: J Biol Chem. 2006 Aug 25;281(34):24934-44[16793765]; Cites: Toxicol Appl Pharmacol. 2007 Jan 1;218(1):20-9[17123561]; Cites: Neuroscience. 2007 Apr 25;146(1):330-9[17321052]; Cites: J Pharmacol Exp Ther. 2007 Sep;322(3):1117-28[17548533]; Cites: Chem Biol Interact. 2008 Sep 25;175(1-3):180-6[18502412]; Cites: J Biol Chem. 2008 Aug 15;283(33):22582-90[18577514]; Cites: Comp Biochem Physiol B. 1989;93(2):417-24[2776434]; Cites: J Biol Chem. 1969 Aug 10;244(15):4247-50[5800444]; Cites: Toxicol Appl Pharmacol. 1997 Jul;145(1):158-74[9221834]; Cites: J Toxicol Environ Health B Crit Rev. 1999 Apr-Jun;2(2):161-81[10230392]; Cites: Mol Pharmacol. 2000 Sep;58(3):577-83[10953051]; Cites: Chem Res Toxicol. 2002 Apr;15(4):582-90[11952345]; Cites: Toxicol Lett. 2002 Sep 5;135(1-2):89-93[12243867]; Cites: Environ Health Perspect. 2003 Nov;111(14):1736-43[14594624]; Cites: Chem Res Toxicol. 2004 Aug;17(8):983-98[15310231]; Cites: Toxicol Sci. 2005 Jan;83(1):166-76[15470232]; Cites: Anal Biochem. 2005 Oct 1;345(1):122-32[16125664]; Cites: Curr Med Chem. 2005;12(23):2683-93[16305465]; Cites: Anal Biochem. 2007 Feb 15;361(2):263-72[17188226]; Cites: Arch Toxicol. 2007 Sep;81(9):627-39[17345062]; Cites: Chem Res Toxicol. 2008 Feb;21(2):421-31[18163544]; Cites: Biochemistry. 1965 Dec;4(12):2815-25[5880690]  
Last updated - 2013-01-19  
British nursing index edition - Toxicological sciences : an official journal of the Society of Toxicology, January 2009, 107(1):144-155  
Corporate institution author - Li, Bin; Schopfer, Lawrence M; Grigoryan, Hasmik; Thompson, Charles M; Hinrichs, Steven H; Masson, Patrick; Lockridge, Oksana  
DOI - MEDL-18930948; 18930948; PMC2638647; 1096-0929 eng

777. Li, H. B.; Li, J.; Xu, Q., and Hu, X. Y. Poly(3-hexylthiophene)/TiO(2) Nanoparticle-Functionalized Electrodes for Visible Light and Low Potential Photoelectrochemical Sensing of Organophosphorus Pesticide Chlopyrifos. 2011; 83, (24): 9681-9686.   
Rec #: 63829  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A dramatic visible light photoelectrochemical sensing platform for the detection of pesticide molecules at zero potential (versus saturated calomel electrode) was first constructed using poly(3-hexylthiophene)-functionalized TiO(2) nanoparticles. Poly(3-hexylthiophene) (P3HT) was synthesized via chemical oxidative polymerization with anhydrous FeCl(3) as the oxidant, 3-hexylthiophene as the monomer, and chloroform as the solvent, and the functional TiO(2) nanoparticles were facilely prepared by blending TiO(2) nanoparticles and P3HT in chloroform solution. The resulting photoelectrocatalysts were characterized by scanning electron microscopy, Raman spectroscopy, and X-ray diffractometry. Under visible light irradiation, P3HT generated the transition from the valence band to the conduction band, delivering the excited electrons into the conduction band of TiO(2) and then to the glassy carbon electrode. Simultaneously, a positive charged hole (h(+)) of TiO(2) may form and migrate to the valence band of P3HT, which can react with H(2)O to generate \*OH, and then it converted chlopyrifos into chlopyrifos\* that promoted the amplifying photocurrent response. On the basis of the proposed photoelectrochemical mechanism, a methodology for sensitive photoelectrochemical sensing for chlopyrifos at zero potential was thus developed. Under optimal conditions, the proposed photoelectrochemical method could detect chlopyrifos ranging from 0.2 to 16 mu mol L(-1) with a detection limit of 0.01 mu mol L(-1) at a signal-to-noise ratio of 3. The photoelectrochemical sensor had an excellent specificity against the other pesticides and could be successfully applied to the detection of reduced chlopyrifos in green vegetables, showing a promising application in photoelectrochemical sensing.  
Keywords: SOLAR-CELLS, PHOTOCATALYTIC ACTIVITY, GAS-CHROMATOGRAPHY,  
ISI Document Delivery No.: 860KJ

778. Li, Huizhen ; Tyler Mehler, W; Lydy, Michael J; You, Jing, and Li, Huizhen. Occurrence and Distribution of Sediment-Associated Insecticides in Urban Waterways in the Pearl River Delta, China. 2011 Mar; 82, (10): 1373-1379.   
Rec #: 43509  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Sediment-associated pesticides, including organochlorine (OCP), organophosphate (OP), and pyrethroid insecticides, were analyzed in urban waterways in three cities (Guangzhou, Dongguan, and Shenzhen) in the Pearl River Delta (PRD), China. The OCPs represented 27.2% of the detectable insecticides in sediment, and chlordanes, DDTs, and endosulfans were the most frequently detected OCPs. The currently used insecticide chlorpyrifos was the only OP detected above the reporting limit (RL), with concentrations ranging from <RL to 100ngg super(-1) dry weight (dw). Additionally, pyrethroids were detected in all sediments with the sum pyrethroid concentrations ranging from 4.26 to 384ngg super(-1) dw and this represented 64.9% of the sum insecticide concentration. Despite their widespread use, no studies have been conducted investigating the occurrence and distribution of pyrethroids in China. As the first report of pyrethroids in urban waterways in China, the current study found cypermethrin was the most abundant insecticide detected in the PRD at concentrations ranging from 1.44 to 219ngg super(-1) dw. Spatially, sediment from more populous and urbanized areas (Shenzhen and Tianhe district in Guangzhou) had higher insecticide residues than less populous agricultural areas. In the more modernized city of Shenzhen, the OCPs were seldom detected, whereas more diverse patterns of pyrethroids were observed. Potential sources of these insecticides, especially the frequently detected pyrethroids, were most likely from pest control during urban landscaping maintenance and from abatement programs targeting mosquitoes and ants. Results suggested that a shift in application pattern and elevated urbanization increased accumulation of currently used insecticides like pyrethroids in sediment, and made them the predominate insecticides in the PRD urban waterways.  
Keywords: Organochlorine compounds  
Keywords: China, People's Rep., Zhu R.  
Keywords: ISEW, China, People's Rep., Guangdong Prov., Shenzhen  
Keywords: Urbanization  
Keywords: Organophosphates  
Keywords: Formicidae  
Keywords: Q2 02264:Sediments and sedimentation  
Keywords: Deltas  
Keywords: Q5 01502:Methods and instruments  
Keywords: Freshwater  
Keywords: Environmental Studies  
Keywords: Insecticides  
Keywords: deltas  
Keywords: Landscaping  
Keywords: Pyrethroids  
Keywords: Aquatic insects  
Keywords: Rivers  
Keywords: Sediment pollution  
Keywords: Cypermethrin  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Chlordane  
Keywords: Z 05350:Medical, Veterinary, and Agricultural Entomology  
Keywords: Brackish  
Keywords: Entomology Abstracts; ASFA 2: Ocean Technology Policy & Non-Living Resources; Environment Abstracts; Pollution Abstracts; Oceanic Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Pest control  
Keywords: organophosphates  
Keywords: China, People's Rep., Guangdong Prov., Guangzhou  
Keywords: Sediments  
Keywords: Maintenance  
Keywords: Endosulfan  
Keywords: ENA 06:Food & Drugs  
Keywords: Chlorpyrifos  
Keywords: cypermethrin  
Keywords: O 4080:Pollution - Control and Prevention  
Keywords: Pesticides  
Keywords: DDT  
Date revised - 2011-10-01  
Language of summary - English  
Location - ISEW, China, People's Rep., Guangdong Prov., Shenzhen; China, People's Rep., Zhu R.; China, People's Rep., Guangdong Prov., Guangzhou  
Pages - 1373-1379  
ProQuest ID - 855539056  
SubjectsTermNotLitGenreText - Rivers; Sediment pollution; Insecticides; Urbanization; DDT; Pesticides; Pest control; Deltas; Aquatic insects; Organochlorine compounds; Cypermethrin; Chlordane; organophosphates; Sediments; Endosulfan; Chlorpyrifos; Landscaping; Pyrethroids; cypermethrin; Organophosphates; deltas; Maintenance; Formicidae; ISEW, China, People's Rep., Guangdong Prov., Shenzhen; China, People's Rep., Zhu R.; China, People's Rep., Guangdong Prov., Guangzhou; Brackish; Freshwater  
Last updated - 2011-12-17  
Corporate institution author - Li, Huizhen; Tyler Mehler, W; Lydy, Michael J; You, Jing  
DOI - OB-5363707c-00f6-47f2-a71ccsamfg201; 14366494; CS1130210; 0045-6535 English

779. Li, J. Q.; Liu, J. A.; Shen, W. J.; Zhao, X. L.; Hou, Y.; Cao, H., and Cui, Z. L. Isolation and characterization of 3,5,6-trichloro-2-pyridinol-degrading Ralstonia sp strain T6. 2010; 101, (19): 7479-7483.   
Rec #: 63869  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A 3,5,6-trichloro-2-pyridinol (TCP)-degrading strain, T6, was isolated by continuous enrichment culture and identified as Ralstonia sp. based on morphological, physiological and biochemical tests as well as 16S rDNA sequence analysis. The bacterium metabolized 100 mg/L TCP within 12 h and 700 mg/L TCP in 80 h. A green metabolite, putatively identified as 3,6-dihydroxypyridine-2,5-dione, was detected. This is the first report of TCP-degrading isolate from the genus of Ralstonia. Strain T6 could potentially be employed in bioremediation of TCP. (C) 2010 Elsevier Ltd. All rights reserved.  
Keywords: 3,5,6-Trichloro-2-pyridinol, Biodegradation, Green metabolite, Ralstonia  
ISI Document Delivery No.: 625KP

780. Li, K.; Wang, S. H.; Shi, Y. H.; Qu, J.; Zhai, Y.; Xu, L. L. ; Xu, Y. X.; Song, J. L.; Liu, L. L.; Rahman, M. A., and Yan, Y. C. Genome Sequence of Paracoccus sp Strain TRP, a Chlorpyrifos Biodegrader. 2011; 193, (7): 1786-1787.   
Rec #: 63879  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Paracoccus sp. strain TRP, isolated from activated sludge, could completely biodegrade chlorpyrifos and 3,5,6-trichloro-2-pyridinol. Here we report the draft genome sequence of Paracoccus sp. strain TRP, which could be used to predict genes for xenobiotic biodegradation and metabolism.  
Keywords: GENES  
ISI Document Delivery No.: 734DW

781. Li, L.; Cao, Z. H.; Jia, P. F., and Wang, Z. R. Calcium signals and caspase-12 participated in paraoxon-induced apoptosis in EL4 cells. 2010; 24, (3): 728-736.   
Rec #: 63889  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In order to investigate whether calcium signals participate in paraoxon (POX)-induced apoptosis in EL4 cells, real-time laser scanning confocal microscopy (LSCM) was used to detect Ca(2+) changes during the POX application. Apoptotic rates of EL4 cells and caspase-12 expression were also evaluated. POX (1-0 nM) increased intracellular calcium concentration ([Ca(2+)]i) in EL4 cells in a dose-dependent manner at early stage (0-2 h) of POX application, and apoptotic rates of EL4 cells after treatment with POX for 16 h were also increased in a dose-dependent manner. Pre-treatment with EGTA, heparin or procaine attenuated POX-induced [Ca(2+)]i elevation and apoptosis. Additionally, POX up-regulated caspase-12 expression in a dose-dependent manner, and pre-treatment with EGTA, heparin or procaine significantly inhibited POX-induced increase of caspase-12 expression. Our results suggested that POX induced [Ca(2+)]i elevation in EL4 cells at the early stage of POX-induced apoptosis, which might involve Ca(2+) efflux from the endoplasmic reticulum (ER) and Ca(2+) influx from extracellular medium. Calcium signals and caspase-12 were important upstream messengers in POX-induced apoptosis in EL4 cells. The ER-associated pathway possibly operated in this apoptosis. (C) 2010 Elsevier Ltd. All rights reserved.  
Keywords: Paraoxon, EL4 cells, Apoptosis, Calcium signals, Endoplasmic reticulum,  
ISI Document Delivery No.: 583IT

782. Li, Q; Kobayashi, M; Kawada, T, and Li, Q. Chlorpyrifos Induces Apoptosis in Human T Cells. 2009 Jan 8; 255, (1-2): 53-57.   
Rec #: 41479  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: It was found previously that organophosphorus pesticides (OPs) significantly inhibited cytotoxic T lymphocyte (CTL) activity. To explore the mechanism of OP-induced inhibition of CTL activity, the present study investigated whether OPs can induce cell death /apoptosis in T cells. Jurkat human T cells were treated with chlorpyrifos at 0-100ppm for 2, 4, and 6h at 37 super(o)C in vitro. It was found that chlorpyrifos induced cell death of Jurkat human T cells in a dose- and time-dependent manner, as shown by MTT and LDH assays. Then, it was investigated if chlorpyrifos-induced cell death consisted of apoptosis, as determined by analysis of Annexin-V staining and the intracellular level of active caspase-3 by flow cytometry, and DNA fragmentation analysis. It was found that chlorpyrifos induces apoptosis in Jurkat T cells in a dose- and time-dependent manner, as determined by analysis of Annexin-V staining. DNA fragmentation was detected when cells were treated with 50 or 100ppm chlorpyrifos for 4 and 6h. Chlorpyrifos also induced an increase in intracellular active caspase-3 in Jurkat T cells in a dose- and time-dependent manner, and a caspase-3 inhibitor, Z-DEVD-FMK, significantly inhibited chlorpyrifos-induced apoptosis. These findings indicate that chlorpyrifos can induce apoptosis in human Jurkat T cell cells, and this effect is partially mediated by the activation of intracellular caspase-3.  
Keywords: Pesticides (organophosphorus)  
Keywords: Pharmacy And Pharmacology  
Keywords: Apoptosis  
Keywords: F 06955:Immunomodulation & Immunopharmacology  
Keywords: Intracellular levels  
Keywords: Toxicology Abstracts; Immunology Abstracts  
Keywords: Cell activation  
Keywords: Chlorpyrifos  
Keywords: Flow cytometry  
Keywords: DNA fragmentation  
Keywords: Cytotoxicity  
Keywords: Lymphocytes T  
Keywords: Caspase-3  
Keywords: X 24330:Agrochemicals  
Date revised - 2011-05-01  
Language of summary - English  
Pages - 53-57  
ProQuest ID - 294613496  
SubjectsTermNotLitGenreText - Flow cytometry; Chlorpyrifos; Pesticides (organophosphorus); DNA fragmentation; Cytotoxicity; Apoptosis; Intracellular levels; Caspase-3; Lymphocytes T; Cell activation  
Last updated - 2011-11-10  
Corporate institution author - Kobayashi, M; Kawada, T  
DOI - OB-MD-0009064538; 8869193; 0300-483X English

783. Li, S.; Liu, Y.; Ni, Z.; Song, X.; Liu, X., and Zhao, L. Mutagenicity of 24 Organophosphorus Pesticides Determined by 6 Short-term Tests. S.Li, Res. Lab. Toxicol., West China Univ. Med. Sci., Chengdu, 610041, Peop. Rep. China//: 1993; 7, (1): 73-77(CHI).   
Rec #: 1050  
Keywords: NOT PURSUING,NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

784. Li, T. G.; Nana, W.; Heng, D., and Min, Z. Polyethylene glycosylation prolongs the stability of recombinant human paraoxonase-1. 2012; 210, (3): 366-371.   
Rec #: 63949  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Paraoxonase-1 (PON1) is a native enzyme that is synthesized in the liver and is capable of hydrolyzing organophosphates (OPs). It is regarded as part of a promising approach for the pretreatment and therapy of OP poisoning. Previous experiments with purified rabbit serum PON1 have established that **it can protect rats against many OP exposures.** In the current paper, we described a preparation of active recombinant human PON1 (rHuPON1) by engineering an Escherichia coil expression system. Recombinant HuPON1 was purified by Ni-NTA affinity chromatography followed by DEAE sepharose fast-flow chromatography. After purification, rHuPON1 was chemically modified with polyethyleneglycol (PEG)-20K. Recombinant HuPON1 exhibited a mean residence time (MRT) of 8.9 h, which was threefold shorter than that of native HuPON1 in rats. However, rHuPON1 chemically modified with PEG-20K displayed an MRT of 19.5 h, suggesting that PEG modification can prolong the circulatory stability of rHuPON1. PEG-rHuPON1 had a catalytic efficiency sufficient in protecting rats against OP poisoning, as measured by acetylcholinesterase activity in tissues and signs after poisoning. Crown Copyright (C) 2012 Published by Elsevier Ireland Ltd. All rights reserved.  
Keywords: Recombinant human paraoxonase-1, Polyethylene glycosylation, Escherichia  
ISI Document Delivery No.: 936XP

785. Li, Y.; Yu, X.; Wang, Z., and Wang, H. Ethanol Poisoning Together With Organophosphate Exposure: a Difficult Clinical Diagnosis Because of Physician Anchoring.   
Rec #: 79389  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: AIMS: Organophosphorus pesticide poisoning occurs frequently in China and can be diagnosed easily based on the history of ingestion and the cholinergic toxic syndrome. Yet, when combined with other toxins, organophosphorus poisoning may appear different.  
ABSTRACT: METHODS: Here, we present a case of acute ethanol poisoning together with a dermal organophosphorus exposure.  
ABSTRACT: RESULTS: Based on the history and a misinterpretation of the physical examination, the patient was treated as an organophosphorus poisoning. Ultimately, serum analysis helped clarify the diagnosis.  
ABSTRACT: CONCLUSIONS: Toxicologist should be aware of the error known as anchoring and take appropriate precautions to limit its occurrence.  
MESH HEADINGS: Adult  
MESH HEADINGS: Chlorpyrifos/poisoning  
MESH HEADINGS: Diagnosis, Differential  
MESH HEADINGS: Environmental Exposure/adverse effects  
MESH HEADINGS: Ethanol/\*poisoning  
MESH HEADINGS: Humans  
MESH HEADINGS: Male  
MESH HEADINGS: \*Organophosphate Poisoning  
MESH HEADINGS: Skin Diseases/chemically induced/diagnosis eng

786. Li, Y. C.; Jiao, B. N.; Zhao, Q. Y.; Wang, C. Q.; Gong, Y.; Zhang, Y. H., and Chen, W. J. Effect of commercial processing on pesticide residues in orange products. 2012; 234, (3): 449-456.   
Rec #: 63979  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effect of commercial processing of orange juice on pesticide residues was investigated, and the processing factors of all orange products and by-products were also determined. The pesticide residues were strengthened using field trials and detected using Ultra-performance Liquid Chromatography-tandem Mass Spectrometry (UPLC-MS/ MS). The results showed that the pesticide residues were mainly distributed in orange peels, the reduction of residue levels ranged from 43.6 to 85.4% during washing process. One percent to 4.5% of initial residues contained in the squeezed juice, 7-94.7% of the total relative residues were distributed in pomace. Filtrating could further reduce all the residue levels, ranging from 96.0-99.4% relative to unwashed whole fruits. After sterilization, there was only 0.5-3.1% of the residues contained in Not from Concentrate juice (NFC juice). 0.2-7.1% of the total relative residues was contained in concentrated juice, comparing with the filtrated juice; however, the concentration of cypermethrin and prochloraz was decreased, but the other 3 pesticides were increased. The residue levels of imidacloprid and carbendazim in orange oil were reduced but abamectin, prochloraz, and cypermethrin were concentrated, and the concentrated factor was 28.214, 5.232, and 5.621, respectively.  
Keywords: Pesticide residues, Orange products, Commercial processing  
ISI Document Delivery No.: 911GC

787. Liang, Bin; Yang, Chengli; Gong, Mingbo; Zhao, Yanfu; Zhang, Jun; Zhu, Changxiong; Jiang, Jiandong; Li, Shunpeng, and Liang, Bin. Adsorption and Degradation of Triazophos, Chlorpyrifos and Their Main Hydrolytic Metabolites in Paddy Soil From Chaohu Lake, China. 2011 Sep; 92, (9): 2229-2234.   
Rec #: 39449  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Triazophos and chlorpyrifos are organophosphorus pesticides (OPs), and their primary hydrolytic metabolites are 1-phenyl-3-hydroxy-1,2,4-triazole (BZC) and 3,5,6-trichloro-2-pyridinol (TCP). In this study, the adsorption and degradation of triazophos, chlorpyrifos, BZC and TCP were investigated in paddy soil from Chaohu Lake, China. Adsorption tests demonstrated that the adsorption of these compounds to soils could be described by the Freundlich equation. Moreover, chlorpyrifos displayed the highest affinity for adsorption, followed by triazophos, BZC and TCP. Degradation of these compounds in non-sterile soil followed first-order exponential decay kinetics, and the half-life (t 1/2) of these contaminants ranged from 8.40 to 44.34 d. Sterilization of soil decreased the degradation rate, indicating that microorganisms played a significant role in the degradation of these compounds. The values of t 1/2 and K oc were fitted to obtain models that could predict the leaching potential of the contaminants from soil. Compared to their parent compounds, BZC and TCP showed high potential for leaching into groundwater. The inoculation of OPs-degrading bacterium (Diaphorobacter sp. GS-1) removed 95.38%, 100% and 100% of triazophos, chlorpyrifos and BZC in paddy soil after 21 d, respectively. The pollution risk of triazophos, chlorpyrifos and BZC could be greatly decreased by inoculating soil with Diaphorobacter sp. GS-1, which decreases the t 1/2 of the contaminants.  
Keywords: China, People's Rep., Anhui Prov., Chaohu L.  
Keywords: Leaching  
Keywords: Degradation  
Keywords: Metabolites  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos  
Keywords: Soil  
Keywords: Lakes  
Keywords: Rice fields  
Keywords: Pesticides  
Keywords: Adsorption  
Keywords: Environment Abstracts; Pollution Abstracts; Sustainability Science Abstracts; Ecology Abstracts  
Keywords: China, People's Rep.  
Date revised - 2011-10-01  
Language of summary - English  
Location - China, People's Rep., Anhui Prov., Chaohu L.; China, People's Rep.  
Pages - 2229-2234  
ProQuest ID - 886340611  
SubjectsTermNotLitGenreText - Soil; Chlorpyrifos; Lakes; Leaching; Rice fields; Degradation; Pesticides; Adsorption; Metabolites; China, People's Rep., Anhui Prov., Chaohu L.; China, People's Rep.  
Last updated - 2012-08-02  
Corporate institution author - Liang, Bin; Yang, Chengli; Gong, Mingbo; Zhao, Yanfu; Zhang, Jun; Zhu, Changxiong; Jiang, Jiandong; Li, Shunpeng  
DOI - OB-9275dab2-43d1-4900-aa48csaobj201; 15161155; 0301-4797 English

788. Liang, Di Wu and Zhu, Hui Zhong. Research on Scanning Monolithic Qcm Sensor Array and Related Measurement System. 2008.  
Rec #: 51869  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This thesis investigated a monolithic QCM sensor array and related scanning measurement system. The QCM array improves the reliability of differential measurement by integrating QCM arrays on one single quartz plate. With the design to contact with liquid on one side, the QCM array could work steadily in liquid phase. The scanning measurement system together with the QCM sensor array could be used as a new sensor platform for the chemical and biologic detection in liquid. For the package of the monolithic QCM sensor array, a plastic double in-line package structure with ceramic substrate inside is designed. A small pool to accept liquid when measuring is designed with plastic packaging material as the wall and one side the QCM array plate as the bottom. The other side of the QCM array is sealed in a cavity on the ceramic substrate. The packaged QCM sensor arrays device were tested with Network Analyzer and shown with good performed. A time-sharing scanning stimuli measurement system is designed to work together with the monolithic QCM sensor array. The oscillator circuit is designed based on a single high speed comparator IC Max-902. The ARM core MCU LPC2132 is used to work as the central process controller of the system. The measurement system is composed by multi-channel gating scanning of QCM array units and peripheral devices. Based on CPLD device XC9572, an even precision frequency measurement module is developed. A PC-based data acquisition and recording system was also developed to do the observation and post-analysis of experimental process. Experiments show that the measurement system works highly precise on frequency measurement. The error during measuring QCM Array unit with 10MHz fundamental frequency is less than 1 Hz. Based on molecular imprinting technology, the sensitive film detection experiments on the pesticide Chlopyrifos in gas/liquid is carried out. The experiments get very positive results and testify the validity of system. The work of the thesis is helpful for further research on the QCM sensor array and measurement system as well as a valuable research foundation.  
Keywords: 0548:Mechanical engineering  
Keywords: Applied sciences  
Keywords: (UMI)AAIH404760  
2008  
0548: Mechanical engineering  
Applied sciences  
2012-07-19  
Chinese  
n/a  
Copyright ProQuest, UMI Dissertations Publishing 2008  
70607522  
169031  
(UMI)AAIH404760  
1026937692  
H404760  
Liang, Di Wu  
2715166151 ZH

789. Liang, J.; Zhao, Z. Y.; Li, H. F., and Guo, B. Y. Residual Degradation Behaviors of Chlorpyrifos in Apple. College of Horticulture, Northwest A&F University, Yangling 712100, China,//: SOIL; 2008; 27, (6): 2461-2466(CHI) (ENG ABS).   
Rec #: 2690  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

790. Liang, Y.; Wang, W.; Shen, Y.; Liu, Y., and Liu, X. J. Dynamics and Residues of Chlorpyrifos and Dichlorvos in Cucumber Grown in Greenhouse. SOIL; 2012; 26, (2): 231-234.   
Rec #: 2760  
Keywords: MIXTURE  
Call Number: NO MIXTURE (CPY,DDVP)  
Notes: Chemical of Concern: CPY,DDVP

791. Liang, Y.; Wang, W.; Shen, Y.; Liu, Y., and Liu, X. J. Effects of home preparation on organophosphorus pesticide residues in raw cucumber. 2012 Aug 1-; 133, (3): 636-640.   
Rec #: 3810  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: The effects of washing with tap water and different detergent solutions, storage at different temperatures and ultrasonic cleaning on organophosphorus pesticide (trichlorfon, dimethoate, dichlorvos, fenitrothion, and chlorpyrifos) residue levels in raw cucumber was investigated. Analysis was carried out by liquid chromatographyÇôtandem mass spectrometry. Washing with detergent solutions proved more effective than tap water. The organophosphorus pesticides reduced from 31.1% to 98.8% after washing with detergent solutions for 20 min. Among detergent solutions, 5% sodium carbonate solution caused the greatest loss in trichlorfon and dimethoate, and 5% sodium bicarbonate solution caused the greatest loss in dichlorvos, fenitrothion and chlorpyrifos. Storage at 4 -\_C for 48 h caused pesticides reduction by 60.9Çô90.2%. Ultrasonic cleaning for 20 min lowered pesticides by 49.8Çô84.4%. The data indicated that home preparation is effective for the reduction of organophosphorus pesticide residues in raw cucumber and it is useful for reducing the dietary exposure. Home preparation/ Organophosphorus pesticide/ Cucumber

792. Liao, C.; Liu, F., and Kannan, K. Bisphenol S, a New Bisphenol Analogue, in Paper Products and Currency Bills and Its Association With Bisphenol a Residues.   
Rec #: 50059  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: As the evidence of the toxic effects of bisphenol A (BPA) grows, its application in commercial products is gradually being replaced with other related compounds, such as bisphenol S (BPS). Nevertheless, very little is known about the occurrence of BPS in the environment. In this study, BPS was analyzed in 16 types of paper and paper products (n = 268), including thermal receipts, paper currencies, flyers, magazines, newspapers, food contact papers, airplane luggage tags, printing paper, kitchen rolls (i.e., paper towels), and toilet paper. All thermal receipt paper samples (n = 111) contained BPS at concentrations ranging from 0.0000138 to 22.0 mg/g (geometric mean: 0.181 mg/g). The overall mean concentrations of BPS in thermal receipt papers were similar to the concentrations reported earlier for BPA in the same set of samples. A significant negative correlation existed between BPS and BPA concentrations in thermal receipt paper samples (r = -0.55, p < 0.0001). BPS was detected in 87% of currency bill samples (n = 52) from 21 countries, at concentrations ranging from below the limit of quantification (LOQ) to 6.26 &mu;g/g (geometric mean: 0.029 &mu;g/g). BPS also was found in 14 other paper product types (n = 105), at concentrations ranging from < LOQ to 8.38 &mu;g/g (geometric mean: 0.0036 &mu;g/g; detection rate: 52%). The estimated daily intake (EDI) of BPS, through dermal absorption via handling of papers and currency bills, was estimated on the basis of concentrations and frequencies of the handling of papers by humans. The median and 95th percentile EDI values, respectively, were 4.18 and 11.0 ng/kg body weight (bw)/day for the general population and 312 and 821 ng/kg bw/day for occupationally exposed individuals. Among the paper types analyzed, thermal receipt papers were found to be the major sources of human exposure to BPS (>88%). To our knowledge, this is the first report on the occurrence of BPS in paper products and currency bills.  
MESH HEADINGS: Chromatography, High Pressure Liquid  
MESH HEADINGS: Limit of Detection  
MESH HEADINGS: \*Paper  
MESH HEADINGS: Phenols/\*analysis/\*chemistry  
MESH HEADINGS: Tandem Mass Spectrometry eng

793. Liao, H. T.; Hsieh, C. J.; Chiang, S. Y.; Lin, M. H.; Chen, P. C., and Wu, K. Y. Simultaneous analysis of chlorpyrifos and cypermethrin in cord blood plasma by online solid-phase extraction coupled with liquid chromatography-heated electrospray ionization tandem mass spectrometry. 2011; 879, (21): 1961-1966.   
Rec #: 64029  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos and cypermethrin are the most used insecticides in Taiwan. Exposure to both pesticides has been associated with reproductive and developmental health effects in humans and animals. This study describes an online solid-phase extraction coupled with liquid chromatography-heated electrospray ionization tandem mass spectrometry (online SPE-LC/HESI/MS/MS) method to analyze chlorpyrifos and cypermethrin in cord blood of pregnant women. Calibration curves showed good linearity (r(2) > 0.998) for both pesticides within the range of 0.1-100 ppb. Limits of detection (LODs) were 0.01 and 0.05 ppb and recoveries in cord blood were 97.2 +/- 4.8% and 93.5 +/- 9.5% for chlorpyrifos and cypermethrin respectively. After analysis of 396 samples, the mean concentrations of chlorpyrifos and cypermethrin were 0.38 and 1.08 ppb respectively. These results demonstrate that LC/HESI/MS/MS is effective for the simultaneous analysis of chlorpyrifos and cypermethrin in cord blood with excellent sensitivity and specificity and may also be effective for high throughput assay in future epidemiology studies. (C) 2011 Elsevier B.V. All rights reserved.  
Keywords: Pesticide, Chlorpyrifos, Cypermethrin, Organophosphate, Pyrethroid, Cord  
ISI Document Delivery No.: 791LB

794. Lieberman, M. T. and Alexander, M. Effects of Pesticides on Decomposition of Organic Matter and Nitrification in Sewage. 1981; 26, 554-560.   
Rec #: 1070  
Keywords: FATE  
Call Number: NO FATE (24D,24DXY,CBL,CPY,DDVP,DZ,MLN,PPX)  
Notes: Chemical of Concern: 24D,24DXY,BDC,CBL,CPY,DDVP,DZ,MLN,PPX

795. Lin, Jing; Chang, Youhong; Yan, Zhimei, and Li, Xiaogang. Effects of bagging on the quality of pear fruit and pesticide residues. 2008(772): 315-318.   
Rec #: 53449  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: fruit bagging  
Paper presented at the International Symposium on Enhancing Economic and Environmental Sustainability of Fruit Production in a Global Economy, held August 13-19, 2006, Seoul, Korea. Includes references 1022986987

796. Ling, Yun; Wang, Han; Yong, Wei; Zhang, Feng; Sun, Li; Yang, Min-Li; Wu, Yong-Ning; Chu, Xiao-Gang, and Ling, Yun. The Effects of Washing and Cooking on Chlorpyrifos and Its Toxic Metabolites in Vegetables. 2011 Jan; 22, (1,): 54-58.   
Rec #: 40089  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effect of household processing on removal of chlorpyrifos residue from vegetables, and the formation of metabolite during processing were studied. Many factors: washing solutions, pH value, cooking mode, processing time were investigated. Analysis of chlorpyrifos and its metabolites was carried out by gas chromatography coupled to triple quadrupole mass spectrometry. Hydrolysis of chlorpyrifos affected the removal of residue from leafy vegetable during washing. Cooking on removal of chlorpyrifos residue was more effective than washing. Chlorpyrifos degraded into 3,5,6-trichloro-2-pyridinol during cooking, while chlorpyrifos did not degrade into chlorpyrifos oxon in all experiments.  
Keywords: Chlorpyrifos  
Keywords: Vegetables  
Keywords: Gas chromatography  
Keywords: Cooking  
Keywords: Metabolites  
Keywords: X 24330:Agrochemicals  
Keywords: Hydrolysis  
Keywords: pH effects  
Keywords: Toxicology Abstracts  
Keywords: Mass spectroscopy  
Date revised - 2012-03-01  
Language of summary - English  
Pages - 54-58  
ProQuest ID - 954587236  
SubjectsTermNotLitGenreText - Chlorpyrifos; Vegetables; Gas chromatography; Cooking; Metabolites; Hydrolysis; pH effects; Mass spectroscopy  
Last updated - 2012-03-30  
British nursing index edition - Food Control [Food Control]. Vol. 22, no. 1,, pp. 54-58. Jan 2011.  
Corporate institution author - Ling, Yun; Wang, Han; Yong, Wei; Zhang, Feng; Sun, Li; Yang, Min-Li; Wu, Yong-Ning; Chu, Xiao-Gang  
DOI - f9156687-3444-42c7-bb9ecsamfg201; 13997742; 0956-7135 English

797. Lisha, K. P.; Anshup, and Pradeep, T. Enhanced visual detection of pesticides using gold nanoparticles. 2009; 44, (7): 697-705.   
Rec #: 64109  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The presence of parts per billion (ppb) levels of chlorpyrifos (O, O-Diethyl-O-(3,5,6-trichloro-2-pyridyl) phosphorothioate) and malathion (S-1,2-bis(ethoxycarbonyl) ethyl O, O-dimethyl phosphorodithioate), two common pesticides found in the surface waters of developing countries, have been visually detected using gold nanoparticles. Visual detection of the presence of pesticide is possible when the color change occurring by the adsorption of pesticides on gold nanoparticles is enhanced by sodium sulfate. The method presented here is simple and there is no need of sample preparation or preconcentration. The response occurs within seconds and the color change is very clear. The detection is possible if chlorpyrifos and malathion are present up to a concentration of 20 and 100 ppb, respectively. The method shows great potential for on-site pesticide monitoring. The method is also applicable as a qualitative technique for the performance evaluation of various household water filters, which claim pesticide removal.  
Keywords: Water, gold nanoparticles, chlorpyrifos, malathion, sodium sulfate  
ISI Document Delivery No.: 535VY

798. Liu, C. G.; Yang, B.; Gan, J.; Zhang, Y.; Liang, M.; Shu, X., and Shu, J. N. Heterogeneous reactions of suspended parathion, malathion, and fenthion particles with NO(3) radicals. 2012; 87, (5): 470-476.   
Rec #: 64129  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorus pesticides (OPPs) emit into the atmosphere in both gas and particulate phases via spray drift from treatments and post-application emission, but most of their degradations in the atmosphere are not well known. In this study, the heterogeneous reactions of nitrate (NO(3)) radicals with three typical OPPs (parathion, malathion, and fenthion) absorbed on azelaic acid particles are investigated using an online vacuum ultraviolet photoionization aerosol time-of-flight mass spectrometer (VUV-ATOFMS). The reaction products observed with the VUV-ATOFMS are identified on the basis of GC/MS analysis of the products in the reaction between NO(3) radicals and the coating of the pesticide. Paraoxon is identified as the only product of parathion; malaoxon and bis(1,2-bis-ethoxycarbonylethyl)disulfide as the products of malathion; fenoxon, fenoxon sulfoxide, fenthion sulfoxide, fenoxon sulfone, and fenthion sulfone as the products of fenthion. The degradation rates of parathion, malathion, and fenthion under the experimental conditions are 5.5 x 10(-3), 5.6 x 10(-2), and 3.3 x 10(-2) s(-1), respectively. The pathways of the heterogeneous reactions between the three OPPs and NO(3) radicals are proposed. The experimental results reveal the possible transformations of these OPPs through the oxidation of NO(3) radicals in the atmosphere. (C) 2011 Elsevier Ltd. All rights reserved.  
Keywords: Organophosphorus pesticides, Heterogeneous reaction, NO(3) radicals,  
ISI Document Delivery No.: 922CJ

799. Liu, G.; Fernandez, A., and Cai, Y. Complexation of Arsenite With Humic Acid in the Presence of Ferric Iron.   
Rec #: 50229  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Sci Total Environ. 1998 Jan 8;209(1):27-39 (medline /9496662)  
COMMENTS: Cites: Science. 2010 May 28;328(5982):1123-7 (medline /20508123)  
COMMENTS: Cites: Environ Sci Technol. 2002 Mar 1;36(5):976-81 (medline /11918029)  
COMMENTS: Cites: Environ Sci Technol. 2002 Jul 1;36(13):2889-96 (medline /12144264)  
COMMENTS: Cites: J Environ Qual. 2002 Jul-Aug;31(4):1115-23 (medline /12175028)  
COMMENTS: Cites: Science. 2002 Nov 22;298(5598):1602-6 (medline /12446905)  
COMMENTS: Cites: Environ Sci Technol. 2006 Aug 1;40(15):4659-65 (medline /16913121)  
COMMENTS: Cites: Environ Sci Technol. 2006 Sep 1;40(17):5380-7 (medline /16999114)  
COMMENTS: Cites: Talanta. 2002 Aug 16;58(1):201-35 (medline /18968746)  
COMMENTS: Cites: Chemosphere. 2010 Nov;81(7):890-6 (medline /20801484)  
COMMENTS: Cites: Environ Sci Technol. 2003 Sep 15;37(18):4182-9 (medline /14524451)  
COMMENTS: Cites: Chemosphere. 2004 Sep;56(11):1105-12 (medline /15276723)  
COMMENTS: Cites: Environ Sci Technol. 2005 Apr 15;39(8):2537-44 (medline /15884346)  
COMMENTS: Cites: J Agric Food Chem. 2005 Nov 2;53(22):8673-8 (medline /16248570)  
COMMENTS: Cites: Sci Total Environ. 2006 Feb 1;354(2-3):179-90 (medline /16398994)  
COMMENTS: Cites: Environ Geochem Health. 2006 Jun;28(3):197-214 (medline /16607568)  
COMMENTS: Cites: J Colloid Interface Sci. 2006 Oct 1;302(1):62-75 (medline /16857207)  
COMMENTS: Cites: Environ Sci Technol. 2006 Oct 1;40(19):6015-20 (medline /17051793)  
COMMENTS: Cites: Environ Sci Technol. 2008 Apr 15;42(8):2893-8 (medline /18497140)  
COMMENTS: Cites: Sci Total Environ. 2008 Nov 15;406(1-2):180-9 (medline /18760447)  
COMMENTS: Cites: Environ Sci Technol. 2010 Jun 15;44(12):4479-85 (medline /20433135)  
COMMENTS: Cites: Sci Total Environ. 2000 Apr 17;249(1-3):297-312 (medline /10813460)  
ABSTRACT: In the presence of iron (Fe), dissolved organic matter (DOM) may bind considerable amounts of arsenic (As), through formation of Fe-bridged As-Fe-DOM complexes and surface complexation of As on DOM-stabilized Fe-colloids (collectively referred to as As-Fe-DOM complexation). However, direct (e.g., chromatographic and spectroscopic) evidence and fundamental kinetic and stability constants have been rarely reported for this As-Fe-DOM complexation. Using a size exclusion chromatography (SEC)-UV-inductively coupled plasma mass spectrometry (ICP-MS) technique, arsenite (As(III))-Fe-DOM complexation was investigated after adding As(III) into the priorly prepared Fe-DOM. A series of evidence, including coelution of As, Fe, and DOM from the SEC column and coretention of As, Fe, and DOM by 3 kDa MWCO centrifugal filtration membrane, demonstrated the occurrence of As(III)-Fe-DOM complexation. The kinetic data of As(III)-Fe-DOM complexation were well described by a pseudofirst order rate equation (R(2) = 0.95), with the rate constant (k') being 0.17 &plusmn; 0.04 1/h. Stability of As(III)-Fe-DOM complexation was characterized by apparent stability constant (K(s)) derived from two-site ligand binding model, with log K(s) ranging from 4.4 &plusmn; 0.2 to 5.6 &plusmn; 0.4. Considering the kinetics (within hours) and stability (similar to typical metal-humates) of As(III)-Fe-DOM complexation, this complexation needs to be included when evaluating As mobility in Fe and DOM rich environments.  
MESH HEADINGS: Arsenites/\*chemistry  
MESH HEADINGS: Environmental Pollutants/\*chemistry  
MESH HEADINGS: Humic Substances/\*analysis  
MESH HEADINGS: Iron/\*chemistry  
MESH HEADINGS: Kinetics  
MESH HEADINGS: Models, Chemical eng

800. Liu, L.; Fiorentino, L.; Natarajan, L.; Parker, B. A.; Mills, P. J.; Sadler, G. R.; Dimsdale, J. E.; Rissling, M.; He, F., and Ancoli-Israel, S. Pre-Treatment Symptom Cluster in Breast Cancer Patients Is Associated With Worse Sleep, Fatigue and Depression During Chemotherapy.   
Rec #: 50929  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Psychiatry Res. 1989 May;28(2):193-213 (medline /2748771)  
COMMENTS: Cites: J Clin Oncol. 2008 Feb 20;26(6):971-82 (medline /18281672)  
COMMENTS: Cites: J Psychosom Res. 1998 Jul;45(1):5-13 (medline /9720850)  
COMMENTS: Cites: J Adv Nurs. 2001 Mar;33(5):668-76 (medline /11298204)  
COMMENTS: Cites: Oncol Nurs Forum. 2001 Apr;28(3):465-70 (medline /11338755)  
COMMENTS: Cites: Eur J Cancer Care (Engl). 2001 Dec;10(4):245-55 (medline /11806675)  
COMMENTS: Cites: Biol Psychiatry. 2003 Aug 1;54(3):269-82 (medline /12893103)  
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COMMENTS: Cites: J Pain Symptom Manage. 2004 Jan;27(1):14-23 (medline /14711465)  
COMMENTS: Cites: Oncol Nurs Forum. 2004 May;31(3):591-5598 (medline /15146224)  
COMMENTS: Cites: J Natl Cancer Inst Monogr. 2004;(32):17-21 (medline /15263036)  
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COMMENTS: Cites: J Clin Oncol. 2005 Sep 1;23(25):6083-96 (medline /16135475)  
COMMENTS: Cites: J Pain Symptom Manage. 2006 Jan;31(1):85-95 (medline /16442485)  
COMMENTS: Cites: Oncol Nurs Forum. 2006 May;33(3):535-42 (medline /16676010)  
COMMENTS: Cites: Oncol Nurs Forum. 2006 Jul;33(4):775-83 (medline /16858459)  
COMMENTS: Cites: J Pain Symptom Manage. 2006 Aug;32(2):118-28 (medline /16877179)  
COMMENTS: Cites: Palliat Support Care. 2006 Sep;4(3):219-37 (medline /17066964)  
COMMENTS: Cites: Sleep. 2006 Nov;29(11):1391-7 (medline /17162985)  
COMMENTS: Cites: J Clin Nurs. 2007 Jan;16(1):104-21 (medline /17181672)  
COMMENTS: Cites: Cancer Pract. 1998 May-Jun;6(3):143-52 (medline /9652245)  
ABSTRACT: OBJECTIVE: The concept of symptom clusters is relatively new in cancer patients' symptom management. This study, which spanned four cycles of chemotherapy, combined three commonly seen pre-treatment symptoms in cancer patients (i.e. sleep disturbances, fatigue and depression) into one symptom cluster, to explore the associations between pre-treatment cluster categories and longitudinal profiles of these same symptoms during chemotherapy.  
ABSTRACT: METHODS: This was a prospective study. Seventy-six women with newly diagnosed stage I-III breast cancer, scheduled to receive at least four cycles of adjuvant or neoadjuvant anthracycline-based chemotherapy participated. Data were collected at seven time points before and during treatment. Sleep quality was measured with the Pittsburgh Sleep Quality Index. Fatigue was measured with the Multidimensional Fatigue Symptom Inventory--Short Form. Depressive symptoms were measured with the Center of Epidemiological Studies--Depression. Patients were divided into three groups based on the number of symptoms they experienced before the start of chemotherapy (i.e. no symptoms, 1-2 symptoms or all three symptoms) and a symptom cluster index (SCI) was computed.  
ABSTRACT: RESULTS: All women reported worse sleep, more fatigue and more depressive symptoms during treatment compared with baseline (all p's < 0.01); however, those women with a higher SCI (i.e. more symptoms pre-treatment) continued to experience worse symptoms during treatment compared with those who began with fewer symptoms (all p's < 0.01).  
ABSTRACT: CONCLUSIONS: A higher clinically relevant-based pre-treatment symptom cluster was associated with more sleep disturbances, greater fatigue and more depressive symptoms during chemotherapy. Specific interventions for these pre-treatment symptoms may improve the frequency and severity of these same symptoms during chemotherapy, when they are most severe and most disruptive to quality of life.  
MESH HEADINGS: Adult  
MESH HEADINGS: Aged  
MESH HEADINGS: Analysis of Variance  
MESH HEADINGS: Antineoplastic Combined Chemotherapy Protocols/\*adverse effects  
MESH HEADINGS: Breast Neoplasms/complications/\*drug therapy  
MESH HEADINGS: Chemotherapy, Adjuvant  
MESH HEADINGS: Depression/etiology/\*prevention &amp  
MESH HEADINGS: control  
MESH HEADINGS: Fatigue/etiology/\*prevention &amp  
MESH HEADINGS: control  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: Prospective Studies  
MESH HEADINGS: Sleep Disorders/etiology/\*prevention &amp  
MESH HEADINGS: control eng

801. Liu, Ning; Cui, Hong-you, and Yao, De. Decomposition and oxidation of sodium 3,5,6-trichloropyridin-2-ol in sub- and supercritical water. 2009 Nov; 87, (6): 387-394.   
Rec #: 5090  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Sodium 3,5,6-trichloropyridin-2-ol (STCP) is a necessary precursor compound for the production of chlorpyrifos and triclopyr, which are extensively used as pesticide and herbicide, respectively. In the process of STCP production, however, large amount of wastewater containing STCP is discharged, which causes increasingly environmental concerns. Therefore, it is of great significance to develop a rapid and effective method for the disposal of containing STCP contaminants. In this work, the thermal decomposition of STCP in sub- and supercritical water was investigated using a continuous tubular reactor. While STCP was stable below 280 -\_C, it could be effectively decomposed at elevated temperature. FT-IR spectra of the decomposition products indicated that the pyridine ring structure in the STCP molecule was stable even at temperatures up to 400 -\_C. The decomposition reaction was mainly caused by the substitution of Cl groups in the STCP molecule with OH groups, resulting in polyhydroxylated pyridines as the major decomposition product. Moreover, high pressure favored the substitution reaction. To completely decompose STCP into non-toxic or low toxic compounds, supercritical water oxidation (SCWO) was employed to evaluate the oxidation of STCP using H2O2 as an oxidant. It was found that STCP could be completely oxidized to H2O, CO2 and corresponding inorganic ammonium salts with an oxidation rate of 99%. Sodium 3,5,6-trichloropyridin-2-ol/ Supercritical/ Subcritical/ Oxidation/ Decomposition

802. Liu, Y. H.; Wang, C. M.; Gui, W. J.; Liang, X.; Bi, J. C.; Huang, G. Y., and Zhu, G. N. Effect of Reaction Format on a McAb-Based Heterologous ELISA for the Insecticide Parathion. 2009; 42, (18): 3031-3045.   
Rec #: 64179  
Keywords: METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Based on the selected monoclonal antibody, the effect of three reaction formats on sensitivity, specificity, and determination ability for real samples were investigated. The results showed the antibody-coated format was the optimal assay for **parathion** determination. The sensitivity of the assay was 3.20ng/ml, with a detection limit of 0.40ng/ml, and the assay time was 1.5h. The average recoveries of parathion in river water, rice, cucumber, green soy bean, and cabbage were 98.56%, 89.46%, 99.25%, 118.57%, and 101.39%, respectively. In addition, when rice and cabbage extracts were analyzed by the assay and HPLC, the correlation was greater than 0.9.  
Keywords: Enzyme-linked immunosorbent assay (ELISA), parathion, reaction format  
ISI Document Delivery No.: 520AL

803. Liu, Y. H. Liu Y. H.; Chen, J. A.; Guo, Y. R.; Wang, C. M.; Liang, X. A., and Zhu, G. N. A sensitive monoclonal antibody-based enzyme-linked immunosorbent assay for chlorpyrifos residue determination in chinese agricultural samples. 2011; 46, (4): 313-320.   
Rec #: 64189  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A monoclonal antibody-based competitive antibody-coated enzyme-linked immunosorbent assay (ELISA) was developed and optimized for determining chlorpyrifos residue in agricultural products. The IC50 and IC10 of this ELISA were 3.3 ng/mL and 0.1 ng/mL respectively. The average recoveries in six agricultural products were between 79.5% and 118.0%, with the intra-assay coefficient of variation being less than 8 %. The limit of detection for all tested products was 30 ng/g. To the best of our knowledge, this assay has the best specificity among all the published research on ELISAs for chlorpyrifos.  
Keywords: Chlorpyrifos, monoclonal antibody, enzyme-linked immunosorbent assay  
ISI Document Delivery No.: 750UO

804. Liu, Z.; Yang, C., and Qiao, C. L. Biodegradation of p-nitrophenol and 4-chlorophenol by Stenotrophomonas sp. 2007; 277, (2): 150-156.   
Rec #: 64199  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A bacterium named LZ-1 capable of utilizing high concentrations of p-nitrophenol (PNP) (up to 500 mg L(-1)) as the sole source of carbon, nitrogen and energy was isolated from an activated sludge. Based on the results of phenotypic features and phylogenetic similarity of 16S rRNA gene sequences, strain LZ-1 was identified as a Stenotrophomonas sp. Other p-substituted phenols such as 4-chlorophenol (4-CP) were also degraded by strain LZ-1, and both PNP and 4-CP were degraded via the hydroquinone pathway exclusively. Strain LZ-1 could degrade PNP and 4-CP simultaneously and the degradation of PNP was greatly accelerated due to the increased biomass supported by 4-CP. An indigenous plasmid was found to be responsible for phenols degradation. In soil samples, 100 mg kg(-1) of PNP and 4-CP in mixtures were removed by strain LZ-1 (10(6) cells g(-1)) within 14 and 16 days respectively, and degradation activity was maintained over a wide range of temperatures (4-35 degrees C). Therefore, strain LZ-1 can potentially be used in bioremediation of phenolic compounds either individually or as a mixture in the environment.  
Keywords: simultaneous degradation, p-nitrophenol, 4-chlorophenol, hydroquinone  
ISI Document Delivery No.: 234UV

805. Liyasova, M.; Li, B.; Schopfer, L. M.; Nachon, F.; Masson, P.; Furlong, C. E., and Lockridge, O. Exposure to tri-o-cresyl phosphate detected in jet airplane passengers. 2011; 256, (3): 337-347.   
Rec #: 64219  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The aircraft cabin and flight deck ventilation are supplied from partially compressed unfiltered bleed air directly from the engine. Worn or defective engine seals can result in the release of engine oil into the cabin air supply. Aircrew and passengers have complained of illness following such "fume events". Adverse health effects are hypothesized to result from exposure to tricresyl phosphate mixed esters, a chemical added to jet engine oil and hydraulic fluid for its anti-wear properties. Our goal was to develop a laboratory test for exposure to tricresyl phosphate. The assay was based on the fact that the active-site serine of butyrylcholinesterase reacts with the active metabolite of tri-o-cresyl phosphate, cresyl saligenin phosphate, to make a stable phosphorylated adduct with an added mass of 80 Da. No other organophosphorus agent makes this adduct in vivo on butyrylcholinesterase. Blood samples from jet airplane passengers were obtained 24-48 h after completing a flight. Butyrylcholinesterase was partially purified from 25 ml serum or plasma, digested with pepsin, enriched for phosphorylated peptides by binding to titanium oxide, and analyzed by mass spectrometry. Of 12 jet airplane passengers tested, 6 were positive for exposure to tri-o-cresyl phosphate that is, they had detectable amounts of the phosphorylated peptide FGEpSAGAAS. The level of exposure was very low. No more than 0.05 to 3% of plasma butyrylcholinesterase was modified. None of the subjects had toxic symptoms. Four of the positive subjects were retested 3 to 7 months following their last airplane trip and were found to be negative for phosphorylated butyrylcholinesterase. In conclusion, this is the first report of an assay that detects exposure to tri-o-cresyl phosphate in jet airplane travelers. (C) 2011 Elsevier Inc. All rights reserved.  
Keywords: Aerotoxic syndrome, Butyrylcholinesterase, Mass spectrometry, Tricresyl  
ISI Document Delivery No.: 850GX

806. Liyasova, M. S.; Schopfer, L. M., and Lockridge, O. Cresyl Saligenin Phosphate, an Organophosphorus Toxicant, Makes Covalent Adducts with Histidine, Lysine, and Tyrosine Residues of Human Serum Albumin. 2012; 25, (8): 1752-1761.   
Rec #: 64229  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: CBDP [2-(2-cresyl)-4H-1-3-2-benzodioxaphosphorin-2-oxide] is a toxic organophosphorus compound. It is generated in vivo from tri-ortho-cresyl phosphate (TOCP), a component of jet engine oil and hydraulic fluids. Exposure to TOCP was proven to occur on board aircraft by finding CBDP-derived phospho-butyrylcholinesterase in the blood of passengers. Adducts on BChE, however, do not explain the toxicity of CBDP. Critical target proteins of CBDP are yet to be identified. Our goal was to facilitate the search for the critical targets of CBDP by determining the range of amino acid residues capable of reacting with CBDP and characterizing the types of adducts formed. We used human albumin as a model protein. Mass spectral analysis of the tryptic digest of CBDP-treated human albumin revealed adducts on His-67, His-146, His-242, His-247, His-338, Tyr-138, Tyr-140, Lys-199, Lys-351, Lys-414, Lys-432, and Lys-525. Adducts formed on tyrosine residues were different from those formed on histidines and lysines. Tyrosines were organophosphorylated by CBDP, while histidine and lysine residues were alkylated. This is the first report of an organophosphorus compound with both phosphorylating and alkylating properties. The o-hydroxybenzyl adduct on histidine is novel. The ability of CBDP to form stable adducts on histidine, tyrosine, and lysine allows one to consider new mechanisms of toxicity from TOCP exposure.  
Keywords: TANDEM MASS-SPECTROMETRY, ACTIVE-SITE SERINE, ATP-CITRATE LYASE,  
ISI Document Delivery No.: 990IS

807. Lizotte Jr, Richard E; Knight, Scott S, and Bryant, Charles T. Sediment Quality Assessment of Beasley Lake: Bioaccumulation and Effects of Pesticides in Hyalella Azteca. 2010 Dec; 26, (6): 411-424.   
Rec #: 47579  
Keywords: SEDIMENT CONC  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Beasley Lake is a Conservation Effects Assessment Program (CEAP) watershed in the intensively cultivated Mississippi Delta, USA. Lake sediment quality at three sites was evaluated in 2004 and 2008 for biological impairment and uptake (animal tissue pesticide residues) from 14 pesticides and three metabolites using Hyalella azteca (Saussure). Eleven pesticides and three metabolites were detected in sediment among the three sites in 2004 and all 17 compounds examined were detected among the three sites in 2008, with the herbicide atrazine having the greatest concentrations. Twenty-eight-day H. azteca survival and growth (mg w/w) indicated no survival effects at any site for either year, but growth impairment occurred in H. azteca exposed to sediments in 2004, whereas growth enhancement occurred in H. azteca exposed to sediments at one site in 2008. Pesticides observed in animal tissue pesticide residues occurred more frequently and in greater concentrations in 2004 compared with 2008. Thirteen pesticides were detected in animal tissue pesticide residues in 2004, with chlorpyrifos occurring in the greatest concentrations, and six pesticides were detected in 2008, with p,p'-DDT occurring in the greatest concentrations. H. azteca tissue pesticide residues of seven pesticides, two herbicides, three insecticides, one insecticide metabolite, and p,p'-DDT, were associated with growth.  
Keywords: Biology--Biochemistry  
Copyright - Copyright Taylor & Francis Ltd. Dec 2010  
Language of summary - English  
Pages - 411-424  
ProQuest ID - 875248309  
Last updated - 2011-09-13  
Place of publication - Abingdon  
Corporate institution author - Lizotte Jr, Richard E; Knight, Scott S; Bryant, Charles T  
DOI - 2392995641; 59153031; 127425; CHEC; TYFRCHEC930670625 English

808. Lizotte, Richard E; Knight, Scott S; Cooper, Charles M, and Lizotte, Richard E. Toxicity Evaluation of a Conservation Effects Assessment Program Watershed, Beasley Lake, in the Mississippi Delta, Usa. 2010 Apr; 84, (4): 422-426.   
Rec #: 47969  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Beasley Lake was assessed monthly in 2005 for biological impairment from 17 historic and current-use pesticides in water and leaf litter using Hyalella azteca (Saussure). Sixteen pesticides were detected in both water and leaf litter with peak detections in spring and summer. Detections ranged from 1-125ng L super(-1) in water and 1-539ngg super(-1) OC in leaf litter. Ten-day H. azteca survival and growth (mg dw) bioassay results indicated no adverse effects on survival or growth in H. azteca exposed to water or leaf litter. Rather, enhanced growth occurred in both lake water and leaf litter exposures for 8 and 6months, respectively.  
Keywords: Historical account  
Keywords: Survival  
Keywords: SW 3030:Effects of pollution  
Keywords: ASW, USA, Louisiana, Mississippi Delta  
Keywords: Deltas  
Keywords: Watersheds  
Keywords: Environmental Studies  
Keywords: Evaluation  
Keywords: Lakes  
Keywords: Agricultural Chemicals  
Keywords: Pollution Abstracts; Environment Abstracts; Water Resources Abstracts; Aqualine Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Toxicology Abstracts  
Keywords: deltas  
Keywords: leaf litter  
Keywords: X 24330:Agrochemicals  
Keywords: Litter  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Toxicity  
Keywords: Hyalella azteca  
Keywords: Leaf litter  
Keywords: Bioassays  
Keywords: Water Pollution Effects  
Keywords: Pesticides  
Keywords: Conservation  
Keywords: summer  
Keywords: survival  
Keywords: Side effects  
Date revised - 2010-02-01  
Language of summary - English  
Location - ASW, USA, Louisiana, Mississippi Delta  
Pages - 422-426  
ProQuest ID - 810005362  
SubjectsTermNotLitGenreText - Leaf litter; Lakes; Pesticides; Conservation; Survival; Toxicity; Watersheds; Side effects; Historical account; Bioassays; deltas; summer; leaf litter; survival; Evaluation; Litter; Agricultural Chemicals; Water Pollution Effects; Deltas; Hyalella azteca; ASW, USA, Louisiana, Mississippi Delta  
Last updated - 2011-10-25  
Corporate institution author - Lizotte, Richard E; Knight, Scott S; Cooper, Charles M  
DOI - OB-5d2dceaf-3357-4aed-870cmfgefd101; 12668426; 0007-4861; 1432-0800 English

809. Lockridge, O. and Schopfer, L. M. Review of tyrosine and lysine as new motifs for organophosphate binding to proteins that have no active site serine. 2010; 187, (1-3): 344-348.   
Rec #: 64259  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The accepted target for organophosphorus agent (OP) binding to enzymes is the active site serine in the consensus sequence Gly X Ser X Gly. New motifs have been identified by using mass spectrometry to fragment OP-labeled peptides. It has been found that OP can make covalent bonds with tyrosine and lysine in proteins that have no active site serine. The OP-tyrosine bond is stable, and does not undergo the decay seen with OP-serine. Information on OP binding to tyrosine has been applied to diagnosis of OP exposure, through the use of mass spectrometry to detect OP-labeled albumin in human and animal plasma. It is expected that the new OP binding motif will aid in the search for a mechanism of low dose OP toxicity. It is hypothesized that proteins involved in axonal transport, especially proteins whose function depends on reversible phosphorylation, are prime candidates fora role in OP-induced neurodegeneration. Treatment of neurodegenerative disorders could be developed by identifying methods to reverse OP binding to tyrosine. (C) 2010 Elsevier Ireland Ltd. All rights reserved.  
Keywords: Pesticides, Nerve agents, Organophosphorus agents, Tyrosine, Lysine  
ISI Document Delivery No.: 641EW

810. Lockridge, O.; Xue, W. H.; Gaydess, A.; Grigoryan, H.; Ding, S. J.; Schopfer, L. M.; Hinrichs, S. H., and Masson, P. Pseudo-esterase activity of human albumin - Slow turnover on tyrosine 411 and stable acetylation of 82 residues including 59 lysines. 2008; 283, (33): 22582-22590.   
Rec #: 64269  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Human albumin is thought to hydrolyze esters because multiple equivalents of product are formed for each equivalent of albumin. Esterase activity with p-nitrophenyl acetate has been attributed to turnover at tyrosine 411. However, p-nitrophenyl acetate creates multiple, stable, acetylated adducts, a property contrary to turnover. Our goal was to identify residues that become acetylated by p-nitrophenyl acetate and determine the relationship between stable adduct formation and turnover. Fatty acid-free human albumin was treated with 0.5mM p-nitrophenyl acetate for 5 min to 2 weeks, or with 10mMp-nitrophenyl acetate for 48 h to 2 weeks. Aliquots were digested with pepsin, trypsin, or GluC and analyzed by mass spectrometry to identify labeled residues. Only Tyr-411 was acetylated within the first 5 min of reaction with 0.5 mM p-nitrophenyl acetate. After 0.5 -6 h there was partial acetylation of 16 -17 residues including Asp-1, Lys-4, Lys-12, Tyr-411, Lys-413, and Lys-414. Treatment with 10 mM p-nitrophenyl acetate resulted in acetylation of 59 lysines, 10 serines, 8 threonines, 4 tyrosines, and Asp-1. When Tyr-411 was blocked with diisopropylfluorophosphate or chlorpyrifos oxon, albumin had normal esterase activity with beta-naphthyl acetate as visualized on a nondenaturing gel. However, after 82 residues had been acetylated, esterase activity was almost completely inhibited. The half-life for deacetylation of Tyr-411 at pH 8.0, 22 degrees C was 61 +/- 4 h. Acetylated lysines formed adducts that were even more stable. In conclusion, the pseudo-esterase activity of albumin is the result of irreversible acetylation of 82 residues and is not the result of turnover.  
Keywords: HUMAN-SERUM-ALBUMIN, ARYL ACYLAMIDASE ACTIVITY, PARA-NITROPHENYL  
ISI Document Delivery No.: 335VR

811. Loewy, Ruth M; Monza, Liliana B; Kirs, Veronica E; Savini, Monica C, and Monza, Liliana B. Pesticide Distribution in an Agricultural Environment in Argentina. 2011; 46, (8): 662-670.   
Rec #: 43669  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An assessment of the off-site migration of pesticides from agricultural activity into the environment in the Neuquen River Valley was performed. The aim of this study was to evaluate the distribution of pesticides in several compartments of a small agricultural sub-catchment. Soil, surface water, shallow groundwater and drift deposition were analyzed for pesticide residues. Results showed the presence of some pesticide residues in soil, surface water and shallow groundwater compartments. The highest detection frequencies in water (surface and subsurface) were found for azinphos-methyl and chlorpyrifos (>70%). In terms of concentration, the highest levels were observed in shallow groundwater for azinphos methyl (22.5 is a subset of g/L) and carbaryl (45.7 is a subset of g/L). In the soil, even before the application period had started, accumulation of residues was present. These residues increased during the period studied. Spray drift during pesticide application was found to be a significant pathway for the migration of pesticide residues in surface water, while leaching and preferential flows were the main transport routes contributing to subsurface contamination.  
Keywords: migration  
Keywords: Pollution detection  
Keywords: Leaching  
Keywords: Surface water  
Keywords: Pesticide residues  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Sprays  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Soil  
Keywords: Chlorpyrifos  
Keywords: Argentina  
Keywords: Pollution Abstracts; Environment Abstracts  
Keywords: Argentina, Neuquen, Neuquen R.  
Keywords: Groundwater  
Date revised - 2011-11-01  
Language of summary - English  
Location - Argentina; Argentina, Neuquen, Neuquen R.  
Pages - 662-670  
ProQuest ID - 907192199  
SubjectsTermNotLitGenreText - Chlorpyrifos; Soil; migration; Leaching; Pollution detection; Pesticide residues; Surface water; Sprays; Groundwater; Argentina; Argentina, Neuquen, Neuquen R.  
Last updated - 2012-12-14  
British nursing index edition - Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants and Agricultural Wastes [J. Environ. Sci. Health, Pt. B: Pestic., Food Contam., Agric. Wastes]. Vol. 46, no. 8, pp. 662-670. 2011.  
Corporate institution author - Loewy, Ruth M; Monza, Liliana B; Kirs, Veronica E; Savini, Monica C  
DOI - b09b9175-976d-42d9-86cacsamfg201; 15680992; 0360-1234; 1532-4109 English

812. London, L.; Beseler, C.; Bouchard, M. F.; Bellinger, D. C.; Colosio, C.; Grandjean, P.; Harari, R.; Kootbodien, T.; Kromhout, H.; Little, F.; Meijster, T.; Moretto, A.; Rohlman, D. S., and Stallones, L. Neurobehavioral and neurodevelopmental effects of pesticide exposures. 2012; 33, (4): 887-896.   
Rec #: 64289  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The association between pesticide exposure and neurobehavioral and neurodevelopmental effects is an area of increasing concern. This symposium brought together participants to explore the neurotoxic effects of pesticides across the lifespan. Endpoints examined included neurobehavioral, affective and neurodevelopmental outcomes among occupational (both adolescent and adult workers) and nonoccupational populations (children). The symposium discussion highlighted many challenges for researchers concerned with the prevention of neurotoxic illness due to pesticides and generated a number of directions for further research and policy interventions for the protection of human health, highlighting the importance of examining potential long-term effects across the lifespan arising from early adolescent, childhood or prenatal exposure. (C) 2012 Elsevier Inc. All rights reserved.  
Keywords: Pesticides, Neurobehavioral, Neurodevelopmental, Toxicity, Acute  
ISI Document Delivery No.: 990FU

813. Longley, M. A Review of Pesticide Effects upon Immature Aphid Parasitoids Within Mummified Hosts. 1999; 45, (2): 139-145.   
Rec #: 200  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ACP,AZ,BFT,CBL,CPY,CYF,CYP,DCTP,DM,DMT,DZ,EFV,ES,FNT,FNV,FPP,FVL,LCYT,MDT,MLN,MOM,MTM,MVP,TCF,TLM), NO REVIEW (ACP,AZ,BFT,CBL,CPY,CYF,CYP,DCTP,DM,DMT,DZ,EFV,ES,FNT,FNV,FPP,FVL,LCYT,MDT,MLN,MOM,MTM,MVP,TCF,TLM)  
Notes: Chemical of Concern: ACP,AZ,BFT,CBL,CPY,CYF,CYP,DCTP,DEM,DM,DMT,DZ,EFV,EPRN,ES,ETN,FNT,FNV,FPP,FVL,HCCH,LCYT,MDT,MLN,MOM,MTM,MVP,PHSL,PIM,PPCP,PPHD,PRN,TCF,TLM

814. Lopez, Lylliam; Blanco, Luis; Aragon, Aurora; Partanen, Timo, and Lopez, Lylliam. Insecticide Residues on Hands: Assessment and Modeling With Video Observations of Determinants of Exposure--a Study Among Subsistence Farmers in Nicaragua. 2009 Mar; 6, (3): 157-164.   
Rec #: 44999  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This investigation quantitatively assessed hand residues of chlorpyrifos and methamidophos in a field setting and sought to explain the residues through application volume and determinants of exposure using application data for 28 subsistence farmers in the Pacific Region of Nicaragua. Hand residues were estimated by recovery of the pesticides by standardized wipe sampling for both hands, analyzed with solvent extraction and gas chromatography with electron capture detector. Application volumes were based on data on individual spraying rates and mixing volumes. Eleven determinants of exposure, related to work practices during mixing and spraying of the pesticides, were assessed for each subject from videotapes. Correlation and regression analyses estimated the associations between hand residues, application volume, pesticide type, and determinants of exposure. Correlations between residues for different hand parts were high (r 0.75-0.98). Total hand residue (sum of residues of parts of both hands) correlated with application volume (r 0.43, p 0.02), not washing hands (r 0.41, p 0.04), spraying nozzle forward (r 0.26, p 0.17), manipulation of hose (r 0.32, p .09), and insecticide type (chlorpyrifos vs. methamidophos; r 0.31, p 0.10). A model that explained total hand residue with these five variables yielded a multiple correlation coefficient of 0.67 (p 0.01). Unmeasured determinants and/or narrow range of the exposure situation probably account for the unexplained variance of the residues.  
Keywords: Solvent extraction  
Keywords: Data processing  
Keywords: methamidophos  
Keywords: Residues  
Keywords: Solvents  
Keywords: Hand  
Keywords: H 1000:Occupational Safety and Health  
Keywords: Spraying  
Keywords: Models  
Keywords: Chlorpyrifos  
Keywords: Toxicology Abstracts; Health & Safety Science Abstracts  
Keywords: Insecticides  
Keywords: Gas chromatography  
Keywords: ASW, Nicaragua  
Keywords: Pesticides  
Keywords: Regression analysis  
Keywords: I, Pacific  
Keywords: Standards  
Keywords: Sampling  
Keywords: X 24330:Agrochemicals  
Keywords: Environmental hygiene  
Date revised - 2009-04-01  
Language of summary - English  
Location - ASW, Nicaragua; I, Pacific  
Pages - 157-164  
ProQuest ID - 20423126  
SubjectsTermNotLitGenreText - ASW, Nicaragua; I, Pacific; Residues; Pesticides; Insecticides; Chlorpyrifos; Standards; Gas chromatography; Solvent extraction; Hand; Spraying; methamidophos; Data processing; Sampling; Models; Solvents; Environmental hygiene; Regression analysis  
Last updated - 2011-12-14  
British nursing index edition - Journal of Occupational and Environmental Hygiene [J. Occup. Environ. Hyg.]. Vol. 6, no. 3, pp. 157-164. Mar 2009.  
Corporate institution author - Lopez, Lylliam; Blanco, Luis; Aragon, Aurora; Partanen, Timo  
DOI - MD-0009453591; 9095011; 1545-9624; 1545-9632 English

815. Lovasi, Gina S; Quinn, James W; Rauh, Virginia a; Perera, Frederica P; Andrews, Howard F; Garfinkel, Robin; Hoepner, Lori; Whyatt, Robin; Rundle, Andrew, and Lovasi, Gina S. Chlorpyrifos Exposure and Urban Residential Environment Characteristics as Determinants of Early Childhood Neurodevelopment. 2011; 101, (1): 63-70.   
Rec #: 40039  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: OBJECTIVES: We evaluated whether neighborhood characteristics correlated with early neurodevelopment and whether these characteristics confounded the previously reported association between exposure to chlorpyrifos (an organophosphate insecticide) and neurodevelopment. METHODS: We obtained prenatal addresses, chlorpyrifos exposure data, and 36-month Psychomotor Development Index (PDI) and Mental Development Index (MDI) scores for a birth cohort in New York City (born 1998-2002). We used data from the 2000 US Census to estimate measures of physical infrastructure, socioeconomic status, crowding, demographic composition, and linguistic isolation for 1-kilometer network areas around each child's prenatal address. Generalized estimating equations were adjusted for demographics, maternal education and IQ, prenatal exposure to tobacco smoke, caretaking environment quality, and building dilapidation. RESULTS: Of 266 children included as participants, 47% were male, 59% were Dominican, and 41% were African American. For each standard deviation higher in neighborhood percent poverty, the PDI score was 2.6 points lower (95% confidence interval [CI] = -3.7, -1.5), and the MDI score was 1.7 points lower (95% CI = -2.6, -0.8). Neighborhood-level confounding of the chlorpyrifos-neurodevelopment association was not apparent. CONCLUSIONS: Neighborhood context and chlorpyrifos exposure were independently associated with neurodevelopment, thus providing distinct opportunities for health promotion.  
Keywords: demography  
Keywords: Prenatal experience  
Keywords: Public health  
Keywords: Demography  
Keywords: USA, New York, New York City  
Keywords: X 24380:Social Poisons & Drug Abuse  
Keywords: Insecticides  
Keywords: poverty  
Keywords: Tobacco  
Keywords: Health & Safety Science Abstracts; Toxicology Abstracts; CSA Neurosciences Abstracts  
Keywords: Urban areas  
Keywords: Data processing  
Keywords: Mathematical models  
Keywords: Crowding  
Keywords: N3 11003:Developmental neuroscience  
Keywords: H 12000:Epidemiology and Public Health  
Keywords: organophosphates  
Keywords: Children  
Keywords: Smoke  
Keywords: Chlorpyrifos  
Keywords: Socio-economic aspects  
Keywords: Intelligence  
Keywords: prenatal experience  
Keywords: Standard deviation  
Keywords: Pesticides  
Keywords: Africa  
Keywords: Census  
Keywords: Language  
Keywords: Mental development  
Date revised - 2011-03-01  
Language of summary - English  
Location - USA, New York, New York City; Africa  
Pages - 63-70  
ProQuest ID - 856765191  
SubjectsTermNotLitGenreText - Prenatal experience; Data processing; Mathematical models; Crowding; organophosphates; Children; Public health; Chlorpyrifos; Demography; Smoke; Intelligence; Socio-economic aspects; Insecticides; Standard deviation; Tobacco; Language; Census; Mental development; demography; prenatal experience; poverty; Pesticides; Urban areas; USA, New York, New York City; Africa  
Last updated - 2012-04-06  
British nursing index edition - American Journal of Public Health [Am. J. Public Health]. Vol. 101, no. 1, pp. 63-70. 2011.  
Corporate institution author - Lovasi, Gina S; Quinn, James W; Rauh, Virginia A; Perera, Frederica P; Andrews, Howard F; Garfinkel, Robin; Hoepner, Lori; Whyatt, Robin; Rundle, Andrew  
DOI - 597201bc-55ce-4a02-a6a8csamfg201; 14047282; 0090-0036 English

816. Lu, C; Ban, D B; Pearson, Ma; Waller, La, and Lu, C. Dietary Intake and Its Contribution to Longitudinal Organophosphorus Pesticide Exposure in Urban/Suburban Children. 2008 Apr; 116, (4): 537-542.   
Rec #: 46009  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: The widespread use of organophosphorus (OP) pesticides has led to frequent exposure in adults and children. Because such exposure may cause adverse health effects, particularly in children, the sources and patterns of exposure need to be studied further. Objectives: We assessed young urban/suburban children's longitudinal exposure to OP pesticides in the Children's Pesticide Exposure Study (CPES) conducted in the greater Seattle, Washington, area, and used a novel study design that allowed us to determine the contribution of dietary intake to the overall OP pesticide exposure. Methods: Twenty-three children 3-11 years of age who consumed only conventional diets were recruited for this 1-year study conducted in 2003-2004. Children switched to organic diets for 5 consecutive days in the summer and fall sampling seasons. We measured specific urinary metabolites for malathion, chlorpyrifos, and other OP pesticides in urine samples collected twice daily for a period of 7, 12, or 15 consecutive days during each of the four seasons. Results: By substituting organic fresh fruits and vegetables for corresponding conventional food items, the median urinary metabolite concentrations were reduced to nondetected or close to non-detected levels for malathion and chlorpyrifos at the end of the 5-day organic diet intervention period in both summer and fall seasons. We also observed a seasonal effect on the OP urinary metabolite concentrations, and this seasonality corresponds to the consumption of fresh produce throughout the year. Conclusions: The findings from this study demonstrate that dietary intake of OP pesticides represents the major source of exposure in young children.  
Keywords: Diets  
Keywords: Pesticides (organophosphorus)  
Keywords: Fruits  
Keywords: Age  
Keywords: Vegetables  
Keywords: Food  
Keywords: fruits  
Keywords: Metabolites  
Keywords: Children  
Keywords: Ingestion  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Dietary intake  
Keywords: Malathion  
Keywords: Chlorpyrifos  
Keywords: Sulfur dioxide  
Keywords: Urine  
Keywords: intervention  
Keywords: Pesticides  
Keywords: summer  
Keywords: INE, USA, Washington, Seattle  
Keywords: Sampling  
Keywords: X 24330:Agrochemicals  
Keywords: Pollution Abstracts; Toxicology Abstracts  
Keywords: Seasonal variations  
Date revised - 2008-05-01  
Language of summary - English  
Location - INE, USA, Washington, Seattle  
Pages - 537-542  
ProQuest ID - 20659355  
SubjectsTermNotLitGenreText - Pesticides (organophosphorus); Fruits; Vegetables; Age; Food; Metabolites; Children; Dietary intake; Malathion; Chlorpyrifos; Urine; Pesticides; Sampling; Seasonal variations; Diets; fruits; Ingestion; Sulfur dioxide; intervention; summer; INE, USA, Washington, Seattle  
Last updated - 2011-12-14  
British nursing index edition - Environmental Health Perspectives [Environ. Health Perspect.]. Vol. 116, no. 4, pp. 537-542. Apr 2008.  
Corporate institution author - Ban, D B; Pearson, MA; Waller, LA  
DOI - MD-0008078154; 8179598; 0091-6765 English

817. Lu, Chensheng; Holbrook, Christina M, and Andres, Leo M. The Implications of Using a Physiologically Based Pharmacokinetic (Pbpk) Model for Pesticide Risk Assessment. 2010 Jan; 118, (1): 125-30.   
Rec #: 44329  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A physiologically based pharmacokinetic (PBPK) model would make it possible to simulate the dynamics of chemical absorption, distribution, metabolism, and elimination (ADME) from different routes of exposures and, in theory, could be used to evaluate associations between exposures and biomarker measurements in blood or urine. We used a PBPK model to predict urinary excretion of 3,5,6-trichloro-2-pyridinol (TCPY), the specific metabolite of chlorpyrifos (CPF), in young children. We developed a child-specific PBPK model for CPF using PBPK models previously developed for rats and adult humans. Data used in the model simulation were collected from 13 children 36 years of age who participated in a cross-sectional pesticide exposure assessment study with repeated environmental and biological sampling. The model-predicted urinary TCPY excretion estimates were consistent with measured levels for 2 children with two 24-hr duplicate food samples that contained 350 and 12 ng/g of CPF, respectively. However, we found that the majority of model outputs underpredicted the measured urinary TCPY excretion. We concluded that the potential measurement errors associated with the aggregate exposure measurements will probably limit the applicability of PBPK model estimates for interpreting urinary TCPY excretion and absorbed CPF dose from multiple sources of exposure. However, recent changes in organophosphorus (OP) use have shifted exposures from multipathways to dietary ingestion only. Thus, we concluded that the PBPK model is still a valuable tool for converting dietary pesticide exposures to absorbed dose estimates when the model input data are accurate estimates of dietary pesticide exposures.  
Keywords: Pyridones -- urine  
Keywords: Animals  
Keywords: Humans  
Keywords: Child  
Keywords: Models, Biological  
Keywords: Risk Assessment  
Keywords: Environmental Studies  
Keywords: Pesticides -- toxicity  
Keywords: Rats  
Keywords: 3,5,6-trichloro-2-pyridinol  
Keywords: Pyridones  
Keywords: Pesticide Residues -- urine  
Keywords: Adult  
Keywords: Chlorpyrifos -- pharmacokinetics  
Keywords: Food Contamination -- analysis  
Keywords: Pesticide Residues  
Keywords: Pesticides -- pharmacokinetics  
Keywords: Child, Preschool  
Keywords: Chlorpyrifos  
Keywords: Environmental Monitoring  
Keywords: Cross-Sectional Studies  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Pesticides  
Keywords: Environmental Exposure  
Keywords: Biological Markers  
Keywords: Biological Markers -- urine  
Copyright - Copyright National Institute of Environmental Health Sciences Jan 2010  
Language of summary - English  
Pages - 125-30  
ProQuest ID - 222650927  
Last updated - 2012-10-24  
Place of publication - Research Triangle Park  
Corporate institution author - Lu, Chensheng; Holbrook, Christina M; Andres, Leo M  
DOI - 1943895781; 50348511; 67001; ENHP; 20056589; INODENHP0006208120  
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Whyatt, Robin M., Barr, Dana B. 2001 "Measurement of organophosphate metabolites in postpartum meconium as a potential biomarker of prenatal exposure: A validation study" Environmental Health Perspectives (EHP) 109 4 417-420  
Zhang X, Driver JH, Li Y, Ross JH, Krieger RI. 2008. Dialkylphosphates (DAPs) in fruits and vegetables may confound biomonitoring in organophosphorus insecticide exposure and risk assessment. J Agric Food Chem 56(22):10638-10645.  
Zhang, Xiaofei, Tsang, Andy M. 2007 "A physiologically based pharmacokinetic/pharmacodynamic model for carbofuran in Sprague-Dawley rats using the exposure-related dose estimating model" Toxicological Sciences 100 2 345-359 English

818. Lu, Chensheng; Rodriguez, Teresa; Thiravirojana-Thetkathuek, Anamai; Pearson, Melanie, and Lu, Chensheng. Feasibility of Using Salivary Biomarkers to Assess Human Exposure to Chlorpyrifos. 2008 Apr; 90, (2): 315-325.   
Rec #: 42229  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The objective of this study was to determine the feasibility of using salivary biomarkers to assess chlorpyrifos exposure using data collected from laboratory controlled animal study, as well as from farmers in Thailand and Nicaragua who applied chlorpyrifos in the field. Time-matched saliva and arterial blood samples were collected from rats and adult agricultural workers, while spot saliva samples were collected from children. Specimen samples were analyzed for chlorpyrifos using a commercially available enzyme-linked immunosorbent assay. The results from both animal and farmer studies show that chlorpyrifos is excreted into saliva. Nevertheless, salivary excretion of chlorpyrifos seems to differ from other pesticides, as evidenced by the lack of correspondence of chlorpyrifos levels between saliva and plasma samples. The lower chlorpyrifos concentrations in saliva collected from rats, and from farmers and their children, may have resulted from the rapid hydrolysis of chlorpyrifos during the intracellular passive diffusion in the salivary gland. In conclusion, chlorpyrifos is excreted into saliva; however, the majority of chlorpyrifos that is excreted in saliva may have been metabolized due to base-dependent hydrolysis. Because of this finding, it was hypothesized that it would be ideal to measure its metabolite, 3,5,6-trichloropyridinol, in saliva as the biomarker for chlorpyrifos exposure.  
Keywords: Agriculture  
Keywords: Enzyme-linked immunosorbent assay  
Keywords: Data processing  
Keywords: Metabolites  
Keywords: Salivary gland  
Keywords: Children  
Keywords: Hydrolysis  
Keywords: biomarkers  
Keywords: Chlorpyrifos  
Keywords: Pesticides  
Keywords: Diffusion  
Keywords: Excretion  
Keywords: Saliva  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Occupational exposure  
Date revised - 2009-02-01  
Language of summary - English  
Pages - 315-325  
ProQuest ID - 20289749  
SubjectsTermNotLitGenreText - Chlorpyrifos; Saliva; biomarkers; Hydrolysis; Children; Occupational exposure; Enzyme-linked immunosorbent assay; Excretion; Data processing; Diffusion; Metabolites; Salivary gland; Pesticides; Agriculture  
Last updated - 2011-12-14  
British nursing index edition - Toxicological and Environmental Chemistry [Toxicol. Environ. Chem.]. Vol. 90, no. 2, pp. 315-325. Apr 2008.  
Corporate institution author - Lu, Chensheng; Rodriguez, Teresa; Thiravirojana-Thetkathuek, Anamai; Pearson, Melanie  
DOI - MD-0009198819; 8882947; 0277-2248 English

819. Lu, D. S.; Qiu, X. L.; Feng, C.; Jin, Y.; Lin, Y. J.; Xiong, L. B.; Wen, Y. M.; Wang, D. L., and Wang, G. Q. Simultaneous determination of 45 pesticides in fruit and vegetable using an improved QuEChERS method and on-line gel permeation chromatography-gas chromatography/mass spectrometer. 2012; 895, 17-24.   
Rec #: 64449  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In this study, a method was developed to determine 45 selected pesticides (of different chemical families) in fruit and vegetable (including apple, spinach and cucumber). Samples were extracted using an improved QuEChERS method with salting out and phase separation in two steps. The target pesticides in concentrated extracts were analyzed by an on-line gel permeation chromatography-gas chromatography/mass spectrometer (online-CPC-CC/MS). Online GPC effectively removed matrix interferences and greatly improved the method sensitivity, recoveries and automation. Method limits of quantification were 10 ng/g for uniconazole and metalaxyl, and 5 ng/g for other 43 target analytes. In three fruit and vegetable matrices each spiked with 45 pesticides (0.01 p,mu g/g), mean recoveries ranged from 80 to 118% for most of the tested pesticides except for profenofos (77% in apple) and chlorpyrifos (68% in apple and 75% in cucumber), with relative standard deviations (RSDs) of less than 14%. The results of the proficiency testing showed that the method is very successful in measuring the certified pesticides with less than 1.3 of the absolute value of Z-score. This method has been applied for routinely monitoring pesticides in fresh fruit and vegetable. (C) 2012 Elsevier B.V. All rights reserved.  
Keywords: QuEChERS, On-line GPC-GC/MS, Pesticides, Fruit and vegetable  
ISI Document Delivery No.: 936ZL

820. Lu, Jinky Leilanie and Lu, Jinky Leilanie. Insecticide Residues in Eggplant Fruits, Soil, and Water in the Largest Eggplant-Producing Area in the Philippines. 2011 Sep; 220, (1-4): 413-422.   
Rec #: 39479  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study looked into the insecticide residues in eggplant, soil, and water samples in the largest eggplant-producing community in the Philippines as well as to analyze the fate of insecticides. The study area consisted of eggplant farms in a community in the largest eggplant producer in the Philippines. A total of 20 of the environmental samples were taken from the farms and analyzed using gas chromatography. The samples were distributed spatially over a mean distance of 451 m (s.d.=20.2 m). For eggplant pesticide application, the mean spraying time of the farmers was 1.4 (sdv=0.53)h/day, 4.13 (sdv=1.9)days/week, 3.79 (sdv=0.22)weeks/month, and 1 year/cropping season. Forty percent of the farm samples of eggplants had positive reading of insecticides cypermethrin and chlorpyrifos between 0.02 and 0.03 mg/kg. There was no positive reading for the 20 water samples. There was only one positive reading of chlorpyrifos in one farm out of 20 soil samples at 0.03 mg/kg. Although Prevathon and Malathion were used by all the farms for eggplant pesticide application, the liter-years of exposure to pesticide was very low for both (0.06, 0.56). Although Brodan and Magnum were not prevalently used, they had the highest liter-years of exposure to pesticide at 4.73 for chlorpyrifos, and 6.09 for cypermethrin. The amount and duration of use of insecticide is important in the determination of its persistence in vegetables and in the environment. In this study, Brodan was the largest and longest used insecticide for eggplants which explains why there was reading for both cypermethrin and chlorpyrifos in the eggplants, but none for Malathion and chlorantraniliprole. The presence of insecticide in water, soil, and plants is also based on its environmental fate. Pesticide regulation and pesticide residue monitoring have been pursued to varying degrees of success in the Philippines, but implementation is considered inadequate. The study also suggests for better implementation of pesticide regulation.  
Keywords: Philippines  
Keywords: Atmospheric pollution  
Keywords: Water sampling  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Insecticide residues  
Keywords: Malathion  
Keywords: Soil  
Keywords: Chlorpyrifos  
Keywords: Soil pollution  
Keywords: cypermethrin  
Keywords: Insecticides  
Keywords: Gas chromatography  
Keywords: farms  
Keywords: Pesticides  
Keywords: Meteorological & Geoastrophysical Abstracts; Environment Abstracts; Pollution Abstracts  
Keywords: M2 551.5:General (551.5)  
Keywords: Seasonal variability  
Keywords: ENA 01:Air Pollution  
Date revised - 2011-09-01  
Language of summary - English  
Location - Philippines  
Pages - 413-422  
ProQuest ID - 888100410  
SubjectsTermNotLitGenreText - Soil pollution; Atmospheric pollution; Gas chromatography; Seasonal variability; Soil; Chlorpyrifos; cypermethrin; Insecticides; Water sampling; farms; Pesticides; Insecticide residues; Malathion; Philippines  
Last updated - 2012-07-13  
British nursing index edition - Water, Air, & Soil Pollution [Water, Air, Soil Pollut.]. Vol. 220, no. 1-4, pp. 413-422. Sep 2011.  
Corporate institution author - Lu, Jinky Leilanie  
DOI - 26f4b1c2-6b15-42fa-bbadmfgefd101; 15454168; 0049-6979; 1573-2932 English

821. Lu, Jinky Leilanie Del Prado and Lu, Jinky Leilanie Del Prado. Multipesticide Residue Assessment of Agricultural Soil and Water in Major Farming Areas in Benguet, Philippines. 2010 Aug; 59, ( 2): 175-181.   
Rec #: 43939  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study investigated the concentration and presence of pesticide residues in water and soil in Benguet, which is a vegetable producing region in the Philippines. Seventy-eight samples and 49 water samples were taken from different farms covering three municipalities in the province of Benguet and were analyzed using gas chromatography. Meteorological conditions of temperature and humidity were also taken. Thirty-four of the soil samples were found to be positive for pesticide residues. The most significant pesticide type with the highest concentration was technical endosulfan, with a mean concentration of 0.025mg/kg, followed by endosulfan sulfate (0.015mg/kg), chlorpyrifos (0.01mg/kg), profenofos (0.003mg/kg), chlorothanil, cypermethrin, and cylohathrin (all at 0.002mg/kg). One water sample was found to be positive for pesticide residue of chlorpyrifos in municipality 2 at a concentration of 0.07mg/L. The data also showed that endosulfan, which is restricted in the Philippines and banned in other countries, was found to be the most prevalent pesticide used (17.7%) and the second highest in concentration (0.015mg/kg) in soil samples. The study also showed a relationship between temperature and pesticide concentration in soil. In conclusion, pesticide residues were found in soil and water samples in the farming areas of Benguet.  
Keywords: Environmental Engineering Abstracts (EN); CSA / ASCE Civil Engineering Abstracts (CE)  
Date revised - 2013-01-01  
Language of summary - English  
Pages - 175-181  
ProQuest ID - 754880537  
Last updated - 2013-01-07  
British nursing index edition - Archives of Environmental Contamination and Toxicology [Arch. Environ. Contam. Toxicol.]. Vol. 59, no. 2, pp. 175-181. Aug 2010.  
DOI - b3ffb00f-a5c6-4b61-a60fmfgefd101; 13400705; 0090-4341; 1432-0703 English

822. Lu, Peng; Li, Qinfen; Liu, Hongming; Feng, Zhaozhong; Yan, Xin; Hong, Qing, and Li, Shunpeng. Biodegradation of chlorpyrifos and 3,5,6-trichloro-2-pyridinol by Cupriavidus sp. DT-1. 2013 Jan; 127, (0): 337-342.   
Rec #: 1430  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: A bacterial strain, Cupriavidus sp. DT-1, capable of degrading chlorpyrifos and 3,5,6-trichloro-2-pyridinol (TCP) and using these compounds as sole carbon source was isolated and characterized. Investigation of the degradation pathway showed that chlorpyrifos was first hydrolyzed to TCP, successively dechlorinated to 2-pyridinol, and then subjected to the cleavage of the pyridine ring and further degradation. The mpd gene, encoding the enzyme responsible for chlorpyrifos hydrolysis to TCP, was cloned and expressed in Escherichia coli BL21. Inoculation of chlorpyrifos-contaminated soil with strain DT-1 resulted in a degradation rate of chlorpyrifos and TCP of 100% and 94.3%, respectively as compared to a rate of 28.2% and 19.9% in uninoculated soil. This finding suggests that strain DT-1 has potential for use in bioremediation of chlorpyrifos-contaminated environments. Cupriavidus sp. DT-1/ Chlorpyrifos/ 3,5,6-Trichloro-2-pyridinol/ Degradation pathway

823. Lu, Q.; Chen, X.; Nie, L.; Luo, J.; Jiang, H.; Chen, L.; Hu, Q.; Du, S., and Zhang, Z. Tuning of the Vinyl Groups' Spacing at Surface of Modified Silica in Preparation of High Density Imprinted Layer-Coated Silica Nanoparticles: a Dispersive Solid-Phase Extraction Materials for Chlorpyrifos.   
Rec #: 77299  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: This paper reports the preparation of high density imprinted layer-coated silica nanoparticles toward selective recognition and fast enrichment of chlorpyrifos (CP) from complicated matrices. The molecularly imprinted polymers (MIPs) were successfully coated at the surface of modified silica through using the chemical immovable vinyl groups at the nanoparticles' surface, followed by the graft copolymerization of methacrylic acid (MAA) and ethylene glycol dimethacrylate (EGDMA) in the presence of templates CP. It has been demonstrated that the space of end vinyl groups at the surface of silica can be controlled by changing the condition of chemical modification, regulating the thickness of imprinted shells and the density of efficient imprinted sites. After removal of templates by solvent extraction, the recognition sites of CP were created in the polymer coating layer. The CP-imprinted nanoparticles exhibited high recognition selectivity and binding affinity to CP analyte. When the CP-imprinted nanoparticles were used as dispersive solid-phase extraction (dSPE) materials, the high recovery yields of 76.1-93.5% from various spiked samples with only 1microg/mL analyte were achieved by one-step extraction. These results reported herein provide the possibility for the separation and enrichment of CP from complicated matrices by the molecular imprinting modification at the surface of common silica nanoparticles.  
MESH HEADINGS: Chemistry Techniques, Analytical  
MESH HEADINGS: Chlorpyrifos/\*chemistry  
MESH HEADINGS: Methacrylates/chemistry  
MESH HEADINGS: Molecular Imprinting/\*methods  
MESH HEADINGS: Nanoparticles/\*chemistry  
MESH HEADINGS: Nanotechnology/\*methods  
MESH HEADINGS: Pesticide Residues/chemistry  
MESH HEADINGS: Pesticides/chemistry  
MESH HEADINGS: Phosphates/chemistry  
MESH HEADINGS: Polymers/chemistry  
MESH HEADINGS: Silicon Dioxide/\*chemistry  
MESH HEADINGS: Solid Phase Extraction/\*methods  
MESH HEADINGS: Solvents/chemistry  
MESH HEADINGS: Thermogravimetry eng

824. Luo, Y; Zhang, M, and Luo, Y. Management-Oriented Sensitivity Analysis for Pesticide Transport in Watershed-Scale Water Quality Modeling Using Swat. 2009 Dec; 157, (12): 3370-3378.   
Rec #: 48249  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The Soil and Water Assessment Tool (SWAT) was calibrated for hydrology conditions in an agricultural watershed of Orestimba Creek, California, and applied to simulate fate and transport of two organophosphate pesticides chlorpyrifos and diazinon. The model showed capability in evaluating pesticide fate and transport processes in agricultural fields and instream network. Management-oriented sensitivity analysis was conducted by applied stochastic SWAT simulations for pesticide distribution. Results of sensitivity analysis identified the governing processes in pesticide outputs as surface runoff, soil erosion, and sedimentation in the study area. By incorporating sensitive parameters in pesticide transport simulation, effects of structural best management practices (BMPs) in improving surface water quality were demonstrated by SWAT modeling. This study also recommends conservation practices designed to reduce field yield and in-stream transport capacity of sediment, such as filter strip, grassed waterway, crop residue management, and tailwater pond to be implemented in the Orestimba Creek watershed.  
Keywords: Freshwater  
Keywords: Environmental Engineering Abstracts (EN); CSA / ASCE Civil Engineering Abstracts (CE)  
Date revised - 2010-02-01  
Language of summary - English  
Pages - 3370-3378  
ProQuest ID - 21083721  
SubjectsTermNotLitGenreText - Freshwater  
Last updated - 2012-08-07  
British nursing index edition - Environmental Pollution [Environ. Pollut.]. Vol. 157, no. 12, pp. 3370-3378. Dec 2009.  
Corporate institution author - Luo, Y; Zhang, M  
DOI - MD-0011005862; 11200845; CS1000097; 0269-7491 English

825. Luo, Y; Zhang, M, and Luo, Y. Multimedia Transport and Risk Assessment of Organophosphate Pesticides and a Case Study in the Northern San Joaquin Valley of California. 2009 May; 75, (7): 969-978.   
Rec #: 48589  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This paper presents a framework for cumulative risk characterization of human exposure to pesticides through multiple exposure pathways. This framework is illustrated through a case study of selected organophosphate (OP) pesticides in the northern San Joaquin Valley of California. Chemical concentrations in environmental media were simulated using a multimedia environmental fate model, and converted to contamination levels in exposure media. The risk characterization in this study was based on a residential-scale exposure to residues of multiple pesticides through everyday activities. Doses from a mixture of OP pesticides that share a common mechanism of toxicity were estimated following US Environmental Protection Agency guidelines for cumulative risk analysis. Uncertainty in the human exposure parameters was included in the Monte Carlo simulation in order to perform stochastic calculations for intakes and corresponding risks of OP pesticides. Risk of brain acetylcholinesterase inhibition was reported as margins of exposure (MOEs) of the 99.9th population percentile for two age groups living in the northern San Joaquin Valley during 1992-2005. Diet was identified as the dominant exposure pathway in cumulative exposure and risk, while the temporal trend and spatial variation in total MOE levels were associated with exposures to contaminated drinking water and ambient air. Uniformly higher risks were observed for children because of their greater inhalation and ingestion rates per body weight, relative to adults. The results indicated that exposures for children were about twice of those estimated for adults. Concerns over children's exposure to OP pesticide through food and water ingestion were suggested based on the spatiotemporal variations predicted for the subchronic MOEs at the 99.9th percentile of exposure in the study area.  
Keywords: Monte Carlo simulation  
Keywords: Inhalation  
Keywords: Risk assessment  
Keywords: Age  
Keywords: Acetylcholinesterase  
Keywords: Organophosphates  
Keywords: Media (transport)  
Keywords: Food  
Keywords: USA, California, San Joaquin Valley  
Keywords: Environmental Studies  
Keywords: Models  
Keywords: spatial distribution  
Keywords: spatial variations  
Keywords: Body weight  
Keywords: guidelines  
Keywords: Risk factors  
Keywords: USA, California  
Keywords: body weight  
Keywords: Diets  
Keywords: age groups  
Keywords: Pesticides (organophosphorus)  
Keywords: Residues  
Keywords: valleys  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Brain  
Keywords: Toxicity  
Keywords: organophosphates  
Keywords: W 30935:Food Biotechnology  
Keywords: Children  
Keywords: Food contamination  
Keywords: Ingestion  
Keywords: Stochasticity  
Keywords: case studies  
Keywords: EPA  
Keywords: Pesticides  
Keywords: Pollution Abstracts; Biotechnology and Bioengineering Abstracts  
Keywords: Drinking water  
Date revised - 2009-05-01  
Language of summary - English  
Location - USA, California, San Joaquin Valley; USA, California  
Pages - 969-978  
ProQuest ID - 289647024  
SubjectsTermNotLitGenreText - USA, California, San Joaquin Valley; USA, California; Pesticides; Toxicity; valleys; Children; Ingestion; case studies; Organophosphates; EPA; Drinking water; guidelines; body weight; spatial distribution; age groups; Monte Carlo simulation; Diets; Risk assessment; Brain; Inhalation; Residues; Media (transport); spatial variations; Acetylcholinesterase; Food; Food contamination; Stochasticity; Pesticides (organophosphorus); Risk factors; Models; Age; Body weight; organophosphates  
Last updated - 2011-11-07  
Corporate institution author - Luo, Y; Zhang, M  
DOI - OB-MD-0009541345; 9211420; 0045-6535 English

826. Luo, Y; Zhang, X; Liu, X; Ficklin, D; Zhang, M, and Luo, Y. Dynamic Modeling of Organophosphate Pesticide Load in Surface Water in the Northern San Joaquin Valley Watershed of California. 2008 Dec; 156, (3): 1171-1181.   
Rec #: 45369  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The hydrology, sediment, and pesticide transport components of the Soil and Water Assessment Tool (SWAT) were evaluated on the northern San Joaquin Valley watershed of California. The Nash-Sutcliffe coefficients for monthly stream flow and sediment load ranged from 0.49 to 0.99 over the watershed during the study period of 1992-2005. The calibrated SWAT model was applied to simulate fate and transport processes of two organophosphate pesticides of diazinon and chlorpyrifos at watershed scale. The model generated satisfactory predictions of dissolved pesticide loads relative to the monitoring data. The model also showed great success in capturing spatial patterns of dissolved diazinon and chlorpyrifos loads according to the soil properties and landscape morphology over the large agricultural watershed. This study indicated that curve number was the major factor influencing the hydrology while pesticide fate and transport were mainly affected by surface runoff and pesticide application and in the study area.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Surface water  
Keywords: Organophosphates  
Keywords: M3 1010:Issues in Sustainable Development  
Keywords: USA, California, San Joaquin Valley  
Keywords: SW 3030:Effects of pollution  
Keywords: transport processes  
Keywords: Watersheds  
Keywords: Streams  
Keywords: Models  
Keywords: Pesticide applications  
Keywords: Environmental Studies  
Keywords: Soil  
Keywords: Agricultural Chemicals  
Keywords: Hydrologic Models  
Keywords: Organophosphorus Pesticides  
Keywords: Assessments  
Keywords: soil properties  
Keywords: Soil properties  
Keywords: Hydrology  
Keywords: Cadmium  
Keywords: Sediment transport  
Keywords: Transport processes  
Keywords: USA, California  
Keywords: X 24330:Agrochemicals  
Keywords: Pollution  
Keywords: EE 40:Water Pollution: Monitoring, Control & Remediation  
Keywords: Pesticides (organophosphorus)  
Keywords: Sediment pollution  
Keywords: Data processing  
Keywords: valleys  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Landscape  
Keywords: AQ 00003:Monitoring and Analysis of Water and Wastes  
Keywords: Environmental Engineering Abstracts; Toxicology Abstracts; Sustainability Science Abstracts; Aqualine Abstracts; Water Resources Abstracts; Pollution Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Sediments  
Keywords: Stream flow  
Keywords: Chlorpyrifos  
Keywords: Pesticides  
Keywords: Morphology  
Keywords: stream flow  
Keywords: Sediment load  
Keywords: Diazinon  
Keywords: Runoff  
Date revised - 2010-02-01  
Language of summary - English  
Location - USA, California; USA, California, San Joaquin Valley  
Pages - 1171-1181  
ProQuest ID - 294624091  
SubjectsTermNotLitGenreText - Agricultural Chemicals; Pesticides; Watersheds; Hydrologic Models; Hydrology; Diazinon; Organophosphorus Pesticides; Cadmium; Assessments; USA, California; USA, California, San Joaquin Valley; Organophosphates; valleys; Chlorpyrifos; Sediment pollution; stream flow; transport processes; Soil; soil properties; Surface water; Landscape; Morphology; Sediment transport; Sediment load; Stream flow; Transport processes; Models; Sediments; Pesticides (organophosphorus); Soil properties; Data processing; Pollution; Streams; Runoff; Pesticide applications  
Last updated - 2011-11-10  
Corporate institution author - Luo, Y; Zhang, X; Liu, X; Ficklin, D; Zhang, M  
DOI - OB-MD-0009002274; 8801600; CS0907423; 0269-7491 English

827. Luo, Yuzhou and Zhang, Minghua. A Geo-Referenced Modeling Environment for Ecosystem Risk Assessment: Organophosphate Pesticides in an Agriculturally Dominated Watershed. 2009; 38, (2): 664-674.   
Rec #: 48719  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A geo-referenced modeling system was developed in this study to investigate the spatiotemporal variability of pesticide distributions and associated ecosystem risks. In the modeling system, pesticide fate and transport processes in soil-canopy system were simulated at field scale by the pesticide root zone model (PRZM). Edge-of-field mass fluxes were up-scaled with a spatially distributed flow-routing model to predict pesticide contaminations in surface water. The developed model was applied to the field conditions of the Orestimba Creek watershed, an agriculturally-dominated area in California's Central Valley during 1990 through 2006, with the organophosphate insecticides diazinon and chlorpyrifos as test agents. High concentrations of dissolved pesticides were predicted at the watershed outlet during the irrigation season of April through November, due to the intensive pesticide use and low stream flow. Concentration violations, according to the California aquatic life criteria, were observed for diazinon before 2001, and for chlorpyrifos during the entire simulation period. Predicted pesticide exposure levels showed potential adverse effects on certain genera of sensitive aquatic invertebrates in the ecosystem of the Orestimba Creek. Modeling assessments were conducted to identify the factors governing spatial patterns and seasonal trends on pesticide distribution and contamination potentials to the studied aquatic ecosystem. Areas with high pesticide yields to surface water were indicated for future research and additional studies focused on monitoring and mitigation efforts within the watershed. Improved irrigation techniques and management practices were also suggested to reduce the violations of pesticide concentrations during irrigation seasons.  
Keywords: Agriculture  
Keywords: Pesticides -- analysis  
Keywords: **Animals**  
Keywords: Organophosphates  
Keywords: Water Pollutants, Chemical -- analysis  
Keywords: Risk Assessment  
Keywords: Soil  
Keywords: Ecosystem  
Keywords: California  
Keywords: 0  
Keywords: Water Pollutants, Chemical -- adverse effects  
Keywords: Pesticides  
Keywords: Water Pollutants, Chemical  
Keywords: Soil -- analysis  
Keywords: Models, Chemical  
Keywords: Organophosphates -- analysis  
Keywords: Geographic Information Systems  
Date completed - 2009-04-23  
Date created - 2009-02-26  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 664-674  
ProQuest ID - 66967015  
Last updated - 2013-01-19  
British nursing index edition - Journal of environmental quality, March 2009, 38(2):664-674  
Corporate institution author - Luo, Yuzhou; Zhang, Minghua  
DOI - MEDL-19244487; 19244487; 0047-2425 eng

828. Luo, Yuzhou ; Zhang, Minghua, and Luo, Yuzhou. Spatially Distributed Pesticide Exposure Assessment in the Central Valley, California, Usa. 2010 May; 158, (5): 1629-1637.   
Rec #: 44139  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Field runoff is an important transport mechanism by which pesticides move into the hydrologic environment of intensive agricultural regions such as California's Central Valley. This study presents a spatially explicit modeling approach to extend Pesticide Root Zone Model (PRZM), a field-scale pesticide transport model, into basin level. The approach was applied to simulate chlorpyrifos use in the Central Valley during 2003-2007. The average value of loading as percent of use (LAPU) is 0.031%. Results of this study provide strong evidence that surface runoff generation and pesticide application timing are the two influencing factors on the spatial and temporal variability of chlorpyrifos sources from agricultural fields. This is one of the first studies in coupling GIS and field-scale models and providing simulations for the dynamics of pesticides over an agriculturally dominated landscape. The demonstrated modeling approach may be useful for implementations of best management practice (BMP) and total maximum daily load (TMDL). Runoff generation and application timing are governing factors on spatiotemporal variability of pesticide sources.  
Keywords: Environmental Engineering Abstracts (EN); CSA / ASCE Civil Engineering Abstracts (CE)  
Date revised - 2013-01-01  
Language of summary - English  
Pages - 1629-1637  
ProQuest ID - 746150977  
Last updated - 2013-01-07  
British nursing index edition - Environmental Pollution [Environ. Pollut.]. Vol. 158, no. 5, pp. 1629-1637. May 2010.  
Corporate institution author - Luo, Yuzhou; Zhang, Minghua  
DOI - d8d6124a-cc60-4555-92e9csaobj201; 13028247; 0269-7491 English

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Rec #: 64569  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Many organisms use subtle chemical cues not only to find partners and food, but also to sense the presence of natural enemies and to avoid predation. As we discuss here, an increasing number of studies now show that low, non-toxic concentrations of chemicals, ranging from heavy metals and pesticides to seemingly harmless substances such as surfactants, can disrupt the transfer of chemical information, inducing maladaptive responses in both the signaller and the receiver. Similar to endocrine disruptors, these 'info disruptors' form a new class of chemical threats, which could have far-reaching implications for ecosystem functioning and conservation management.  
Keywords: SEX PHEROMONAL COMMUNICATION, PREDATOR AVOIDANCE-BEHAVIOR, RED-SPOTTED  
ISI Document Delivery No.: 189BF

830. Lusk, E. E. and Willis, J. D. The Development of Midge Problems in the Shasta Mosquito Abatement District. 1969; 37, 114(ABS).   
Rec #: 1080  
Keywords: NO TOX DATA  
Call Number: NO TOX DATA (CPY,FNT,MP)  
Notes: Chemical of Concern: CPY,EPRN,FNT,MP,PRN

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Rec #: 49879  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
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COMMENTS: Cites: J Exp Med. 2009 Jul 6;206(7):1457-64 (medline /19564351)  
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ABSTRACT: Regulatory T cells (T(regs)) are key elements in immunological self-tolerance. The number of T(regs) may alter in both peripheral blood and in colonic mucosa during pathological circumstances. The local cellular, microbiological and cytokine milieu affect immunophenotype and function of T(regs). Forkhead box P3+ T(regs) function shows altered properties in inflammatory bowel diseases (IBDs). This alteration of T(regs) function can furthermore be observed between Crohn's disease and ulcerative colitis, which may have both clinical and therapeutical consequences. Chronic mucosal inflammation may also influence T(regs) function, which together with the intestinal bacterial flora seem to have a supporting role in colitis-associated colorectal carcinogenesis. T(regs) have a crucial role in the immunoevasion of cancer cells in sporadic colorectal cancer. Furthermore, their number and phenotype correlate closely with the clinical outcome of the disease, even if their contribution to carcinogenesis has previously been controversial. Despite knowledge of the clinical relationship between IBD and colitis-associated colon cancer, and the growing number of immunological aspects encompassing sporadic colorectal carcinogenesis, the molecular and cellular links amongst T(regs), regulation of the inflammation, and cancer development are still not well understood. In this paper, we aimed to review the current data surrounding the role of T(regs) in the pathogenesis of IBD, colitis-associated colon cancer and sporadic colorectal cancer. eng

832. Ma, M; Zhang, B; Ge, Y-Z; Li, S-C, and Ma, M. Determination of the Activity of Acetylcholinesterase (Ache) in Pardosa Astrigera and the Inhibition Effects of Pesticides on Its Activity. 2011; 2, (1): 60-63.   
Rec #: 43579  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: [Objective] The paper was to systemically study the characteristics of acetyl cholinesterase (AChE) in **Pardosa astrigera**, and confirm the occurrence and development of its pesticide resistance and the resistance level, thereby establishing a **quick and accurate detection method for enzyme activity**. [Method] The optimal conditions for assaying the activity of AChE in different parts of P. astrigera were determined by orthogonal experiment. The distribution conditions of acetyl cholinesterase (AChE) in different tissues of P. astrigera were further studied, and the sensitivities of the enzyme to four common pesticides were also determined. [Result] The optimal condition for assaying the activity of AChE in cephalothorax, abdomen and appendage of P. astrigera was as follows, enzyme concentrations: 12, 18 and 29 g/L; substrate concentrations: 0.6, 1.0 and 1.0 mmol/L; pH value, 7.0; reaction temperatures: 30, 35, 35 degree C; reaction time, 5 min. AChE was mainly distributed in the cephalothorax of P. astrigera. The specific activity of AChE in the extract solution with Triton X-100 was higher than that in the solution without Triton X-100. The median inhibitory concentrations (IC sub(50)) of methomyl, phoxim, betacypermethrin, chlorpyrifos against AChE in the cephalothorax of P. astrigera were 7.76 x 10 super(-5), 1.76 x 10 super(-4), 4.12 x 10 super(-4) and 4.94 x 10 super(-4) mol/L, respectively. [Conclusion] AChEs in P. astrigera were membrane-bounded. The inhibition of four pesticides against AChE in the cephalothorax of P. astrigera had good dose-effect, this indicated that AChE in the cephalothorax of P. astrigera could be used as the biochemical marker to monitor the contamination of organic phosphorus, carbamate and pyrethroid pesticides in the environment.  
Keywords: Chlorpyrifos  
Keywords: Plant diseases  
Keywords: P 9999:GENERAL POLLUTION  
Keywords: Biochemistry  
Keywords: Pesticides  
Keywords: Cephalothorax  
Keywords: Enzymes  
Keywords: Pests  
Keywords: Cholinesterase  
Keywords: Pollution Abstracts  
Keywords: Pardosa astrigera  
Keywords: Organic phosphorus  
Date revised - 2012-11-01  
Language of summary - English  
Pages - 60-63  
ProQuest ID - 1171875122  
SubjectsTermNotLitGenreText - Chlorpyrifos; Plant diseases; Biochemistry; Pesticides; Cephalothorax; Enzymes; Pests; Cholinesterase; Organic phosphorus; Pardosa astrigera  
Last updated - 2012-12-03  
British nursing index edition - Plant Diseases and Pests. Vol. 2, no. 1, pp. 60-63. Feb 2011.  
Corporate institution author - Zhang, B; Ge, Y-Z; Li, S-C  
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Rec #: 1810  
Keywords: FATE  
Call Number: NO FATE (CPY,DZ)  
Notes: Chemical of Concern: CPY,DZ

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Rec #: 64579  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: ORGANOPHOSPHATE PESTICIDES, INHALATION EXPOSURE, CHLORPYRIFOS, WORKERS  
ISI Document Delivery No.: 169LS

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Rec #: 51459  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
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COMMENTS: Cites: J Biol Chem. 1993 Oct 25;268(30):22369-76 (medline /8226748)  
ABSTRACT: Because copper catalyzes the conversion of H(2)O(2) to hydroxyl radicals in vitro, it has been proposed that oxidative DNA damage may be an important component of copper toxicity. **Elimination of the copper export genes, copA, cueO, and cusCFBA, rendered Escherichia coli sensitive to growth inhibition by copper and provided forcing circumstances in which this hypothesis could be tested. When the cells were grown in medium supplemented with copper,** the intracellular copper content increased 20-fold. However, the copper-loaded mutants were actually less sensitive to killing by H(2)O(2) than cells grown without copper supplementation. The kinetics of cell death showed that excessive intracellular copper eliminated iron-mediated oxidative killing without contributing a copper-mediated component. Measurements of mutagenesis and quantitative PCR analysis confirmed that copper decreased the rate at which H(2)O(2) damaged DNA. Electron paramagnetic resonance (EPR) spin trapping showed that the copper-dependent H(2)O(2) resistance was not caused by inhibition of the Fenton reaction, for copper-supplemented cells exhibited substantial hydroxyl radical formation. However, copper EPR spectroscopy suggested that the majority of H(2)O(2)-oxidizable copper is located in the periplasm; therefore, most of the copper-mediated hydroxyl radical formation occurs in this compartment and away from the DNA. Indeed, while E. coli responds to H(2)O(2) stress by inducing iron sequestration proteins, H(2)O(2)-stressed cells do not induce proteins that control copper levels. These observations do not explain how copper suppresses iron-mediated damage. However, it is clear that copper does not catalyze significant oxidative DNA damage in vivo; therefore, copper toxicity must occur by a different mechanism.  
MESH HEADINGS: Catalysis  
MESH HEADINGS: Copper/analysis/\*toxicity  
MESH HEADINGS: \*DNA Damage  
MESH HEADINGS: Escherichia coli/growth &amp  
MESH HEADINGS: development/\*metabolism  
MESH HEADINGS: Hydrogen Peroxide/toxicity  
MESH HEADINGS: Hydroxyl Radical/metabolism  
MESH HEADINGS: Iron/metabolism  
MESH HEADINGS: Oxidation-Reduction  
MESH HEADINGS: Periplasm/chemistry eng

836. Mage, D. T. Microg/Kg-Day or Microg/Day? A Commentary on Georgopoulos Et Al., Jesee 2008.   
Rec #: 79369  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Comment on: J Expo Sci Environ Epidemiol. 2009 Feb;19(2):149-71 (medline /18368010)  
MESH HEADINGS: Age Factors  
MESH HEADINGS: Biological Markers/analysis/metabolism  
MESH HEADINGS: \*Body Weight  
MESH HEADINGS: Chlorpyrifos/administration &amp  
MESH HEADINGS: dosage/metabolism/\*toxicity  
MESH HEADINGS: Dose-Response Relationship, Drug  
MESH HEADINGS: Environmental Exposure/adverse effects/\*analysis  
MESH HEADINGS: Humans  
MESH HEADINGS: Insecticides/administration &amp  
MESH HEADINGS: dosage/metabolism/\*toxicity  
MESH HEADINGS: Public Health  
MESH HEADINGS: Risk Assessment  
MESH HEADINGS: Sex Factors  
MESH HEADINGS: Time Factors eng

837. Mage, D. T.; Allen, R. H., and Kodali, A. Creatinine corrections for estimating children's and adult's pesticide intake doses in equilibrium with urinary pesticide and creatinine concentrations. 2008; 18, (4): 360-368.   
Rec #: 64609  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A urine contaminant concentration per se has uncertain meaning for human health because of dilution by hydration. However, the estimation of the health-related daily intake dose of pollutant (mg/kg/day) that equilibrates with a spot urinary concentration of a pesticide residue or metabolite, or other analyte, can be made using creatinine-corrected toxicant levels (mg analyte/mg creatinine) multiplied by an estimate oft he subjects' expected creatinine excretion rates (mg creatinine/kg/day). The objective was to develop a set of equations predicting a person's expected daily creatinine excretion (mg/kg) as a function of age, gender, race and morphometry, from birth to old age. We review the creatinine excretion literature where infants, children and adults provided 24 h total urine samples for creatinine analysis. Equations are developed for infants (<= 3 years), children (3-18 years) and adults (>= 18 years) that match at 3 and 18 years. A series of equations that estimate daily creatinine excretion (mg/day) are developed that are piecewise continuous from birth through infancy through adolescence and through adulthood for males and females, and Black and White races. Complicating factors such as diet, health status and obesity are discussed. We propose that these equations, with caveat, can now be used with measured urine concentrations to consistently estimate the corresponding equilibrium intake doses of toxicants at ages from birth to 92 years for the healthy non-obese. We recommend that this system of equations be considered for future development and reporting of applied doses in mg/kg/day of pollutants and toxicants that are measured in urine samples, as in the National Health and Nutrition Examination Survey.  
Keywords: creatine, creatinine, NHANES, pesticides, children, adults, obesity  
ISI Document Delivery No.: 314TU

838. Mage, David T. [Mu]G/Kg-Day or [Mu]G/Day? A Commentary on Georgopoulos Et Al., Jesee 2008. 2008 Nov; 18, (6): 535-7.   
Rec #: 45479  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: Insecticides -- toxicity  
Keywords: Insecticides -- metabolism  
Keywords: Age Factors  
Keywords: Chlorpyrifos -- administration & dosage  
Keywords: Sex Factors  
Keywords: Dose-Response Relationship, Drug  
Keywords: Insecticides -- administration & dosage  
Keywords: Humans  
Keywords: Environmental Exposure -- analysis  
Keywords: Environmental Studies  
Keywords: Risk Assessment  
Keywords: Body Weight  
Keywords: Chlorpyrifos  
Keywords: Public Health  
Keywords: Insecticides  
Keywords: Biological Markers -- analysis  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Environmental Exposure -- adverse effects  
Keywords: Time Factors  
Keywords: Biological Markers  
Keywords: Chlorpyrifos -- metabolism  
Keywords: Biological Markers -- metabolism  
Copyright - Copyright Nature Publishing Group Nov 2008  
Language of summary - English  
Pages - 535; author reply 536-7  
ProQuest ID - 219551935  
Last updated - 2012-11-20  
Place of publication - Tuxedo  
Corporate institution author - Mage, David T  
DOI - 1579808161; 40779151; 68909; ENNP; 18936758; NTPGENNPjes200852 English

839. Magnanti, B ; Carreira, S C; Saunders, M; Bartonova, a; Von Krauss, M, and Magnanti, B. Chlorpyrifos and Neurodevelopmental Toxicity: Critical Assessment and Expert Elicitation. 2009 Sep 13; 189, S268-S269.   
Rec #: 41019  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Abstract not available.  
Keywords: Chlorpyrifos  
Keywords: Toxicology Abstracts; Environment Abstracts  
Keywords: Pesticides  
Keywords: Toxicity  
Keywords: X 24330:Agrochemicals  
Keywords: ENA 02:Toxicology & Environmental Safety  
Date revised - 2009-08-01  
Language of summary - English  
Pages - S268-S269  
ProQuest ID - 20763248  
SubjectsTermNotLitGenreText - Toxicity; Pesticides; Chlorpyrifos  
Last updated - 2011-12-14  
British nursing index edition - Toxicology Letters [Toxicol. Lett.]. Vol. 189, pp. S268-S269. 13 Sep 2009.  
Corporate institution author - Magnanti, B; Carreira, S C; Saunders, M; Bartonova, A; Von Krauss, M  
DOI - MD-0010154521; 10273945; 0378-4274 English

840. Magner, J. A.; Alsberg, T. E., and Broman, D. EVALUATION OF POLY(ETHYLENE-CO-VINYL ACETATE-CO-CARBON MONOXIDE) AND POLYDIMETHYLSILOXANE FOR EQUILIBRIUM SAMPLING OF POLAR ORGANIC CONTAMINANTS IN WATER. 2009; 28, (9): 1874-1880.   
Rec #: 64619  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The aim of the present study was to develop a passive absorptive equilibrium sampler that would enable the determination of the concentrations of polar organic compound (POC) in water more efficiently than existing techniques. To this end, a novel plastic material, poly(ethylene-co-vinyl acetate-co-carbon monoxide) (PEVAC), was evaluated and the results were compared with an existing silicone-based passive absorptive equilibrium device. Seven compounds (imidacloprid, carbendazim, metoprolol, atrazin, carbamazepine, diazinon, and chlorpyrifos), a mixture of pharmaceuticals, and pesticides with a logarithmic octanol-water partition coefficient ranging from 0.2 to 4.77 were selected as model substances for the experiments. The results showed that six of the seven selected POCs reached distribution equilibrium within 4 d in the two materials tested. A linear relation with a regression coefficient of more than 0.8906 between the established logarithmic absorbent-water partition coefficient and the calculated logarithmic dissociation partition coefficient of the selected compounds in the two polymers was observed. The correlation between these two coefficients was within one order of magnitude for the compounds that reached equilibrium in the two polymers, which demonstrates that both materials are suitable for mimicking biological uptake of POCs. The PEVAC material showed an enhanced sorption for all selected compounds compared to the silicone material and up to five times higher enrichment for the most polar compound. Fluorescence analysis of the sampler cross-section, following the uptake of fluoranthene, and proof that the sorption was independent of surface area variations demonstrated that the PEVAC polymer possessed absorptive rather than adsorptive enrichment of organic compounds.  
Keywords: Passive equilibrium sampler, Absorbent, Polar organic compounds, Liquid  
ISI Document Delivery No.: 482HT

841. Magner, Jorgen a; Alsberg, Tomas E; Broman, Dag, and Magner, Jorgen A. The Ability of a Novel Sorptive Polymer to Determine the Freely Dissolved Fraction of Polar Organic Compounds in the Presence of Fulvic Acid or Sediment. 2009 Nov; 395, (5): 1525-1532.   
Rec #: 44489  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A novel plastic material, poly(ethylene-co-vinyl acetate-co-carbon monoxide) (PEVAC), was evaluated as an absorptive passive equilibrium sampler for determination of the freely dissolved fraction of seven polar organic contaminants (POCs) in the presence of fulvic acid and sediment. The seven compounds selected were imidacloprid, carbendazim, metoprolol, atrazin, carbamazepine, diazinon and chlorpyrifos, i.e. a mixture of pharmaceuticals and pesticides having logarithmic octanol/water partition coefficients (log K OW) ranging from 0.2 to 4.77. The experiments demonstrated that the PEVAC sampler is well suited for determination of the freely dissolved fraction of chemicals in aquatic environments. Generally, the freely dissolved fraction of the POCs decreased with increasing hydrophobicity. However, strong interactions with functional groups of the organic matter seemed to dominate the partitioning for imidacloprid and carbendazim, having logarithmic dissociation partition coefficient log D<1.47, and for metoprolol, which is positively charged at neutral pH.  
Keywords: Chlorpyrifos  
Keywords: Chemicals  
Keywords: Sediment pollution  
Keywords: Insecticides  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Organic matter  
Keywords: Pesticides  
Keywords: hydrophobicity  
Keywords: fulvic acids  
Keywords: Polymers  
Keywords: Pollution Abstracts  
Keywords: Aquatic environment  
Date revised - 2010-08-01  
Language of summary - English  
Pages - 1525-1532  
ProQuest ID - 754551566  
SubjectsTermNotLitGenreText - Chlorpyrifos; Chemicals; Sediment pollution; Insecticides; Organic matter; Pesticides; hydrophobicity; fulvic acids; Polymers; Aquatic environment  
Last updated - 2011-12-14  
British nursing index edition - Analytical and Bioanalytical Chemistry [Anal. Bioanal. Chem.]. Vol. 395, no. 5, pp. 1525-1532. Nov 2009.  
Corporate institution author - Magner, Jorgen A; Alsberg, Tomas E; Broman, Dag  
DOI - 0a38164d-93cb-417f-ba7fcsamfg201; 13313200; 1618-2642; 1618-2650 English

842. Mahboob, S; Ghazala; Sultana, S; Asi, M R; Nadeem, S; Chaudhry, a S, and Mahboob, S. Determination of Organochlorine and Nitrogen Containing Pesticide Residues in Water, Sediments and Fish Samples by Reverse Phase High Performance Liquid Chromatograph. 2009; 10, (5): 9-12.   
Rec #: 45209  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: With high performance liquid chromatography, the concentrations of a-endosulfan, DDE, parathion methyl, isoproturon, atrazine, carbaryl and carbofuran were determined in farmed raised fish Labeo rohita of two weight groups. All these pesticide residues were detected in fish meat samples. All these pesticide residues except isoproturon were identified in soil sediments, whereas all these pesticide residues except isoproturon, carbaryl and DDE were also present in water samples. DDT, heptachlor, b-endosulfan, chlorpyrifos, dimethoate, captan, cypermethrin, chlorobromuron and chlorotoluron were absent in all samples of water, sediments and fish flesh. The pesticide residues levels were in order of parathion methyl > DDE > carbofuran > atrazine > a-endosulfan > isoproturan > carbaryl. The concentrations of pest cides were higher in fish weighing 800 - 1 300 g than in those weighing 250 - 750 g. The DDE was remained highest in sediments, while that was not detected in water samples. The pesticides (endosulfan, parathion methyl, atrazine and carbofuran) had crossed their MRL values (0.001 kg/g) in water samples.  
Keywords: Water sampling  
Keywords: Water Analysis  
Keywords: Pesticide residues  
Keywords: Water Sampling  
Keywords: SW 3030:Effects of pollution  
Keywords: Carbaryl  
Keywords: Pollution effects  
Keywords: Freshwater fish  
Keywords: Freshwater  
Keywords: Soil  
Keywords: Insecticides  
Keywords: Nitrous oxide  
Keywords: meat  
Keywords: HPLC  
Keywords: Sediment pollution  
Keywords: Sediment chemistry  
Keywords: Q3 01582:Fish culture  
Keywords: Chlorine compounds  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: DDE  
Keywords: Pesticide Residues  
Keywords: Herbicides  
Keywords: carbofuran  
Keywords: Q5 01504:Effects on organisms  
Keywords: Q1 01485:Species interactions: pests and control  
Keywords: Sediments  
Keywords: Endosulfan  
Keywords: Chlorpyrifos  
Keywords: cypermethrin  
Keywords: Labeo rohita  
Keywords: Liquid chromatography  
Keywords: Pesticides  
Keywords: Atrazine  
Keywords: DDT  
Keywords: ASFA 1: Biological Sciences & Living Resources; ASFA Aquaculture Abstracts; Pollution Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Fish  
Keywords: Parathion  
Keywords: Nitrogen  
Date revised - 2010-01-01  
Language of summary - English  
Pages - 9-12  
ProQuest ID - 21207387  
SubjectsTermNotLitGenreText - HPLC; Sediment chemistry; Sediment pollution; Chlorine compounds; DDT; DDE; Pesticides; Pollution effects; Herbicides; Freshwater fish; Nitrogen; Water sampling; Pesticide residues; Carbaryl; carbofuran; Sediments; Endosulfan; Soil; Chlorpyrifos; cypermethrin; Insecticides; Nitrous oxide; Liquid chromatography; meat; Atrazine; Fish; Parathion; Water Analysis; Water Sampling; Pesticide Residues; Labeo rohita; Freshwater  
Last updated - 2012-10-19  
British nursing index edition - Hunan Agricultural Science & Technology Newsletter [Hunan Agric. Sci. Technol. Newsl.]. Vol. 10, no. 5, pp. 9-12. 2009.  
Corporate institution author - Mahboob, S; Sultana, S; Asi, M R; Nadeem, S; Chaudhry, A S  
DOI - MD-0011951989; 11653442; CS1026646; 1009-4229 English

843. Majerciak, V.; Pripuzova, N.; Mccoy, J. P.; Gao, S. J., and Zheng, Z. M. Targeted Disruption of Kaposi's Sarcoma-Associated Herpesvirus Orf57 in the Viral Genome Is Detrimental for the Expression of Orf59, K8alpha, and K8.1 And the Production of Infectious Virus.   
Rec #: 51519  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Virol. 2000 Dec;74(23):10920-9 (medline /11069986)  
COMMENTS: Cites: AIDS. 2000 May 5;14(7):899-902 (medline /10839602)  
COMMENTS: Cites: J Virol. 2001 Mar;75(6):2921-8 (medline /11222717)  
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COMMENTS: Cites: J Virol. 2001 Aug;75(15):6786-99 (medline /11435557)  
COMMENTS: Cites: EMBO J. 2001 Oct 15;20(20):5769-78 (medline /11598019)  
COMMENTS: Cites: EMBO J. 2001 Dec 17;20(24):6969-78 (medline /11742974)  
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COMMENTS: Cites: J Virol. 2005 Sep;79(17):10952-67 (medline /16103147)  
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COMMENTS: Cites: J Virol. 2005 Nov;79(22):14207-21 (medline /16254356)  
COMMENTS: Cites: J Pathol. 2006 Jan;208(2):187-98 (medline /16362980)  
COMMENTS: Cites: Nat Rev Cancer. 2006 Jan;6(1):38-51 (medline /16397526)  
COMMENTS: Cites: J Virol. 2006 Jun;80(11):5251-60 (medline /16699005)  
COMMENTS: Cites: J Virol. 2006 Jul;80(14):7037-51 (medline /16809309)  
COMMENTS: Cites: J Biol Chem. 2006 Sep 22;281(38):28365-78 (medline /16829516)  
COMMENTS: Cites: J Virol. 2006 Dec;80(24):11968-81 (medline /17020939)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 1996 Jun 25;93(13):6641-6 (medline /8692871)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1996 Oct 15;93(21):11883-8 (medline /8876232)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1996 Dec 10;93(25):14862-7 (medline /8962146)  
COMMENTS: Cites: J Virol. 1997 Jun;71(6):4187-92 (medline /9151804)  
COMMENTS: Cites: J Virol. 1998 Jul;72(7):6228-32 (medline /9621095)  
COMMENTS: Cites: J Virol. 1998 Aug;72(8):6725-31 (medline /9658120)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1998 Sep 1;95(18):10866-71 (medline /9724796)  
COMMENTS: Cites: Virology. 1998 Sep 15;249(1):140-9 (medline /9740785)  
COMMENTS: Cites: Virology. 1998 Dec 20;252(2):304-12 (medline /9878608)  
COMMENTS: Cites: J Virol. 1999 Feb;73(2):1341-9 (medline /9882339)  
COMMENTS: Cites: J Virol. 1999 Feb;73(2):1438-46 (medline /9882349)  
COMMENTS: Cites: J Virol. 1999 Mar;73(3):1909-17 (medline /9971770)  
COMMENTS: Cites: Virology. 1999 Apr 25;257(1):84-94 (medline /10208923)  
COMMENTS: Cites: Science. 1999 Apr 23;284(5414):641-4 (medline /10213686)  
COMMENTS: Cites: Prog Neurobiol. 1999 May;58(1):31-59 (medline /10321796)  
COMMENTS: Cites: J Virol. 1999 Jul;73(7):5556-67 (medline /10364304)  
COMMENTS: Cites: J Virol. 1999 Nov;73(11):9348-61 (medline /10516043)  
COMMENTS: Cites: J Virol. 2000 Jan;74(2):1038-44 (medline /10623771)  
COMMENTS: Cites: J Virol. 2000 Apr;74(8):3586-97 (medline /10729134)  
COMMENTS: Cites: J Virol. 2001 Feb;75(3):1487-506 (medline /11152521)  
ABSTRACT: Kaposi's sarcoma-associated herpesvirus (KSHV) ORF57 regulates viral gene expression at the posttranscriptional level during viral lytic infection. To study its function in the context of the viral genome, we disrupted KSHV ORF57 in the KSHV genome by transposon-based mutagenesis. The insertion of the transposon into the ORF57 exon 2 region also interrupted the 3' untranslated region of KSHV ORF56, which overlaps with the ORF57 coding region. The disrupted viral genome, Bac36-Delta57, did not express ORF57, ORF59, K8alpha, K8.1, or a higher level of polyadenylated nuclear RNA after butyrate induction and could not be induced to produce infectious viruses in the presence of valproic acid, a histone deacetylase inhibitor and a novel KSHV lytic cycle inducer. The ectopic expression of ORF57 partially complemented the replication deficiency of the disrupted KSHV genome and the expression of the lytic gene ORF59. The induced production of infectious virus particles from the disrupted KSHV genome was also substantially restored by the simultaneous expression of both ORF57 and ORF56; complementation by ORF57 alone only partially restored the production of virus, and expression of ORF56 alone showed no effect. Altogether, our data indicate that in the context of the viral genome, KSHV ORF57 is essential for ORF59, K8alpha, and K8.1 expression and infectious virus production.  
MESH HEADINGS: Cell Line  
MESH HEADINGS: Gene Expression Regulation, Viral/\*physiology  
MESH HEADINGS: Genome, Viral/\*drug effects/genetics  
MESH HEADINGS: Glycoproteins/genetics/metabolism  
MESH HEADINGS: Herpesvirus 8, Human/\*physiology  
MESH HEADINGS: Open Reading Frames  
MESH HEADINGS: Sarcoma, Kaposi/\*virology  
MESH HEADINGS: Viral Proteins/genetics/metabolism  
MESH HEADINGS: Virus Replication eng

844. Majidi, M. R.; Asadpour-Zeynali, K., and Nazarpur, M. Determination of Fenitrothion in River Water and Commercial Formulations by Adsorptive Stripping Voltammetry with a Carbon Ceramic Electrode. 2009; 92, (2): 548-554.   
Rec #: 64639  
Keywords: FATE  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: A sol-gel carbon ceramic electrode (CCE) without any assigned electron transfer mediator or specific reagents was used for the determination of fenitrothion by square-wave adsorptive stripping voltammetry. Fenitrothion strongly adsorbs on a CCE surface, which enables the development of facile electrochemical quantitative methods. Operational parameters such as pH value, initial potential value, and pulse frequency were optimized, and the stripping voltammetric performance was studied by using square-wave voltammetry. Square-wave adsorptive stripping voltammetry was used to obtain calibration curves with 2 linear ranges, 0.005-0.1 and 0.1-50 mu M; the lower linear range was used to calculate the detection limit, 0.0016 mu M (5 min adsorption). The effect of interference species on the determination of fenitrothion was also studied. The inherent stability, high sensitivity, low detection limit, and low cost of analysis are the advantages of this sensor. The present method was successfully applied to the determination of fenitrothion in a commercial formulation and river water samples. Analysis of real water samples by using the sensor demonstrated the feasibility of applying the sensor to the on-site monitoring of organophosphate compounds.  
Keywords: ORGANOPHOSPHATE NERVE AGENTS, MICROBIAL BIOSENSOR, PESTICIDES,  
ISI Document Delivery No.: 434YB

845. Makino, Y.; Oshita, S.; Murayama, Y.; Mori, M.; Kawagoe, Y., and Sakai, K. Nondestructive Analysis of Chlorpyrifos on Apple Skin Using UV Reflectance. 2009; 52, (6): 1955-1960.   
Rec #: 53539  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Analysis of chlorpyrifos using UV was performed to assess the possibility of nondestructive detection of pesticides on agricultural products. Absorbance of chlorpyrifos dissolved in acetonitrile was positively proportional to its concentration at 229 and 290 nm at limits of detection (LOD) of 0.0233 and 0.0113 mg kg -1 , and limits of quantification (LOQ) of 0.0778 and 0.0378 mg kg -1 , respectively. This suggested that a UV method is suitable for detection and quantification of chlorpyrifos. UV reflectance changes were used to estimate the amount of chlorpyrifos dried on apple skin. Differences between reflectance at 280 and 300 nm were positively proportional to the amount of chlorpyrifos standard dried on apple skin, and the LOD was 0.0849 mg cm -2 . Reflectance differences between 260 and 290 nm were positively proportional to the amount of chlorpyrifos included in water-dispersible Dursban dried on apple skin, and the LOD was 0.000214 mg cm -2 . These LOD values were below the amount required for acute intoxication in mammals resulting from oral dosage. This UV optical method is practical for 100% nondestructive inspection and detection of chemicals present on product surfaces and thus may be suitable for use in sorting lines. However, it may not be effective for detecting chemicals in products' internal tissues as can be achieved through immunochemical techniques and gas chromatography with mass spectrometry, which, while more sensitive than this UV method, are destructive and therefore not suitable for 100% inspection of shipping products.  
Keywords: Internet resource  
Includes references 1022772141

846. Malchev, Ivan; Fletcher, Ron, and Kott, Laima. Breeding of Rutabaga (Brassica Napus Var. Napobrassica L. Reichenb.) Based on Biomarker Selection for Root Maggot Resistance (Delia Radicum L.). 2010 Sep; 175, (2): 191-205.   
Rec #: 43869  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Cabbage root maggot (Delia radicum) is the most devastating and persistent pest for rutabaga (Brassica napus var. napobrassica) in all production areas in Canada. With the deregistration of terbufos (Counter^sup Â®^) to combat maggot attack, only chlorpyrifos (Lorsban^sup Â®^), an organophosphorous pesticide, remains and extensive use could lead to insecticide resistance. An unprotected crop would lead to serious domestic and export losses. Root maggot resistance from canola, that originated from the weedy crucifer, Sinapis alba, was transferred to rutabaga by standard hand crossing. A population of doubled haploids was developed from the F1s and screened in a high pressure root maggot rutabaga production field. Resistant and susceptible isolines were identified from different crossing groups and these isoline pairs were used to develop a biochemical selection protocol based on HPLC profiles where glucosinolates can be present as an aid to resistance breeding. Fourteen peaks in the HPLC profile were identified as markers and predictably varied between the more resistant and more susceptible lines. The 3-4 leaf stage was identified as the ideal stage for tissue extraction for profiling which is close to the stage when gravid female maggot flies seek host plants for oviposition utilizing olfactory signals from the host. Olfactory signals for Delia commonly are isothiocyanates which are volatile break down products of glucosinolates. The peaks in the HPLC profiles identified as markers for resistance contain glucosinolates and may be partially responsible for the plant-insect interaction. A predictive model is proposed as an aid to breeders for the development of root maggot resistant rutabaga lines.[PUBLICATION ABSTRACT]  
Keywords: Agriculture--Crop Production And Soil  
Copyright - Springer Science+Business Media B.V. 2010  
Language of summary - English  
Pages - 191-205  
ProQuest ID - 872174732  
Document feature - References  
Last updated - 2011-06-30  
Place of publication - Dordrecht  
Corporate institution author - Malchev, Ivan; Fletcher, Ron; Kott, Laima  
DOI - 2377083891; 62414671; 108026; EPHY; SPVLEPHY106811752162 English

847. Malhat, Farag and Nasr, Islam. Organophosphorus Pesticides Residues in Fish Samples From the River Nile Tributaries in Egypt. 2011 Dec; 87, (6): 689-92.   
Rec #: 39219  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The concentration of organophosphorus pesticides in fish samples from different tributaries of the Nile River in Egypt was monitored. Fish samples were collected from El Menofiya, canal water supplies (El-Sarsawia, El-Bagoria and Bahr Shebin), in addition to El-Embaby, El-Menofi and Miet Rabiha drainage canals each 2 month during periods of 16 month, June 2007-Septemper 2008. Chloropyrifos, cadusafos, diazinon, prothiphos and malathion were detected in fish tissues samples at level below the maximum residue limit. The highest average amount of chlorpyrifos (9.38 ng g^sup -1^) and malathion (8.31 ng g^sup -1^) were detected in El-Embaby drain. Prothiphos were found in tissues collected from El-Sarsawia canal and Miet-Rabiha drain at mean concentration of 4.91 and 6.55 ng g^sup -1^, respectively. Diazinon was only found in one fish sample that collected from El-Menofi drain at the level of 9.23 ng g^sup -1^.[PUBLICATION ABSTRACT]  
Keywords: Organophosphorus Compounds -- analysis  
Keywords: Animals  
Keywords: Water Pollutants, Chemical -- analysis  
Keywords: Water Supply  
Keywords: Pesticide Residues  
Keywords: Diazinon -- analysis  
Keywords: Malathion  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos  
Keywords: Egypt  
Keywords: Chlorpyrifos -- analysis  
Keywords: Organophosphorus Compounds  
Keywords: Malathion -- analysis  
Keywords: Fishes  
Keywords: Water Pollutants, Chemical  
Keywords: Pesticide Residues -- analysis  
Keywords: Rivers -- chemistry  
Keywords: Diazinon  
Keywords: Environmental Monitoring -- methods  
Copyright - Springer Science+Business Media, LLC 2011  
Language of summary - English  
Location - Egypt  
Pages - 689-92  
ProQuest ID - 905875732  
Document feature - References  
SubjectsTermNotLitGenreText - Egypt  
Last updated - 2012-03-23  
Place of publication - New York  
Corporate institution author - Malhat, Farag; Nasr, Islam  
DOI - 2518732311; 65735241; 108019; BVCX; 21953307; SPVLBVCX128876419  
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Tsuda, T, Kojima, M 1997 "Acute toxicity, accumulation and excretion of organophosphorous insecticides and their oxidation products in killifish" Chemosphere 35 5 939-949  
Yamashita N, Urushigawa Y, Masunaga S, Walash MI, Miyazaki A (2000) Organochlorine pesticides in water, sediment and fish from the Nile River and Manzala Lake in Egypt. Int J Environ Anal Chem 77:289-303 English

848. Mancia, G.; Parati, G.; Bilo, G.; Choi, J.; Kilama, M. O.; Ruilope, L. M., and Talent Investigators. Blood Pressure Control by the Nifedipine Gits-Telmisartan Combination in Patients at High Cardiovascular Risk: the Talent Study.   
Rec #: 50299  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Comment in: Expert Opin Pharmacother. 2012 Mar;13(4):607-11 (medline /22332938)  
COMMENTS: Erratum in: J Hypertens. 2011 May;29(5):1022  
ABSTRACT: BACKGROUND: Guidelines on hypertension regard combinations between two antihypertensive drugs to be the most important treatment strategy. Because of the complementary mechanism of action and the evidence of cardiovascular protective effects they include the combination of a calcium antagonist and an angiotensin receptor antagonist among the priorital ones to employ.  
ABSTRACT: AIMS: To determine in hypertensive patients at high cardiovascular risk whether combining Nifedipine GITS at low dose and telmisartan reduced ambulatory and clinic blood pressure (BP) more than the combination components, controlled BP early after treatment initiation and allowed to also obtain a better long-term BP control compared to initiating treatment with the combination components and moving to the combination later.  
ABSTRACT: METHODS: Four hundred and five patients with a clinic SBP &ge; 135 mmHg and with diabetes, a metabolic syndrome or organ damage were randomized to once-a-day telmisartan 80 mg, nifedipine GITS 20 mg or the combination of the two drugs in a 1: 1: 2 ratio for 8 weeks in the context of a multicenter double-blind study design. Patients on monotherapy were then moved to combination treatment and all three groups were followed for an additional 16-week period. Both 24-h and clinic BP were measured before treatment and at various times during treatment.  
ABSTRACT: RESULTS: In the per-protocol patients (n = 327), baseline demographic and clinical characteristics were similar between the three groups. Baseline 24-h SBP values were 136.2 &plusmn; 11.6 mmHg (mean &plusmn; SD), 137.2 &plusmn; 12.5 mmHg and 136.8 &plusmn; 11.7 mmHg in the telmisartan monotherapy, nifedipine GITS monotherapy and combination therapy, respectively. The corresponding clinic values were 151.7 &plusmn; 11.8, 151.3 &plusmn; 11.9 and 151.1 &plusmn; 11.8 mmHg, respectively. All treatments lowered 24-h SBP significantly (P < 0.0001) but combination treatment (8 weeks) reduced it significantly more than monotherapies (10.8 &plusmn; 0.8 vs. 6.6 &plusmn; 1.1 mmHg and 8.0 &plusmn; 1.2 mmHg; P = 0.001 and 0.037). Similar data were obtained for clinic SBP for which the combination showed a significantly greater BP reduction (12.6 &plusmn; 0.6 vs. 8.6 &plusmn; 0.7 mmHg and 9.3 &plusmn; 0.8 mmHg; P = 0.003 and 0.024) also after 2 weeks of treatment. Moving from monotherapy to combination therapy increased the antihypertensive effect and made both ambulatory and clinic SBP superimposable in the three groups after 16 and 24 weeks of treatment. Similar findings were obtained for DBP.  
ABSTRACT: CONCLUSION: Combination treatment with nifedipine GITS low dose and telmisartan provides a greater and earlier clinic and ambulatory BP reduction than the combination components in monotherapy. Initiating treatment with the combination did not result in any better longer term BP control compared to starting treatment with monotherapy and moving to the combination later.  
MESH HEADINGS: Adult  
MESH HEADINGS: Aged  
MESH HEADINGS: Antihypertensive Agents/\*administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Benzimidazoles/\*administration &amp  
MESH HEADINGS: dosage/adverse effects  
MESH HEADINGS: Benzoates/\*administration &amp  
MESH HEADINGS: dosage/adverse effects  
MESH HEADINGS: Blood Pressure/drug effects  
MESH HEADINGS: Blood Pressure Monitoring, Ambulatory  
MESH HEADINGS: Cardiovascular Diseases/\*etiology  
MESH HEADINGS: Delayed-Action Preparations  
MESH HEADINGS: Double-Blind Method  
MESH HEADINGS: Drug Therapy, Combination  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: Hypertension/complications/\*drug therapy/physiopathology  
MESH HEADINGS: Male  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: Nifedipine/\*administration &amp  
MESH HEADINGS: dosage/adverse effects  
MESH HEADINGS: Prospective Studies  
MESH HEADINGS: Risk eng

849. Manfo, F. P. T.; Moundipa, P. F.; Dechaud, H.; Tchana, A. N.; Nantia, E. A.; Zabot, M. T., and Pugeat, M. Effect of agropesticides use on male reproductive function: A study on farmers in Djutitsa (Cameroon). 2012; 27, (7): 423-432.   
Rec #: 64729  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study aimed at investigating the effect of agropesticides on male reproductive function in farmers in Djutitsa (West Cameroon). To this end, 47 farmers in Djutitsa were asked questions on their health status and pesticide use in agriculture. Thereafter, their blood samples were collected for assessment of sex hormones including serum luteinizing hormone (LH), follicle-stimulating hormone (FSH), androstenedione, testosterone, as well as sex hormone binding globulin (SHBG). Their serum triiodothyronine (T3) and thyroxine (T4) levels were also measured. Thirty seven men not exposed to agropesticides were recruited as control group. Fifty six pesticides containing 25 active substances were currently used by farmers enrolled in our study, and most of their symptoms were related to spread/use of these chemicals. Compared to the control group, there was no significant difference in FSH, LH, SHBG, estradiol, and thyroid hormones (T3 and T4) levels. Farmers had significantly lower serum testosterone (20.93 +/- 1.03 nM vs. 24.32 +/- 1.32 nM; P < 0.05) and higher androstenedione level (3.83 +/- 0.20 nM vs. 2.80 +/- 0.15 nM; P < 0.001). Their serum free testosterone as well as bioavailable testosterone were unchanged, while estradiol/testosterone and androstenedione/testosterone ratios were significantly increased (0.45 +/- 0.03% vs. 0.33 +/- 0.02%; P < 0.01 and 12.26 +/- 3.64 vs 19.31 +/- 6.82; P < 0.001, respectively). Our results suggest that male farmers of Djutitsa (West Cameroon) are exposed to agropesticides due to improper protective tool, and this exposure may impair their reproductive function through inhibition of testosterone synthesis; probably by inhibition of testicular 17 beta- hydroxysteroid dehydrogenase (17HSD3) and induction of aromatase (CYP19).(c) 2010 Wiley Periodicals, Inc. Environ Toxicol, 2012.  
Keywords: agropesticides, human, reproduction, testosterone, androstenedione  
ISI Document Delivery No.: 960RK

850. Mangiafico, Salvatore S.; Newman, Julie; Merhaut, Donald J.; Gan, Jay; Faber, Ben, and Wu, Laosheng. Nutrients and Pesticides in Stormwater Runoff and Soil Water in Production Nurseries and Citrus and Avocado Groves in California. 2009; 19, (2): 360-367.   
Rec #: 53579  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Potential water quality impacts of agricultural production include runoff and leaching losses of nutrients, pesticides, and sediment. Stormwater runoff and soil water samples were collected from citrus (Citrus spp.), avocado (Persea americana), and ornamental nursery sites in Ventura County, CA, across 19 months. Nitrate-nitrite-nitrogen concentrations in runoff ranged from 0.07 to 31.1 mgĂ‚Â·L-1, with medians for groves and nurseries of 4.2 and 5.7 mgĂ‚Â·L-1, respectively. Constituents in runoff exceeding benchmarks for surface waters included turbidity, chlorpyrifos, and some organochlorine pesticides. When detected, chlorpyrifos concentration was linearly related to sample turbidity (P = 0.0025, r2 = 0.49). This suggests that the retention of waterborne sediments on-site may be an effective method for mitigating runoff of this pesticide. Bifenthrin, permethrin, and diazinon were also detected in runoff, but concentrations did not exceed water quality benchmarks. Nutrient concentrations in soil water were generally similar to nutrient concentrations in stormwater runoff, suggesting that potential groundwater contamination from leaching at citrus, avocado, and nursery sites may be as much of a concern as stormwater from these operations, particularly on sites with sandy or structured soil texture or flat topography. Nitrate-nitrite-nitrogen and orthophosphate concentrations in soil water were linearly related to nitrogen and phosphorus fertilizer application rates across sites, respectively (P < 0.0001, r2 = 0.49 and 0.50, respectively), suggesting that proper nutrient management is important in reducing potential groundwater contamination at these operations.  
Includes references 1022982218

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Rec #: 2420  
Keywords: ABSTRACT  
Call Number: NO ABSTRACT (CPY,MLN)  
Notes: Chemical of Concern: CHD,CPY,MLN

852. Mann, H. D. Report of Dursban Insecticide Residue Analysis in Treated Cattle. 1966.  
Rec #: 1090  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

853. Mansour, S. A. Environmental Impact of Pesticides in Egypt. 2008: 1-51.   
Rec #: 2070  
Keywords: SURVEY  
Call Number: NO SURVEY (ADC,ATZ,AZ,CBL,CPY,CPYM,Captan,DMT,DZ,ES,MLN,MTM,PFF,PIRM,TBF)  
Notes: Chemical of Concern: ADC,AMTR,ATZ,AZ,CBL,CPY,CPYM,Captan,DDE,DDT,DMT,DZ,EN,EPRN,ES,HCCH,MLN,MTM,PCB,PFF,PIRM,PPCP,PRN,TBF,TXP

854. Mansour, S. A. and Mossa, A. H. Adverse Effects of Lactational Exposure to Chlorpyrifos in Suckling Rats. samansour@hotmail.com//: 2010; 29, (2): 77-92.   
Rec #: 210  
Keywords: NO CONC  
Call Number: NO CONC (CPY)  
Notes: Chemical of Concern: CPY

855. Mansour, Sa ; Belal, M H; Abou-Arab, Aak; Gad, M F, and Mansour, SA. Monitoring of Pesticides and Heavy Metals in Cucumber Fruits Produced From Different Farming Systems. 2009 May; 75, (5): 601-609.   
Rec #: 48579  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A total of 216kg of cucumber samples, representing three different types of farming production [e.g., conventional (C), greenhouse (G) and organic (O)], were collected from different locations in Giza governorate (Egypt), and subjected to pesticide residue and heavy metal analyses. Residues of some organochlorine pesticides (OCPs), such as hexachlorobenzene (HCB), heptachlor, aldrin, endrin, dieldrin and o,p'-DDT, as well as organophosphorus pesticides (OPPs), such as chlorpyrifos-methyl, thiometon and phorate were found in a number of samples at concentrations exceeding their MRLs. Lindane was detected in 33.3%, 50.0% and 25.0% of samples from C, G and O cucumber, respectively, without violation. The insecticide methamidophos showed high frequency in the analyzed samples of C, G and O cucumber accounting to 66.7%, 41.7% and 50.0%, respectively, without violation. The majority of the analyzed samples contained detectable concentrations of Zn, Cu, Mn, Fe, Cd, Pb, Cr, Ni and Co. Only, Pb and Cd were found in a number of samples at concentrations exceeding their MLs. Contamination among the three types of cucumber either by pesticides or heavy metals varied from a season to another. Generally, the greenhouse cucumber contained the highest value of total pesticide residues (1.016mgkg super(-) super(1)), followed by organic (0.442mgkg super(-) super(1)) and then conventional (0.415mgkg super(-) super(1)) cucumbers. Heavy metal contamination in the three cucumber types accounted to 4.968, 5.350 and 6.248mgkg super(-) super(1), respectively. The study shed light to the problem of multi toxicants in a food commodity such as cucumber; a common element in the daily human diet.  
Keywords: Fruits  
Keywords: Egypt, Arab Rep.  
Keywords: Organochlorine compounds  
Keywords: Toxicants  
Keywords: Heavy metals  
Keywords: phorate  
Keywords: Pesticide residues  
Keywords: P 5000:LAND POLLUTION  
Keywords: Food  
Keywords: Aldrin  
Keywords: Copper  
Keywords: Lead  
Keywords: Environmental Studies  
Keywords: Insecticides  
Keywords: Zinc  
Keywords: greenhouses  
Keywords: Cadmium  
Keywords: X 24330:Agrochemicals  
Keywords: Manganese  
Keywords: heavy metals  
Keywords: Diets  
Keywords: Pollution Abstracts; Toxicology Abstracts; Biotechnology and Bioengineering Abstracts  
Keywords: Pesticides (organophosphorus)  
Keywords: methamidophos  
Keywords: Chromium  
Keywords: heptachlor  
Keywords: fruits  
Keywords: Dieldrin  
Keywords: Pesticides (organochlorine)  
Keywords: Lindane  
Keywords: W 30935:Food Biotechnology  
Keywords: Food contamination  
Keywords: Greenhouses  
Keywords: Heptachlor  
Keywords: Pesticides  
Keywords: Endrin  
Keywords: Hexachlorobenzene  
Date revised - 2009-05-01  
Language of summary - English  
Location - Egypt, Arab Rep.  
Pages - 601-609  
ProQuest ID - 289683299  
SubjectsTermNotLitGenreText - Egypt, Arab Rep.; heavy metals; Lead; Cadmium; Pesticide residues; Insecticides; greenhouses; Aldrin; Lindane; Food contamination; Diets; fruits; Toxicants; Dieldrin; Organochlorine compounds; Zinc; Hexachlorobenzene; Heptachlor; Heavy metals; Greenhouses; methamidophos; Endrin; Chromium; Pesticides (organochlorine); Food; Pesticides; Manganese; heptachlor; Copper; Pesticides (organophosphorus); Fruits; phorate  
Last updated - 2011-11-07  
Corporate institution author - Mansour, SA; Belal, M H; Abou-Arab, AAK; Gad, M F  
DOI - OB-MD-0009535187; 9207133; 0045-6535 English

856. Manthripragada, A. D.; Costello, S.; Cockburn, M. G.; Bronstein, J. M., and Ritz, B. Paraoxonase 1, Agricultural Organophosphate Exposure, and Parkinson Disease. 2010; 21, (1): 87-94.   
Rec #: 64819  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Human, animal and cell models support a role for pesticides in the etiology of Parkinson disease. Susceptibility to pesticides may be modified by genetic variants of xenobiotic enzymes, such as paraoxonase, that play a role in metabolizing some organophosphates. Methods: We examined associations between Parkinson disease and the organophosphates diazinon, chlorpyrifos, and parathion, and the influence of a functional polymorphism at position 55 in the coding region of the PON1 gene (PON1-55). From I January 2001 through I January 2008, we recruited 351 incident cases and 363 controls from 3 rural California counties in a population-based case-control study. Participants provided a DNA sample, and residential exposure to organophosphates was determined from pesticide usage reports and a geographic information system (GIS) approach. We assessed the main effects of both genes and pesticides in unconditional logistic regression analyses, and evaluated the effect of carrying a PON1-55 MM variant on estimates of effects for diazinon, chlorpyrifos, and parathion exposures. Results: Carriers of the variant MM PON1-55 genotype exposed to organophosphates exhibited a greater than 2-fold increase in Parkinson disease risk compared with persons who had the wildtype or heterozygous genotype and no exposure (for diazinon, odds ratio = 2.2 [95% confidence interval = 1.1-4.5]; for chlorpyrifos, 2.6 [1.3-5.4]). The effect estimate for chlorpyrifos, was more pronounced in younger-onset cases and controls (<= 60 years) (5.3 [1.7-16]). No increase in risk was noted for parathion. Conclusion: The increase in risk we observed among PON1-55 variant carriers for specific organophosphates metabolized by PON1 underscores the importance of considering Susceptibility factors when studying environmental exposures in Parkinson disease.  
Keywords: PESTICIDE EXPOSURE, CARDIOVASCULAR-DISEASE, PON1 GENE, POLYMORPHISMS,  
ISI Document Delivery No.: 534CK

857. Maravgakis, G.; Tzatzarakis, M. N.; Alegakis, A. K.; Stivaktakis, P. D., and Tsatsakis, A. M. Diethyl Phosphates Accumulation in Rabbits' Hair as an Indicator of Long Term Exposure to Diazinon and Chlorpyrifos. Centre of Toxicological Sciences and Research Medical School, University of Crete, Voutes, Heraklion, 71409 Crete, Greece.//: 2012; 218, (1-3): 106-110.   
Rec #: 2630  
Keywords: NO EFFECT  
Call Number: NO EFFECT (CPY,DZ)  
Notes: Chemical of Concern: CPY,DZ

858. March, C.; ManclŁS, J. J.; Jim‚Nez, Y.; Arnau, A., and Montoya, A. A Piezoelectric Immunosensor for the Determination of Pesticide Residues and Metabolites in Fruit Juices.   
Rec #: 78829  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: A quartz crystal microbalance (QCM) immunosensor was developed for the determination of the insecticide carbaryl and 3,5,6-trichloro-2-pyridinol (TCP), the main metabolite of the insecticide chlorpyrifos and of the herbicide triclopyr. The detection was based on a competitive conjugate-immobilized immunoassay format using monoclonal antibodies (MAbs). Hapten conjugates were covalently immobilized, via thioctic acid self-assembled monolayer (SAM), onto the gold electrode sensitive surface of the quartz crystal. This covalent immobilization allowed the reusability of the modified electrode surface for at least one hundred and fifty assays without significant loss of sensitivity. The piezoimmunosensor showed detection limits (analyte concentrations producing 10% inhibition of the maximum signal) of 11 and 7 microg l(-1) for carbaryl and TCP, respectively. The sensitivity attained (I(50) value) was around 30 microg l(-1) for both compounds. Linear working ranges were 15-53 microg l(-1) for carbaryl and 13-83 microg l(-1) for TCP. Each complete assay cycle took 20 min. The good sensitivity, specificity, and reusability achieved, together with the short response time, allowed the application of this immunosensor to the determination of carbaryl and TCP in fruits and vegetables at European regulatory levels, with high precision and accuracy.  
MESH HEADINGS: Beverages/\*analysis  
MESH HEADINGS: Carbaryl/analysis  
MESH HEADINGS: Chlorpyrifos/analysis  
MESH HEADINGS: Electrochemistry/instrumentation/methods  
MESH HEADINGS: Electrodes  
MESH HEADINGS: Food Contamination/analysis  
MESH HEADINGS: \*Fruit  
MESH HEADINGS: Glycolates/analysis  
MESH HEADINGS: Immunoassay/\*methods/standards  
MESH HEADINGS: Pesticide Residues/\*analysis/metabolism  
MESH HEADINGS: Pyridones/analysis  
MESH HEADINGS: Reproducibility of Results eng

859. Marchis, Daniela; Ferro, Gian Luca; Brizio, Paola; Squadrone, Stefania, and Abete, Maria Cesarina . Detection of pesticides in crops: A modified QuEChERS approach. 2012 May; 25, (1): 270-273.   
Rec #: 5880  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: The general term ÇŁpesticideÇĄ includes a large number of substances that belong to many different chemical classes. Pesticides are applied to crops at various stages of cultivation to provide protection against weeds and pests, and during post-harvest storage to preserve quality. The list of which pesticides are authorized for use in Europe is available on EU pesticides Database. The QuEChERS approach is a method designed for the analysis of pesticides in fruits and vegetables. This method is based on an extraction and clean-up step; it has been designed to be Quick Easy Cheap Effective Rugged and Safe. The aim of this study was to modify the QuEChERS method to be applied in the analysis of 9 organophosphate and 1 pyrethroid pesticides in raw materials for animal feeding introducing an additional liquidÇôliquid partition step. This additional step allowed us to concentrate the samples, avoiding any solvent evaporation, prior to the instrumental analysis. Once the method was optimized, it was carried out a pesticides quantization study using a GCÇôMS SIM multi-residue analysis. 45 samples of maize and soy coming from Northern Italy (Piedmont Region) were analysed during ten months. In 30 samples organophosphate pesticides were found up to 12.4-ámg-ákgęĆ1 of Chlorpyrifos, while no Deltamethrin was detected. QuEChERS/ Raw material/ Feed/ GCÇôMS

860. Markovic, Mirjana; Cupac, Svjetlana; Urovic, Rada; Milinovic, Jelena; Kljajic, Petar, and Markovic, Mirjana. Assessment of Heavy Metal and Pesticide Levels in Soil and Plant Products From Agricultural Area of Belgrade, Serbia. 2010 Feb; 58, (2): 341-351.   
Rec #: 44229  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study was aimed to assess the levels of selected heavy metals and pesticides in soil and plant products from an agricultural area of Belgrade, Serbia and to indicate possible sources and risks of contamination. Soil, vegetable, and fruit samples from the most important agricultural city areas were collected from July to November of 2006. Metal contents were determined by atomic absorption spectrometry, whereas pesticide residues were analyzed by gas chromatography-mass spectrometry after extraction performed using solid-phase microextraction technique. Soil characterization based on the determination of selected physical and chemical properties revealed heterogeneous soils belonging to different soil groups. The concentrations of lead, cadmium, copper, and zinc in soil samples do not exceed the limits established by national and international regulations. Residues of the herbicide atrazine were detected in three soil samples, with levels lower than the relevant limit. The presence of other herbicides, namely prometryn, chloridazon, acetochlor, flurochloridone, and napropamide, was registered in some soil samples as well. Among the insecticides investigated in the soil, fenitrothion and chlorpyrifos were the only ones detected. In most of the investigated vegetable samples from the Obrenovac area, Pb and Cd contents are higher in comparison with the maximum levels, indicating the emission of coal combustion products from local thermal power plants as a possible source of contamination. Residue levels of some herbicides and insecticides (metribuzin, trifluralin, pendimethalin, bifenthrin, chlorpyrifos, and cypermethrin) determined in tomato, pepper, potato, and onion samples from Slanci, Ovca, and Obrenovac areas are even several times higher than the maximum residue levels. Inappropriate use of these plant protection products is considered to be the most probable reason of contamination. Because increased levels of heavy metals and pesticide residues found in plant products could pose a risk to consumers' health, their continual monitoring before product distribution to city markets is indispensable.  
Keywords: Vegetables  
Keywords: Contamination  
Keywords: Plant protection  
Keywords: Heavy metals  
Keywords: P 5000:LAND POLLUTION  
Keywords: Copper  
Keywords: Mass spectroscopy  
Keywords: Lead  
Keywords: Pendimethalin  
Keywords: Soil  
Keywords: Agricultural Chemicals  
Keywords: Insecticides  
Keywords: Gas chromatography  
Keywords: Solanum tuberosum  
Keywords: Consumers  
Keywords: Cadmium  
Keywords: heavy metals  
Keywords: plant protection  
Keywords: Sustainability Science Abstracts; Environmental Engineering Abstracts; Environment Abstracts; Pollution Abstracts; Aqualine Abstracts; Toxicology Abstracts  
Keywords: Chlorpyrifos  
Keywords: cypermethrin  
Keywords: metribuzin  
Keywords: Allium cepa  
Keywords: International regulations  
Keywords: Serbia  
Keywords: Fruits  
Keywords: Combustion products  
Keywords: Pesticide residues  
Keywords: M3 1010:Issues in Sustainable Development  
Keywords: Coal  
Keywords: Environmental Studies  
Keywords: Lycopersicon esculentum  
Keywords: acetochlor  
Keywords: Zinc  
Keywords: Power plants  
Keywords: X 24330:Agrochemicals  
Keywords: Urban areas  
Keywords: fruits  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Herbicides  
Keywords: Fenitrothion  
Keywords: Heavy Metals  
Keywords: Spectrometry  
Keywords: Soil pollution  
Keywords: Risk  
Keywords: Atrazine  
Keywords: Pesticides  
Keywords: Trifluralin  
Keywords: Solid phase methods  
Date revised - 2010-02-01  
Language of summary - English  
Location - Serbia  
Pages - 341-351  
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SubjectsTermNotLitGenreText - Fruits; Vegetables; Contamination; Pesticide residues; Heavy metals; Plant protection; Combustion products; Coal; Copper; Lead; Mass spectroscopy; Pendimethalin; Soil; Insecticides; Gas chromatography; Zinc; Power plants; Consumers; Cadmium; Herbicides; Fenitrothion; Spectrometry; Chlorpyrifos; Soil pollution; metribuzin; Pesticides; Atrazine; Trifluralin; International regulations; Solid phase methods; plant protection; fruits; acetochlor; cypermethrin; heavy metals; Urban areas; Risk; Agricultural Chemicals; Heavy Metals; Lycopersicon esculentum; Solanum tuberosum; Allium cepa; Serbia  
Last updated - 2011-11-03  
Corporate institution author - Markovic, Mirjana; Cupac, Svjetlana; urovic, Rada; Milinovic, Jelena; Kljajic, Petar  
DOI - OB-7358bb40-85f7-4194-a49emfgefd107; 12588272; 0090-4341; 1432-0703 English

861. Mart+ˇnez, C. Estevan; Vilanova, E., and Sogorb, M. A. Chlorpyrifos and its metabolite, chlorpyrifos-oxon, modify the genic expression of mouse embryonic stem cells after 12&#xa0;h of exposure: Abstracts of the 47th Congress of the European Societies of Toxicology (EUROTOX). 2011 Aug 28-; 205, Supplement, (0): S157.   
Rec #: 2340  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

862. Martinez-Haro, M.; Vinuela, J., and Mateo, R. Exposure of Birds to Cholinesterase-Inhibiting Pesticides Following a Forest Application for Tick Control. 2007; 23, 347-349.   
Rec #: 1100  
Keywords: MIXTURE  
Call Number: NO MIXTURE (CBL,CPY,MLN)  
Notes: Chemical of Concern: CBL,CPY,MLN

863. Martins, J.; Esteves, C.; Limpo-Faria, A.; Barros, P.; Ribeiro, N.; Simoes, T.; Correia, M., and Delerue-Matos, C. Multiresidue Method for the Determination of Organophosphorus Pesticides in Still Wine and Fortified Wine Using Solid-Phase Microextraction and Gas Chromatography - Tandem Mass Spectrometry. 2011; 44, (6): 1021-1035.   
Rec #: 64899  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A SPME-GC-MS/MS method for the determination of eight organophosphorus pesticides (azinphos-methyl, chlorpyriphos, chlorpyriphos-methyl, diazinon, fenitrothion, fenthion, malathion, and methidathion) in still and fortified wine was developed. The extraction procedure is simple, solvent free, and without any sample pretreatment. Limits of detection (LOD) and quantitation (LOQ) values in the range 0.1-14.3 mu g/L and 0.2-43.3 mu g/L, respectively, were obtained. The LOQ values are below the maximum residue levels (MRLs) established by European Regulation for grapes, with the exception of methidathion. Coefficients of correlation (R2) higher than 0.99 were obtained for the majority of the pesticides, in all different wines analyzed.  
Keywords: Fortified wine, GC-MS, MS, Organophosphorus pesticides, SPME, Still wine  
ISI Document Delivery No.: 746KS

864. Masson, P.; Froment, M. T.; Gillon, E.; Nachon, F.; Lockridge, O., and Schopfer, L. M. Kinetic analysis of effector modulation of butyrylcholinesterase-catalysed hydrolysis of acetanilides and homologous esters. 2008; 275, (10): 2617-2631.   
Rec #: 64929  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effects of tyramine, serotonin and benzalkonium on the esterase and aryl acylamidase activities of wild-type human butyrylcholinesterase and its peripheral anionic site mutant, D70G, were investigated. The kinetic study was carried out under steady-state conditions with neutral and positively charged aryl acylamides [o-nitrophenylacetanilide, o-nitrotrifluorophenylacetanilide and m-(acetamido) N,N,N-trimethylanilinium] and homologous esters (o-nitrophenyl acetate and acetylthiocholine). Tyramine was an activator of hydrolysis for neutral substrates and an inhibitor of hydrolysis for positively charged substrates. The affinity of D70G for tyramine was lower than that of the wild-type enzyme. Tyramine activation of hydrolysis for neutral substrates by D70G was linear. Tyramine was found to be a pure competitive inhibitor of hydrolysis for positively charged substrates with both wild-type butyrylcholinesterase and D70G. Serotonin inhibited both esterase and aryl acylamidase activities for both positively charged and neutral substrates. Inhibition of wild-type butyrylcholinesterase was hyperbolic (i.e. partial) with neutral substrates and linear with positively charged substrates. Inhibition of D70G was linear with all substrates. A comparison of the effects of tyramine and serotonin on D70G versus the wild-type enzyme indicated that: (a) the peripheral anionic site is involved in the nonlinear activation and inhibition of the wild-type enzyme; and (b) in the presence of charged substrates, the ligand does not bind to the peripheral anionic site, so that ligand effects are linear, reflecting their sole interaction with the active site binding locus. Benzalkonium acted as an activator at low concentrations with neutral substrates. High concentrations of benzalkonium caused parabolic inhibition of the activity with neutral substrates for both wild-type butyrylcholinesterase and D70G, suggesting multiple binding sites. Benzalkonium caused linear, noncompetitive inhibition of the positively charged aryl acetanilide m-(acetamido) N,N,N-trimethylanilinium for D70G, and an unusual mixed-type inhibition/activation (alpha > beta > 1) for wild-type butyrylcholinesterase with this substrate. No fundamental difference was observed between the effects of ligands on the butyrylcholinesterase-catalysed hydrolysis of esters and amides. Thus, butyrylcholinesterase uses the same machinery, i.e. the catalytic triad S198/H448/E325, for the hydrolysis of both types of substrate. The differences in response to ligand binding depend on whether the substrates are neutral or positively charged, i.e. the differences depend on the function of the peripheral site in wild-type butyrylcholinesterase, or the absence of its function in the D70G mutant. The complex inhibition/activation effects of effectors, depending on the integrity of the peripheral anionic site, reflect the allosteric 'cross-talk' between the peripheral anionic site and the catalytic centre.  
Keywords: aryl acylamidase, benzalkonium, butyrylcholinesterase, serotonin,  
ISI Document Delivery No.: 292SF

865. Mast, M Alisa; Alvarez, David a, and Zaugg, Steven D. Deposition and Accumulation of Airborne Organic Contaminants in Yosemite National Park, California. 2012 Mar; 31, (3): 524-533.   
Rec #: 42839  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Deposition and accumulation of airborne organic contaminants in Yosemite National Park were examined by sampling atmospheric deposition, lichen, zooplankton, and lake sediment at different elevations. Passive samplers were deployed in high-elevation lakes to estimate surface-water concentrations. Detected compounds included current-use pesticides chlorpyrifos, dacthal, and endosulfans and legacy compounds chlordane, dichlorodiphenyltrichloroethane-related compounds, dieldrin, hexachlorobenzene, and polychlorinated biphenyls. Concentrations in snow were similar among sites and showed little variation with elevation. Endosulfan concentrations in summer rain appeared to coincide with application rates in the San Joaquin Valley. More than 70% of annual pesticide inputs from atmospheric deposition occurred during the winter, largely because most precipitation falls as snow. Endosulfan and chlordane concentrations in lichen increased with elevation, indicating that mountain cold-trapping might be an important control on accumulation of these compounds. By contrast, chlorpyrifos concentrations were inversely correlated with elevation, indicating that distance from source areas was the dominant control. Sediment concentrations were inversely correlated with elevation, possibly because of the organic carbon content of sediments but also perhaps the greater mobility of organic contaminants at lower elevations. Surface-water concentrations inferred from passive samplers were at sub-parts-per-trillion concentrations, indicating minimal exposure to aquatic organisms from the water column. Concentrations in sediment generally were low, except for dichlorodiphenyldichloroethane in Tenaya Lake, which exceeded sediment guidelines for protection of benthic organisms. Copyright Â© 2011 SETAC.  
Keywords: 2921-88-2  
Keywords: Pesticides -- analysis  
Keywords: Animals  
Keywords: 115-29-7  
Keywords: Organic Chemicals  
Keywords: Zooplankton -- metabolism  
Keywords: Water Pollutants, Chemical -- analysis  
Keywords: Rain -- chemistry  
Keywords: Polychlorinated Biphenyls  
Keywords: Organic Chemicals -- analysis  
Keywords: Air Pollutants -- analysis  
Keywords: Polychlorinated Biphenyls -- analysis  
Keywords: Phthalic Acids -- analysis  
Keywords: Chlorpyrifos -- analysis  
Keywords: California  
Keywords: 118-74-1  
Keywords: Hydrocarbons, Chlorinated  
Keywords: Water Pollutants, Chemical  
Keywords: Snow -- chemistry  
Keywords: Phthalic Acids  
Keywords: Lakes -- chemistry  
Keywords: Hexachlorobenzene -- analysis  
Keywords: Air Pollutants  
Keywords: Lichens -- chemistry  
Keywords: 1861-32-1  
Keywords: Endosulfan  
Keywords: Environmental Monitoring  
Keywords: Chlorpyrifos  
Keywords: 12789-03-6  
Keywords: Chlordan  
Keywords: Chlordan -- analysis  
Keywords: 0  
Keywords: Hydrocarbons, Chlorinated -- analysis  
Keywords: Endosulfan -- analysis  
Keywords: Pesticides  
Keywords: Hexachlorobenzene  
Keywords: dimethyl 2,3,5,6-tetrachloroterephthalate  
Date completed - 2012-08-20  
Date created - 2012-02-27  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 524-533  
ProQuest ID - 923951323  
Last updated - 2013-01-19  
British nursing index edition - Environmental toxicology and chemistry / SETAC, March 2012, 31(3):524-533  
Corporate institution author - Mast, M Alisa; Alvarez, David A; Zaugg, Steven D  
DOI - MEDL-22189687; 22189687; 1552-8618 eng

866. Math, Renukaradhya K; Asraful Islam, Shah Md; Cho, Kye Man; Hong, Sun Joo; Kim, Jong Min; Yun, Myoung Geun; Cho, Ji Joong; Heo, Jae Young; Lee, Young Han; Kim, Hoon; Yun, Han Dae, and Kim, Hoon. Isolation of a Novel Gene Encoding a 3,5,6-Trichloro-2-Pyridinol Degrading Enzyme From a Cow Rumen Metagenomic Library. 2010 Jul; 21, (4): 565-573.   
Rec #: 43999  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: 3,5,6-trichloro-2-pyridinol (TCP) is a major metabolite of the insecticide chlorpyrifos and is hazardous to human and animal health. A gene encoding a TCP degrading enzyme was cloned from a metagenomic library prepared from cow rumen. The gene (tcp3A) is 2.5kb in length, encoding a protein (Tcp3A) of 599 amino acid residues. Tcp3A has a potential signal sequence, as well as a putative ATP/GTP binding site, and a likely amidation site. The molecular weight of the enzyme is 62kDa by SDS-PAGE. Comparison of Tcp3A with the NCBI database using BLASTP revealed homology to amidohydrolase proteins. Recombinant Escherichia coli harboring the tcp3A gene could utilize TCP as the sole source of carbon. TLC and HPLC revealed that TCP was degraded by recombinant E. coli harboring tcp3A. This is the first report of a gene encoding a TCP degrading enzyme.  
Keywords: High-performance liquid chromatography  
Keywords: A 01360:Plant Diseases  
Keywords: Amino acids  
Keywords: Biodegradation  
Keywords: Rumen  
Keywords: GTP  
Keywords: ATP  
Keywords: Enzymes  
Keywords: Metabolites  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos  
Keywords: Databases  
Keywords: Carbon  
Keywords: Insecticides  
Keywords: Homology  
Keywords: Molecular weight  
Keywords: Escherichia coli  
Keywords: Microbiology Abstracts A: Industrial & Applied Microbiology; Biotechnology and Bioengineering Abstracts  
Date revised - 2010-02-01  
Language of summary - English  
Pages - 565-573  
ProQuest ID - 810916516  
SubjectsTermNotLitGenreText - High-performance liquid chromatography; Biodegradation; Amino acids; Rumen; Enzymes; ATP; GTP; Metabolites; Chlorpyrifos; Databases; Carbon; Insecticides; Homology; Molecular weight; Escherichia coli  
Last updated - 2011-11-03  
Corporate institution author - Math, Renukaradhya K; Cho, Kye Man; Hong, Sun Joo; Kim, Jong Min; Yun, Myoung Geun; Cho, Ji Joong; Heo, Jae Young; Lee, Young Han; Kim, Hoon; Yun, Han Dae  
DOI - OB-0fe430aa-ee7d-4010-b0b2mfgefd101; 13094101; 0923-9820; 1572-9729 English

867. Matthews, Andre R; Sutter, Mark E, and Rentz, Danielle E. Serum Paraoxonase-1 (Pon-1) Genotype and Exposure to Organophosphorous Insectides--Is There a High-Risk Population? 2011 Sep; 7, (3): 243-247.   
Rec #: 43189  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The Health Studies Branch (HSB) is responsible for responding to domestic and international requests for assistance with suspected and known environmental-associated public health threats as well as pursuing original environmental research. The HSB employs personnel with a wide variety of educational backgrounds and professional training including epidemiology, medicine, toxicology, statistics, and other environmental public health-related disciplines. This wide range of expertise is necessary to address the broad scope of potential environmental health threats. HSB scientists conduct studies on environmental exposures. Recent examples include the following: mercury exposure in children living in large urban areas, exposure to brevetoxins and microcystins arising from harmful algal blooms, and occupational exposures to pesticides. This article will present a brief description of an ongoing study of insecticide exposure and paraoxonase-1 (PON-1) genotype in banana plantation workers in Chinandega, Nicaragua. We will then discuss the enzyme PON-1 and its potential role in organophosphate insecticide metabolism and toxicity.  
Keywords: United States  
Keywords: 2921-88-2  
Keywords: Animals  
Keywords: Humans  
Keywords: Aryldialkylphosphatase  
Keywords: Organophosphorus Compounds -- adverse effects  
Keywords: Insecticides -- adverse effects  
Keywords: Organophosphorus Compounds  
Keywords: Insecticides  
Keywords: Chlorpyrifos -- adverse effects  
Keywords: Insecticides -- toxicity  
Keywords: Aryldialkylphosphatase -- genetics  
Keywords: Centers for Disease Control and Prevention (U.S.)  
Keywords: Organophosphate Poisoning  
Keywords: Agricultural Workers' Diseases -- chemically induced  
Keywords: EC 3.1.8.1  
Keywords: Chlorpyrifos  
Keywords: Risk  
Keywords: Insecticides -- poisoning  
Keywords: 0  
Keywords: Agricultural Workers' Diseases -- epidemiology  
Keywords: Environmental Exposure  
Keywords: Aryldialkylphosphatase -- blood  
Keywords: Occupational Exposure -- adverse effects  
Keywords: Organophosphorus Compounds -- toxicity  
Date completed - 2011-11-30  
Date created - 2011-08-08  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 243-247  
ProQuest ID - 893264799  
Last updated - 2013-01-19  
British nursing index edition - Journal of medical toxicology : official journal of the American College of Medical Toxicology, September 2011, 7(3):243-247  
Corporate institution author - Matthews, Andre R; Sutter, Mark E; Rentz, Danielle E  
DOI - MEDL-21786069; 21786069; 1937-6995 eng

868. Maver, L.; Stajnbaher, D.; Gros, L.; Kahne-Jurisevic, B.; Repse, B., and Sinigoj-Gacnik, K. Residues of organophosphorus pesticides in different food commodities in Slovenia, 1997-1998. 2007; 31, (1-2): 142-154.   
Rec #: 64969  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: During the period 1997-1998 a total of 1237 samples of different food commodities were analysed for residues of organophosphorus pesticides in Slovenia. The domestic and imported commodities tested included fruits, vegetables, cereals, alcoholic drinks and food of animal origin such as liver, fish, eggs, milk and honey. Residues of organophosphates were detected in 8.2% of samples (101 samples). Violation rate was 0.5% (6 samples). The most frequently found were pirimiphos-methyl in samples of cereals and wheat flour, chlorpyrifos in imported grape and phosalone in apples. No residues of organophosphates were found in food of animal origin.  
Keywords: pesticide residues, organophosphates, food commodities  
ISI Document Delivery No.: 253KT

869. Maya, K.; Singh, R. S.; Upadhyay, S. N., and Dubey, Suresh K. Kinetic analysis reveals bacterial efficacy for biodegradation of chlorpyrifos and its hydrolyzing metabolite TCP. 2011 Nov; 46, (11): 2130-2136.   
Rec #: 490  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Efficacy of soil bacterial communities comprising seven different isolates for biodegradation of chlorpyrifos and TCP (3,5,6-trichloro-2-pyridinol), a degradation product of chlorpyrifos, has been investigated. The concentration of chlorpyrifos has ranged from 25 to 200 mg chlorpyrifos/L, and that of TCP from 25 to 100 mg TCP/L. The average values of Ks and Vmax are found to be different for isolates 1Çô4, 5Çô6 and 7 for both chlorpyrifos and TCP. The Ks has ranged from 97 to 142.3 mg/L and Vmax from 7.4 to 12.1 mg/L/d for chlorpyrifos and 103.09 to 148.8 mg/L and 14.9 to 21.2 mg/L/d, respectively, for TCP. Results indicate the high affinity of bacterial community for degradation of both chlorpyrifos and TCP. The 16S rRNA gene sequence analysis has confirmed the genetic relatedness of isolates 1Çô4 with Pseudomonas, isolates 5 and 6 with Agrobacterium, and isolate 7 with Bacillus. Their degradation potential for chlorpyrifos and TCP has been found to be in the order: Pseudomonas &gt; Agrobacterium &gt; Bacillus. It has been also observed that all seven isolates are more efficient in degrading TCP compared to chlorpyrifos. Chlorpyrifos/ TCP/ Biodegradation/ Kinetics/ Molecular characterization

870. Mayer, M.; Semetey, V.; Gitlin, I.; Yang, J., and Whitesides, G. M. Using Ion Channel-Forming Peptides to Quantify Protein-Ligand Interactions.   
Rec #: 51369  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: FEBS Lett. 1993 Aug 30;329(3):332-5 (medline /7689977)  
COMMENTS: Cites: J Med Chem. 1993 Jan 8;36(1):126-33 (medline /8421278)  
COMMENTS: Cites: J Membr Biol. 1992 Aug;129(2):109-36 (medline /1279177)  
COMMENTS: Cites: Prog Biophys Mol Biol. 1991;55(3):139-235 (medline /1715999)  
COMMENTS: Cites: Int J Biochem. 1990;22(9):947-56 (medline /2282964)  
COMMENTS: Cites: Biophys J. 1986 Jan;49(1):295-306 (medline /2420381)  
COMMENTS: Cites: Int J Pept Protein Res. 1988 Nov;32(5):344-51 (medline /3145251)  
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COMMENTS: Cites: Crit Rev Biomed Eng. 1991;18(5):323-40 (medline /2036800)  
COMMENTS: Cites: Eur Biophys J. 1993;22(2):105-24 (medline /7689461)  
ABSTRACT: This paper proposes a method for sensing affinity interactions by triggering disruption of self-assembly of ion channel-forming peptides in planar lipid bilayers. It shows that the binding of a derivative of alamethicin carrying a covalently attached sulfonamide ligand to carbonic anhydrase II (CA II) resulted in the inhibition of ion channel conductance through the bilayer. We propose that the binding of the bulky CA II protein (MW approximately 30 kD) to the ion channel-forming peptides (MW approximately 2.5 kD) either reduced the tendency of these peptides to self-assemble into a pore or extracted them from the bilayer altogether. In both outcomes, the interactions between the protein and the ligand lead to a disruption of self-assembled pores. Addition of a competitive inhibitor, 4-carboxybenzenesulfonamide, to the solution released CA II from the alamethicin-sulfonamide conjugate and restored the current flow across the bilayer by allowing reassembly of the ion channels in the bilayer. Time-averaged recordings of the current over discrete time intervals made it possible to quantify this monovalent ligand binding interaction. This method gave a dissociation constant of approximately 2 microM for the binding of CA II to alamethicin-sulfonamide in the bilayer recording chamber: this value is consistent with a value obtained independently with CA II and a related sulfonamide derivative by isothermal titration calorimetry.  
MESH HEADINGS: Alamethicin/chemistry  
MESH HEADINGS: Biochemistry/\*methods  
MESH HEADINGS: Calorimetry  
MESH HEADINGS: Inhibitory Concentration 50  
MESH HEADINGS: Ion Channels/chemistry  
MESH HEADINGS: \*Ions  
MESH HEADINGS: Kinetics  
MESH HEADINGS: Ligands  
MESH HEADINGS: Lipid Bilayers/chemistry  
MESH HEADINGS: Models, Statistical  
MESH HEADINGS: Molecular Weight  
MESH HEADINGS: Peptides/\*chemistry  
MESH HEADINGS: Proteins/\*chemistry  
MESH HEADINGS: Sulfonamides/chemistry  
MESH HEADINGS: Time Factors eng

871. Mccarthy, Kathleen and McCarthy, Kathleen. Investigation of Hydrophobic Contaminants in an Urban Slough System Using Passive Sampling - Insights From Sampling Rate Calculations. 2008 Oct; 145, (1-3): 31-47.   
Rec #: 45549  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Semipermeable membrane devices (SPMDs) were deployed in the Columbia Slough, near Portland, Oregon, on three separate occasions to measure the spatial and seasonal distribution of dissolved polycyclic aromatic hydrocarbons (PAHs) and organochlorine compounds (OCs) in the slough. Concentrations of PAHs and OCs in SPMDs showed spatial and seasonal differences among sites and indicated that unusually high flows in the spring of 2006 diluted the concentrations of many of the target contaminants. However, the same PAHs - pyrene, fluoranthene, and the alkylated homologues of phenanthrene, anthracene, and fluorene - and OCs - polychlorinated biphenyls, pentachloroanisole, chlorpyrifos, dieldrin, and the metabolites of dichlorodiphenyltrichloroethane (DDT) - predominated throughout the system during all three deployment periods. The data suggest that storm washoff may be a predominant source of PAHs in the slough but that OCs are ubiquitous, entering the slough by a variety of pathways. Comparison of SPMDs deployed on the stream bed with SPMDs deployed in the overlying water column suggests that even for the very hydrophobic compounds investigated, bed sediments may not be a predominant source in this system. Perdeuterated phenanthrene (phenanthrene-d sub(10)). spiked at a rate of 2kg per SPMD, was shown to be a reliable performance reference compound (PRC) under the conditions of these deployments. Post-deployment concentrations of the PRC revealed differences in sampling conditions among sites and between seasons, but indicate that for SPMDs deployed throughout the main slough channel, differences in sampling rates were small enough to make site-to-site comparisons of SPMD concentrations straightforward.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Pollution monitoring  
Keywords: Organochlorine compounds  
Keywords: SW 3030:Effects of pollution  
Keywords: Metabolites  
Keywords: Outer continental shelf  
Keywords: Freshwater  
Keywords: Storms  
Keywords: Streams  
Keywords: phenanthrene  
Keywords: pyrene  
Keywords: Insecticides  
Keywords: Sulfur dioxide  
Keywords: Assessments  
Keywords: Pollutants  
Keywords: Aromatic hydrocarbons  
Keywords: Sampling  
Keywords: Aqualine Abstracts; Pollution Abstracts; Environment Abstracts; Water Resources Abstracts; Oceanic Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: PCB compounds  
Keywords: Seasonal variations  
Keywords: PCB  
Keywords: O 4060:Pollution - Environment  
Keywords: Polycyclic aromatic hydrocarbons  
Keywords: Seasonal Distribution  
Keywords: USA, Oregon, Portland  
Keywords: Chlorine compounds  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Dieldrin  
Keywords: Brackish  
Keywords: Seasonal distribution  
Keywords: AQ 00003:Monitoring and Analysis of Water and Wastes  
Keywords: Sediments  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Channels  
Keywords: Pesticides  
Keywords: High Flow  
Keywords: DDT  
Keywords: polycyclic aromatic hydrocarbons  
Keywords: water column  
Keywords: Contaminants  
Date revised - 2010-02-01  
Language of summary - English  
Location - USA, Oregon, Portland  
Pages - 31-47  
ProQuest ID - 21277349  
SubjectsTermNotLitGenreText - Chlorine compounds; Pesticides; Dieldrin; DDT; Aromatic hydrocarbons; Seasonal distribution; Sampling; Outer continental shelf; PCB; Pollution monitoring; Organochlorine compounds; Metabolites; Storms; Streams; Sediments; Channels; Chlorpyrifos; phenanthrene; pyrene; Insecticides; Sulfur dioxide; polycyclic aromatic hydrocarbons; water column; Contaminants; Seasonal variations; PCB compounds; Polycyclic aromatic hydrocarbons; Seasonal Distribution; Assessments; Pollutants; High Flow; USA, Oregon, Portland; Freshwater; Brackish  
Last updated - 2012-03-29  
British nursing index edition - Environmental Monitoring and Assessment [Environ. Monit. Assess.]. Vol. 145, no. 1-3, pp. 31-47. Oct 2008.  
Corporate institution author - McCarthy, Kathleen  
DOI - MD-0011180736; 11886878; CS1014404; 0167-6369; 1573-2959 English

872. Mccarty, K. M.; Ryan, L.; Houseman, E. A.; Williams, P. L.; Miller, D. P.; Quamruzzaman, Q.; Rahman, M.; Mahiuddin, G.; Smith, T.; Gonzalez, E.; Su, L., and Christiani, D. C. A Case-Control Study of Gst Polymorphisms and Arsenic Related Skin Lesions.   
Rec #: 51469  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Environ Health Perspect. 1999 Sep;107(9):727-9 (medline /10464073)  
COMMENTS: Cites: Cancer Res. 2001 Dec 15;61(24):8718-22 (medline /11751390)  
COMMENTS: Cites: Mutat Res. 1997 Jun;386(3):197-207 (medline /9219558)  
COMMENTS: Cites: Crit Rev Biochem Mol Biol. 1995;30(6):445-600 (medline /8770536)  
COMMENTS: Cites: Epidemiology. 1996 May;7(3):286-90 (medline /8728443)  
COMMENTS: Cites: Experientia. 1994 Feb 15;50(2):115-20 (medline /8125168)  
COMMENTS: Cites: Nature. 1998 Sep 24;395(6700):338 (medline /9759723)  
COMMENTS: Cites: Carcinogenesis. 1998 Feb;19(2):275-80 (medline /9498276)  
COMMENTS: Cites: Toxicol Appl Pharmacol. 1997 Nov;147(1):1-8 (medline /9356301)  
COMMENTS: Cites: Br J Cancer. 1999 Nov;81(5):769-73 (medline /10555744)  
COMMENTS: Cites: Toxicol Lett. 2000 Mar 15;112-113:209-17 (medline /10720733)  
COMMENTS: Cites: Toxicol Lett. 2000 Mar 15;112-113:357-63 (medline /10720752)  
COMMENTS: Cites: Biochem Pharmacol. 2000 Jun 1;59(11):1375-85 (medline /10751546)  
COMMENTS: Cites: J Biol Chem. 2000 Oct 27;275(43):33404-8 (medline /10938093)  
COMMENTS: Cites: Bull World Health Organ. 2000;78(9):1093-103 (medline /11019458)  
COMMENTS: Cites: Cancer Epidemiol Biomarkers Prev. 2000 Nov;9(11):1259-62 (medline /11097236)  
COMMENTS: Cites: J Occup Environ Med. 2000 Dec;42(12):1195-201 (medline /11125683)  
COMMENTS: Cites: Toxicol Appl Pharmacol. 2001 May 1;172(3):249-61 (medline /11312654)  
COMMENTS: Cites: Mol Pharmacol. 2001 Aug;60(2):302-9 (medline /11455017)  
COMMENTS: Cites: Chem Res Toxicol. 2001 Aug;14(8):1051-7 (medline /11511179)  
COMMENTS: Cites: Carcinogenesis. 1997 Jul;18(7):1285-9 (medline /9230269)  
COMMENTS: Cites: Environ Int. 2002 Feb;27(7):597-604 (medline /11871394)  
COMMENTS: Cites: Toxicol Sci. 2002 Dec;70(2):183-92 (medline /12441363)  
COMMENTS: Cites: Science. 2002 Nov 22;298(5598):1602-6 (medline /12446905)  
COMMENTS: Cites: Environ Sci Technol. 2003 Jan 1;37(1):35A-38A (medline /12542282)  
COMMENTS: Cites: Biochem Biophys Res Commun. 2003 Feb 7;301(2):516-20 (medline /12565892)  
COMMENTS: Cites: Epidemiology. 2003 Mar;14(2):174-82 (medline /12606883)  
COMMENTS: Cites: Biofactors. 2003;17(1-4):115-30 (medline /12897434)  
COMMENTS: Cites: Mol Cell Biochem. 2004 Jan;255(1-2):11-8 (medline /14971641)  
COMMENTS: Cites: J Biol Chem. 2004 Jul 30;279(31):32700-8 (medline /15161912)  
COMMENTS: Cites: Blood. 2005 Feb 1;105(3):1198-203 (medline /15231573)  
COMMENTS: Cites: Breast Cancer Res. 2005;7(1):R12-8 (medline /15642161)  
COMMENTS: Cites: Pharmacogenet Genomics. 2005 Jul;15(7):493-501 (medline /15970797)  
COMMENTS: Cites: Int J Cancer. 2006 May 15;118(10):2470-8 (medline /16353154)  
COMMENTS: Cites: Methods Enzymol. 2005;401:78-99 (medline /16399380)  
COMMENTS: Cites: Environ Health Perspect. 2006 Mar;114(3):334-40 (medline /16507454)  
COMMENTS: Cites: Biochem Pharmacol. 1991 Jul 15;42(3):465-8 (medline /1859460)  
ABSTRACT: BACKGROUND: Polymorphisms in GSTT1, GSTM1 and GSTP1 impact detoxification of carcinogens by GSTs and have been reported to increase susceptibility to environmentally related health outcomes. Individual factors in arsenic biotransformation may influence disease susceptibility. GST activity is involved in the metabolism of endogenous and exogenous compounds, including catalyzing the formation of arsenic-GSH conjugates.  
ABSTRACT: METHODS: We investigated whether polymorphisms in GSTT1, GSTP1 and GSTM1 were associated with risk of skin lesions and whether these polymorphisms modify the relationship between drinking water arsenic exposure and skin lesions in a case control study of 1200 subjects frequency matched on age and gender in community clinics in Pabna, Bangladesh in 2001-2002.  
ABSTRACT: RESULTS AND DISCUSSION: GSTT1 homozygous wildtype status was associated with increased odds of skin lesions compared to the null status (OR1.56 95% CI 1.10-2.19). The GSTP1 GG polymorphism was associated with greater odds of skin lesions compared to GSTP1 AA, (OR 1.86 (95%CI 1.15-3.00). No evidence of effect modification by GSTT1, GSTM1 or GSTP1 polymorphisms on the association between arsenic exposure and skin lesions was detected.  
ABSTRACT: CONCLUSION: GSTT1 wildtype and GSTP1 GG are associated with increased risk of skin lesions.  
MESH HEADINGS: Adolescent  
MESH HEADINGS: Adult  
MESH HEADINGS: Arsenic/analysis  
MESH HEADINGS: Arsenic Poisoning/diagnosis/\*epidemiology  
MESH HEADINGS: Case-Control Studies  
MESH HEADINGS: Causality  
MESH HEADINGS: Female  
MESH HEADINGS: Genotype  
MESH HEADINGS: Glutathione S-Transferase pi/\*genetics  
MESH HEADINGS: Glutathione Transferase/\*genetics  
MESH HEADINGS: Humans  
MESH HEADINGS: /epidemiology  
MESH HEADINGS: Male  
MESH HEADINGS: Odds Ratio  
MESH HEADINGS: \*Polymorphism, Genetic  
MESH HEADINGS: Regression Analysis  
MESH HEADINGS: Risk Factors  
MESH HEADINGS: Skin Neoplasms/\*epidemiology/\*genetics  
MESH HEADINGS: Water Supply/analysis eng

873. McCollister, S. B.; Kociba, R. J.; Gehring, P. J., and Humiston, C. G. Results of Two-Year Dietary Feeding Studies on Dowco 179 in Beagle Dogs. 1971.  
Rec #: 1110  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

874. Mcknight, Ursula S; Rasmussen, Jes J; Kronvang, Brian; Bjerg, Poul L; Binning, Philip J, and McKnight, Ursula S. Integrated Assessment of the Impact of Chemical Stressors on Surface Water Ecosystems. 2012 Jun 15; 427-428, 319-331.   
Rec #: 46679  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The release of chemicals such as chlorinated solvents, pesticides and other xenobiotic organic compounds to streams, either from contaminated sites, accidental or direct application/release, is a significant threat to water resources. In this paper, different methods for evaluating the impacts of chemical stressors on stream ecosystems are evaluated for a stream in Denmark where the effects of major physical habitat degradation can be disregarded. The methods are: (i) the Danish Stream Fauna Index, (ii) Toxic Units (TU), (iii) SPEAR indices, (iv) Hazard Quotient (HQ) index and (v) AQUATOX, an ecological model. The results showed that the hydromorphology, nutrients, biological oxygen demand and contaminants (pesticides and trichloroethylene from a contaminated site) originating from groundwater do not affect the good ecological status in the stream. In contrast, the evaluation by the novel SPEARpesticides index and TU indicated that the site is far from obtaining good ecological status - a direct contradiction to the ecological index currently in use in Denmark today - most likely due to stream sediment-bound pesticides arising from the spring spraying season. In order to generalise the findings of this case study, the HQ index and AQUATOX were extended for additional compounds, not only partly to identify potential compounds of concern, but also to determine thresholds where ecological impacts could be expected to occur. The results demonstrate that some commonly used methods for the assessment of ecological impact are not sufficient for capturing - and ideally separating - the effects of all anthropogenic stressors affecting ecosystems. Predictive modelling techniques can be especially useful in supporting early decisions on prioritising hot spots, serving to identify knowledge gaps and thereby direct future data collection. This case study presents a strong argument for combining bioassessment and modelling techniques to multi-stressor field sites, especially before cost-intensive studies are conducted.  
Keywords: Ecosystems  
Keywords: Degradation  
Keywords: Surface water  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: M3 1010:Issues in Sustainable Development  
Keywords: Environment Abstracts; Pollution Abstracts; Sustainability Science Abstracts  
Keywords: Solvents  
Keywords: Xenobiotics  
Keywords: Streams  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Case studies  
Keywords: Pesticides  
Keywords: Denmark  
Keywords: Trichloroethylene  
Date revised - 2012-06-01  
Language of summary - English  
Location - Denmark  
Pages - 319-331  
ProQuest ID - 1020197882  
SubjectsTermNotLitGenreText - Case studies; Degradation; Ecosystems; Surface water; Pesticides; Solvents; Xenobiotics; Trichloroethylene; Streams; Denmark  
Last updated - 2012-08-02  
Corporate institution author - McKnight, Ursula S; Rasmussen, Jes J; Kronvang, Brian; Bjerg, Poul L; Binning, Philip J  
DOI - OB-d1baa92d-90c0-476b-9b63csamfg201; 16794313; 0048-9697 English

875. Mech, A.; Orynbayeva, Z.; Irgebayev, K.; Kolusheva, S., and Jelinek, R. Screening Membrane Interactions of Pesticides by Cells Decorated with Chromatic Polymer Nanopatches. 2009; 22, (1): 90-96.   
Rec #: 65029  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Elucidating the factors contributing to the cell toxicity of pesticides and other environmentally sensitive small molecules is critical for evaluation of their health impacts and for understanding the biological processes that they affect. Disruption and permeation of the plasma membrane, which constitutes the critical interface between the cell and its environment, are recognized initiators of cytotoxicity. We present a new approach for predicting pesticide cytotoxicity through rapid screening of membrane interactions of pesticides using a recently developed live-cell chromatic sensor. The sensing platform comprises living mammalian cells labeled with polydiacetylene (PDA), a chromatic polymer that undergoes intense fluorescence transformations induced by structural perturbations of the membrane bilayer. Within a short time after the addition of membrane-interacting tested compounds to the labeled cells, the PDA patches emit high fluorescence, which can be monitored by conventional spectroscopy and microscopy apparatuses. The chromatic technology facilitates rapid evaluation of membrane activity of pesticide compounds and is capable of distinguishing between toxic effects associated with membrane interactions vs intracellular mechanisms.  
Keywords: PYRETHROID INSECTICIDE ALLETHRIN, DEVELOPMENTAL NEUROTOXICITY,  
ISI Document Delivery No.: 396PF

876. Medina-Diaz, I M; Rubio-Ortiz, M; Martinez-Guzman, M C; Davalos-Ibarra, R L; Rojas- Garcia, Ae; Robledo-Marenco, M L; Barron-Vivanco, B S; Giron-Perez, Mi; Elizondo, G, and Medina-Diaz, I M. Organophosphate Pesticides Increase the Expression of Alpha Glutathione S-Transferase in Hepg2 Cells. 2011 Dec; 25, (8): 2074-2079.   
Rec #: 42999  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos and methyl parathion are among the most widely used insecticides in the world. Human populations are constantly exposed to low doses of both due to their extensive use and presence in food and drinking water. Glutathione S-transferase (GST) catalyzes the conjugation of glutathione on electrophilic substrates and is an important line of defense in the protection of cellular components from reactive species. GST alpha1 (GSTA1) is the predominant isoform of GST expressed in the human liver; thus, determining the effect of insecticides on GSTA1 transcription is very important. In the present study, we analyzed the effects of methyl parathion and chlorpyrifos on GSTA1 gene expression in HepG2 cells using real time PCR, and activity and immunoreactive protein assays. The results demonstrated that exposure to methyl parathion and chlorpyrifos increased the level of GSTA1 mRNA, GSTA1 immunoreactive protein and GST activity relative to a control. These results demonstrated that these insecticides can increase the expression of GSTA1. In conclusion, HepG2 cell cultures treated with methyl parathion and chlorpyrifos could be a useful model for studying the function of GSTA1 and its role in the metabolism of xenobiotics in the liver.  
Keywords: Pesticides (organophosphorus)  
Keywords: Pharmacy And Pharmacology  
Keywords: Food  
Keywords: Transcription  
Keywords: Cell culture  
Keywords: Xenobiotics  
Keywords: Glutathione transferase  
Keywords: Gene expression  
Keywords: Chlorpyrifos  
Keywords: Insecticides  
Keywords: Liver  
Keywords: Polymerase chain reaction  
Keywords: Methyl parathion  
Keywords: Drinking water  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Metabolism  
Date revised - 2012-01-01  
Language of summary - English  
Pages - 2074-2079  
ProQuest ID - 910051963  
SubjectsTermNotLitGenreText - Pesticides (organophosphorus); Food; Transcription; Cell culture; Xenobiotics; Glutathione transferase; Chlorpyrifos; Gene expression; Insecticides; Liver; Polymerase chain reaction; Methyl parathion; Drinking water; Metabolism  
Last updated - 2012-01-26  
Corporate institution author - Medina-Diaz, I M; Rubio-Ortiz, M; Martinez-Guzman, M C; Davalos-Ibarra, R L; Rojas- Garcia, AE; Robledo-Marenco, M L; Barron-Vivanco, B S; Giron-Perez, MI; Elizondo, G  
DOI - OB-5fef4bd8-825b-4d76-a7cbcsamfg201; 16058571; 0887-2333 English

877. Medjdoub, A.; Merzouk, S. A.; Merzouk, H.; Chiali, F. Z., and Narce, M. Effects of Mancozeb and Metribuzin on in vitro proliferative responses and oxidative stress of human and rat spleen lymphocytes stimulated by mitogens. 2011; 101, (1): 27-33.   
Rec #: 65059  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticides have been shown to possess marked immunotropic activity. The aim of this work was to study the **in vitro effects of different concentrations (1-100 mu M) of Mancozeb (fungicide) and Metribuzin (herbicide), on the proliferative responses of human and rat spleen lymphocytes** stimulated by concanavalin A (ConA, mitogen), the Th1- (IL-2, INF gamma) and Th2- (IL-4) cytokine secretion and on the intracellular oxidative status. The results showed that Mancozeb significantly reduced ConA lymphocyte proliferation in a dose-dependent manner in both humans and rats. It also decreased IL-2, INF gamma and IL-4 secretion with a a shift away to Th1 phenotype. Metribuzin at low concentrations (1-10 mu M) resulted in activation of ConA stimulated lymphocyte proliferation and cytokine production in both human and rat spleen cells. However, at high concentrations (25-100 mu M), Metribuzin induced a dose-dependent inhibition of lymphocyte proliferation and cytokines. Changes in intracellular levels of reduced Glutathione, hydroperoxides and carbonyl proteins and in the activities of catalase and SOD were observed after Mancozeb and Metribuzin exposure reflecting oxidative stress and DNA damage specially at high concentrations. In conclusion, Mancozeb and Metribuzin had significant immunomodulatory properties with oxidative stress induction at high concentrations. (C) 2011 Elsevier Inc. All rights reserved.  
Keywords: Mancozeb, Metribuzin, Rat splenocytes, Human lymphocytes, Cytokines,  
ISI Document Delivery No.: 823UU

878. Mee Kin, Chai and Guan Huat, Tan. Headspace solid-phase microextraction for the evaluation of pesticide residue contents in cucumber and strawberry after washing treatment . 2010 Dec 1-; 123, (3): 760-764.   
Rec #: 5120  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: The headspace solid-phase microextraction was developed to examine the organophosphorus (diazinon, malathion, chloropyrifos, quinalphos, profenofos) and organochlorine (chlorothalonil, +\_-endosulfan and +\_-endosulfan) pesticide residues in vegetable (cucumber) and fruit (strawberry) samples. The effects of washing by different solutions were evaluated for the reduction of organophosphorus and organochlorine pesticide residues contents. Gas chromatography with electron capture detection was used to analysis the investigated pesticides. The results showed that washing by a non-toxic solution can decrease the concentration of pesticide residues in the fruit and vegetable samples. The data further indicated that acetic acid was the most effective solution in removing the residues of the investigated pesticides from the fruit and vegetable samples when compared to sodium carbonate, sodium chloride and tap water. The amount of pesticides removed by solution washing is related to their water solubility and vapour pressure properties. HS-SPME/ Pesticide residues/ Washing

879. Meeker, J D ; Ravi; Barr, D B; Hauser, R, and Meeker, J D. Circulating Estradiol in Men Is Inversely Related to Urinary Metabolites of Nonpersistent Insecticides. 2008 Feb; 25, (2): 184-191.   
Rec #: 46169  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Estradiol plays an important role in male reproductive health as a germ cell survival factor. Chlorpyrifos and carbaryl, nonpersistent insecticides to which the general population are commonly exposed, were recently shown to inhibit estradiol metabolism in vitro which could lead to altered hormone balance. Methods: Subjects (N=322) were the male partners in couples presenting to a Massachusetts infertility clinic from years 2000-2003. 3,5,6-Trichloro-2-pyridinol (TCPY), the major urinary metabolite of chlorpyrifos and chlorpyrifos-methyl, and 1- and 2-naphthol (1N and 2N), urinary metabolites of carbaryl and naphthalene, were measured in a spot urine sample from each subject. Estradiol, sex hormone binding globulin (SHBG), and prolactin were measured in serum collected from subjects during the same clinic visit. Results: Using multiple linear regression, an interquartile range (IQR) increase in TCPY was associated with a 1.36pg/mL decline (95% confidence interval=-2.91 to -0.22) in estradiol concentration. When estradiol and TCPY were divided into quintiles, there was a dose-dependent increase in the odds of being in the lowest estradiol quintile with increasing TCPY quintiles. Conclusion: On a population level, these reductions in estradiol levels are of potential public health importance because of widespread exposure to TCPY and its parent insecticides.  
Keywords: Infertility  
Keywords: survival factor  
Keywords: Germ cells  
Keywords: Naphthalene  
Keywords: Carbaryl  
Keywords: Globulins  
Keywords: Metabolites  
Keywords: Hormones  
Keywords: Estradiol  
Keywords: Sex hormones  
Keywords: Public health  
Keywords: Chlorpyrifos  
Keywords: Prolactin  
Keywords: Insecticides  
Keywords: Urine  
Keywords: Population levels  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Date revised - 2008-04-01  
Language of summary - English  
Pages - 184-191  
ProQuest ID - 20543574  
SubjectsTermNotLitGenreText - Estradiol; Metabolites; Insecticides; Chlorpyrifos; Carbaryl; Public health; Urine; Sex hormones; Prolactin; Germ cells; Infertility; Hormones; Population levels; Naphthalene; Globulins; survival factor  
Last updated - 2011-12-13  
British nursing index edition - Reproductive Toxicology [Reprod. Toxicol.]. Vol. 25, no. 2, pp. 184-191. Feb 2008.  
Corporate institution author - Meeker, J D; Ravi; Barr, D B; Hauser, R  
DOI - MD-0007976063; 8103556; 0890-6238 English

880. Meggs, W. J. and Brewer, K. L. Toxicant Exposures and the Obesity Epidemic.   
Rec #: 76739  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: MESH HEADINGS: Adult  
MESH HEADINGS: Child  
MESH HEADINGS: Chlorpyrifos/adverse effects  
MESH HEADINGS: Environmental Exposure/\*adverse effects  
MESH HEADINGS: Humans  
MESH HEADINGS: Insecticides/\*adverse effects  
MESH HEADINGS: Obesity/\*epidemiology eng

881. Mehrani, H. and Golmanesh, L. Changes in mRNA and protein levels of nicotinic acetylcholine receptors in Diazoxon exposed pC12 cells. 2008; 22, (5): 1257-1263.   
Rec #: 65099  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Effects of diazoxon on the gene and protein expression of nicotinic acetylcholine receptors (nAChR) were evaluated in PC12 cells. Cells were exposed to 100 mu M diazoxon for 48 h in the presence versus absence of nAChR agonists or antagonists. Diazoxon significantly inhibited AChE activity in the cells. At the mRNA level, transcripts of the alpha(4) and beta(2) subunits of nAChR were significantly reduced in cells exposed to diazoxon, but there was no change in alpha(7) subunit mRNA content. Diazoxon exposure also significantly reduced the protein levels of both alpha(4) and beta(2) nAChR subunits. Treatment with nicotine (10 mu M) or with the nicotinic receptor antagonists, mecamylamine (10 mu M) or dihydro-beta-erythroidine (DH beta E) (5 mu M) efficiently prevented the diazoxon-induced reduction in alpha(4) and beta(2) nAChR mRNA and protein in PC12 cells, but carbamaylcholine, a weak nAChR agonist, was ineffective. These data suggest that alpha(4)beta(2) nAChRs are involved in diazoxon-related toxicity and that nicotinic receptor antagonists could play a protective role against organophosphate-related damage. (C) 2008 Elsevier Ltd. All rights reserved.  
Keywords: diazoxon, nicotinic acetylcholine receptor, mecamylamine,  
ISI Document Delivery No.: 326GC

882. ---. Evaluation of nicotinic receptors agonists and antagonists against paraoxon exposed PC12 cells. 2008; 26, (1): 22-29.   
Rec #: 65109  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chronic and acute exposure to organophosphate pesticides may lead to persistent neurological and neurobehavioral effects, which cannot be explained by acetylcholinesterase (AChE) inhibition alone. In an attempt to elucidate the mechanism by which paraoxon affects the nicotinic receptors gene expression, the effects of exposure of PC12 cells to 100 mu M concentrations of paraoxon for 48 h in the presence and the absence of nicotinic acetylcholine receptors (nAChRs) agonists and antagonists were characterized. Paraoxon at 100 mu M significantly inhibited AChE activity. On the mRNA level, the alpha(4) and beta(2) subunits of nAChR mRNA were significantly decreased in the cells exposed to paraoxon. On the protein level, alpha(4) and beta(2) subunits of nAChR protein were also significantly reduced. Mecamylamine (10 mu M), dihydro-beta-erythroidine (DH beta E) (5 mu M) and nicotine (10 mu M) efficiently prevented the decrease alpha(4) and beta(2) nAChR mRNA and protein in PC12 cells, but carbamaylcholine a weak agonist of nAChR was not efficient. These observations suggest that alpha(4)beta(2) nAChRs are involved in paraoxon related toxicity and nicotinic receptors antagonists could play some protective role against organophosphate related damages. (C) 2008 Elsevier B.V. All rights reserved.  
Keywords: paraoxon, nicotinic acetylcholine receptor, mRNA, mecamylamine, AChE,  
ISI Document Delivery No.: 300VY

883. Meinke, G.; Phelan, P. J.; Fradet-Turcotte, A.; Bohm, A.; Archambault, J., and Bullock, P. A. Structure-Based Analysis of the Interaction Between the Simian Virus 40 T-Antigen Origin Binding Domain and Single-Stranded Dna.   
Rec #: 50339  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Crit Rev Biochem Mol Biol. 1997;32(6):503-68 (medline /9444478)  
COMMENTS: Cites: J Virol. 1990 May;64(5):1973-83 (medline /2157865)  
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COMMENTS: Cites: J Virol. 1997 May;71(5):3972-85 (medline /9094674)  
COMMENTS: Cites: Genes Dev. 1997 May 1;11(9):1098-110 (medline /9159391)  
COMMENTS: Cites: Annu Rev Biochem. 1997;66:61-92 (medline /9242902)  
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COMMENTS: Cites: Acta Crystallogr D Biol Crystallogr. 2005 Apr;61(Pt 4):458-64 (medline /15805601)  
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COMMENTS: Cites: Acta Crystallogr D Biol Crystallogr. 2010 Feb;66(Pt 2):213-21 (medline /20124702)  
COMMENTS: Cites: J Mol Biol. 2010 Apr 16;397(5):1276-86 (medline /20219473)  
COMMENTS: Cites: Annu Rev Biochem. 2010;79:89-130 (medline /20373915)  
COMMENTS: Cites: Acta Crystallogr D Biol Crystallogr. 2010 Apr;66(Pt 4):486-501 (medline /20383002)  
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COMMENTS: Cites: J Virol. 1998 Dec;72(12):9771-81 (medline /9811712)  
ABSTRACT: The origin-binding domain (OBD) of simian virus 40 (SV40) large T-antigen (T-Ag) is essential for many of T-Ag's interactions with DNA. Nevertheless, many important issues related to DNA binding, for example, how single-stranded DNA (ssDNA) transits along the T-Ag OBD, have yet to be established. Therefore, X-ray crystallography was used to determine the costructure of the T-Ag OBD bound to DNA substrates such as the single-stranded region of a forked oligonucleotide. A second structure of the T-Ag OBD crystallized in the presence of poly(dT)(12) is also reported. To test the conclusions derived from these structures, residues identified as being involved in binding to ssDNA by crystallography or by an earlier nuclear magnetic resonance study were mutated, and their binding to DNA was characterized via fluorescence anisotropy. In addition, these mutations were introduced into full-length T-Ag, and these mutants were tested for their ability to support replication. When considered in terms of additional homology-based sequence alignments, our studies refine our understanding of how the T-Ag OBDs encoded by the polyomavirus family interact with ssDNA, a critical step during the initiation of DNA replication.  
MESH HEADINGS: Amino Acid Sequence  
MESH HEADINGS: Animals  
MESH HEADINGS: Antigens, Viral, Tumor/\*chemistry/genetics/\*metabolism  
MESH HEADINGS: Crystallography, X-Ray  
MESH HEADINGS: DNA, Single-Stranded/\*chemistry/\*metabolism  
MESH HEADINGS: Fluorescence Polarization  
MESH HEADINGS: Magnetic Resonance Spectroscopy  
MESH HEADINGS: Models, Molecular  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Mutagenesis, Site-Directed  
MESH HEADINGS: Mutant Proteins/genetics/metabolism  
MESH HEADINGS: Protein Binding  
MESH HEADINGS: Protein Structure, Tertiary  
MESH HEADINGS: Sequence Alignment  
MESH HEADINGS: Simian virus 40/\*physiology eng

884. Meire, Rodrigo Ornellas; Lee, Sum Chi; Yao, Yuan; Targino, Admir C; Torres, Joao Paulo M; Harner, Tom, and Meire, Rodrigo Ornellas. Seasonal and Altitudinal Variations of Legacy and Current-Use Pesticides in the Brazilian Tropical and Subtropical Mountains. 2012 Nov; 59, 108-116.   
Rec #: 42429  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Polyurethane foam (PUF) disk passive air samplers were deployed over summer (December-March) and winter (June-August) periods in 2007-2008 along altitudinal gradients in Brazilian southeastern and southern mountain regions. As part of the Global Atmospheric Passive Sampling (GAPS) Network, this work was initiated to address the lack of knowledge on the fate of legacy and current-use pesticides in South America, particularly in mountainous regions. Of the pesticides measured, concentrations in air were dominated by the current-use pesticides (CUPs) endosulfan (and its metabolite, endosulfan sulphate (EndoSO4)) and chlorpyrifos. Other pesticides that were regularly detected included alpha - and gamma -hexachlorocyclohexanes (HCHs), dieldrin, heptachlor epoxide and p,p'-DDE. Highest air concentrations were observed for total endosulfan (Endo I + Endo II + EndoSO4) (100s-1000s pg m-3), followed by chlorpyrifos, capital sigma DDT (mainly o,p'-DDT + p,p'-DDE), capital sigma HCH ( alpha -HCH + gamma -HCH), dieldrin and heptachlor epoxide. Seasonal variations did not show any clear trends for pesticides, except for endosulfan which reached concentration values one order of magnitude higher during summer at all sites compared to levels during winter. Along the altitudinal gradients, some pesticides showed higher atmospheric concentrations at sites above 1500 m which may indicate efficient high-altitude transport from regional sources. Northerly and southerly air back trajectories appeared to be the main continental influences at the two highest-altitude sites in both mountain regions. These trajectories travelled over extended crop areas from central Brazil to Argentina. A strong, positive correlation between air concentration and altitude was observed (Spearman's correlation, p < 0.05) for endosulfan, consistent with previous studies of endosulfan in mountainous regions in South America.  
Keywords: Meteorological & Geoastrophysical Abstracts; Environment Abstracts  
Keywords: Correlations  
Keywords: Summer  
Keywords: Environmental Studies  
Keywords: Endosulfan  
Keywords: Winter  
Keywords: Chlorpyrifos  
Keywords: Mountains  
Keywords: Argentina  
Keywords: Heptachlor  
Keywords: Foam  
Keywords: Pesticides  
Keywords: Air sampling  
Keywords: M2 551.5:General (551.5)  
Keywords: Mountain regions  
Keywords: Seasonal variations  
Keywords: ENA 01:Air Pollution  
Date revised - 2012-11-01  
Language of summary - English  
Location - Argentina  
Pages - 108-116  
ProQuest ID - 1222700911  
SubjectsTermNotLitGenreText - Foam; Correlations; Mountain regions; Seasonal variations; Mountains; Chlorpyrifos; Heptachlor; Pesticides; Air sampling; Summer; Winter; Endosulfan; Argentina  
Last updated - 2012-12-06  
Corporate institution author - Meire, Rodrigo Ornellas; Lee, Sum Chi; Yao, Yuan; Targino, Admir C; Torres, Joao Paulo M; Harner, Tom  
DOI - OB-b1fdbd11-8ec5-492f-8240csamfg201; 17270556; 1352-2310 English

885. Melnick, R. L.; Thayer, K. A., and Bucher, J. R. Conflicting Views on Chemical Carcinogenesis Arising From the Design and Evaluation of Rodent Carcinogenicity Studies.   
Rec #: 51359  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Occup Health. 2007 May;49(3):172-82 (medline /17575397)  
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COMMENTS: Cites: IARC Monogr Eval Carcinog Risks Hum. 1997;69:33-343 (medline /9336729)  
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COMMENTS: Cites: Natl Cancer Inst Carcinog Tech Rep Ser. 1976 Feb;2:1-215 (medline /12844147)  
COMMENTS: Cites: Ann N Y Acad Sci. 2002 Dec;982:177-89 (medline /12562636)  
COMMENTS: Cites: Br J Cancer. 2003 Jan 13;88(1):84-9 (medline /12556964)  
COMMENTS: Cites: Int J Occup Environ Health. 2002 Apr-Jun;8(2):144-52 (medline /12019681)  
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COMMENTS: Cites: Toxicol Sci. 2000 Jun;55(2):433-43 (medline /10828276)  
COMMENTS: Cites: Carcinogenesis. 2000 Apr;21(4):823-6 (medline /10753222)  
COMMENTS: Cites: N Engl J Med. 2005 Jul 14;353(2):116-8 (medline /16014880)  
ABSTRACT: Conflicting views have been expressed frequently on assessments of human cancer risk of environmental agents based on animal carcinogenicity data; this is primarily because of uncertainties associated with extrapolations of toxicologic findings from studies in experimental animals to human circumstances. Underlying these uncertainties are issues related to how experiments are designed, how rigorously hypotheses are tested, and to what extent assertions extend beyond actual findings. National and international health agencies regard carcinogenicity findings in well-conducted experimental animal studies as evidence of potential carcinogenic risk to humans. Controversies arise when both positive and negative carcinogenicity data exist for a specific agent or when incomplete mechanistic data suggest a possible species difference in response. Issues of experimental design and evaluation that might contribute to disparate results are addressed in this article. To serve as reliable sources of data for the evaluation of the carcinogenic potential of environmental agents, experimental studies must include a) animal models that are sensitive to the end points under investigation; b) detailed characterization of the agent and the administered doses; c) challenging doses and durations of exposure (at least 2 years for rats and mice); d) sufficient numbers of animals per dose group to be capable of detecting a true effect; e) multiple dose groups to allow characterization of dose-response relationships, f) complete and peer-reviewed histopathologic evaluations; and g) pairwise comparisons and analyses of trends based on survival-adjusted tumor incidence. Pharmacokinetic models and mechanistic hypotheses may provide insights into the biological behavior of the agent; however, they must be adequately tested before being used to evaluate human cancer risk.  
MESH HEADINGS: Animals  
MESH HEADINGS: Carcinogenicity Tests/methods  
MESH HEADINGS: Carcinogens/\*toxicity  
MESH HEADINGS: Dose-Response Relationship, Drug  
MESH HEADINGS: Humans  
MESH HEADINGS: Mice  
MESH HEADINGS: Public Health  
MESH HEADINGS: Rats  
MESH HEADINGS: Research Design  
MESH HEADINGS: Risk Assessment eng

886. Melnyk, L. J.; Byron, M. Z.; Brown, G. G.; Clayton, C. A., and Michael, L. C. Pesticides on Household Surfaces May Influence Dietary Intake of Children. 2011; 45, (10): 4594-4601.   
Rec #: 65159  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The physical and chemical environment influences children's exposures to pesticides in and around the home. Children's activities,. which increase their potential for exposure especially during eating, have been captured in the Children's Dietary Intake Model (CDIM). In addition to the chemical exposure associated with the food itself, this model incorporates excess dietary exposures due to handling of food during consumption. To stochastically evaluate CDIM, distributions of measured, and in some cases estimated, model factors were determined from measurements of permethrin, chlorpyrifos, and diazinon derived from assembled databases and laboratory experiments. Using the distributions of these factors, Monte Carlo simulations were performed to obtain distributions of total dietary intake of pesticides. To target the sources of pesticide contamination that were influencing total dietary intake, each factor was evaluated. We found pesticide surface concentration to be highly influential. By excluding surface concentration, we were also able to determine the influence of the other factors based on the F-statistic. Transfer efficiencies, followed by pesticide residue in consumed foods and amount of food consumed, were the next most influential factors within the model. With these distributions for model inputs, CDIM has the potential to more accurately predict total dietary intake of a contaminant by a child.  
Keywords: FARMWORKER CHILDREN, PRESCHOOL-CHILDREN, YOUNG-CHILDREN, CHLORPYRIFOS,  
ISI Document Delivery No.: 761UQ

887. Mendes, M. C.; Lima, C. K. P.; Nogueira, A. H. C.; Yoshihara, E.; Chiebao, D. P.; Gabriel, F. H. L.; Ueno, T. E. H.; Namindome, A., and Klafke, G. M. Resistance to cypermethrin, deltamethrin and chlorpyriphos in populations of Rhipicephalus (Boophilus) microplus (Acari: Ixodidae) from small farms of the State of Sao Paulo, Brazil. 2011; 178, (3-4): 383-388.   
Rec #: 65169  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: **A field survey of resistance** was conducted based on the larval packet test technique with synthetic pyrethroids (cypermethrin and deltamethrin) and organophosphates (chlorpyriphos) in Rhipicephalus (Boophilus) microplus field populations from six different regions of the State of Sao Paulo (Brazil). 82.6% of the populations showed resistance to cypermethrin, 86.36% to deltamethrin and 65.25% to chlorpyriphos, with 50% presenting resistance to both SP and OP acaricide. According to the questionnaires completed by the producers, OP + SP mixtures followed by SP-only formulations were the products most commonly used for controlling the cattle tick in the surveyed areas. The present study showed high occurrence of resistance to SP and OP in the State of Sao Paulo, Brazil and revealed the type of strategy adopted by small dairy farms in this state. This information is fundamental in order to establish the monitoring of resistance on each farm individually, contributing to the rational use of acaricides for the control of R. (B.) microplus. (C) 2011 Elsevier B.V. All rights reserved.  
Keywords: Rhipicephalus (Boophilus) microplus, Acaricide resistance, Synthetic  
ISI Document Delivery No.: 781AB

888. Mendonis, M ; Papoutsis, I; Pistos, C; Athanaselis, S; Spiliopoulou, C; Maravelias, C, and Mendonis, M. Determination of Anticholinesterase Insecticides in Biological Fluids Using a Gas Chromatographic Method. Applications in Clinical and Forensic Toxicology. 2008 Jun; 46, (5): 413.   
Rec #: 45859  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Objective: Anticholinesterase insecticides are widely used in most countries and as a result they are accused of being responsible for numerous acute and even fatal poisonings. Therefore, they must always be considered when investigating relevant forensic and clinical cases (1). The aim of the study was the development of a rapid, specific, sensitive and accurate method for the determination of eleven anticholinesterase insecticides (aldicarb, methomyl, methamidophos, carbofuran, diazinon, terbufos, chlorpyrifos, malathion, methidathion, azin-phos, dialifos) in blood. Method: A gas-chromatographic method combined with nitrogen-phosphorus detector (NPD) was developed, optimized and validated for the determination of the above pesticides. Only a small amount of blood (0.5 ml) is needed for the isolation of ana-lytes by liquid-liquid extraction with solvent mixture of toluene: chloroform (4:1). The organic phase was evaporated and the residues were reconstituted by addition of hexane, before of the injection (1 mu l) onto GC-NPD. Mevinphos was used as internal standard. Results: The recoveries were more than 80% for all the analytes. The calibration curves were linear in the corresponding dynamic ranges with correlation coefficient more than 0.996. For all analytes, the limits of detection were found between 1-15 ng/ml with S/N (3:1) and limits of quantitation were 3-50 ng/ml with S/N (10:1). Accuracy and precision were also calculated and were found to be less than 13%. The method was successfully applied to 6 insecticide poisoning cases where the organophosphates were determined. The identification results were confirmed by GC-MS. Conclusion: The method is simple, sensitive and specific and measures the levels of the insecticides in question in blood or other biological fluids. Therefore it could contribute to the investigation of both forensic and clinical toxicological cases of accidental and suicidal poisoning.  
Keywords: Organophosphates  
Keywords: Toluene  
Keywords: Carcinoembryonic antigen  
Keywords: methidathion  
Keywords: Malathion  
Keywords: Chloroform  
Keywords: Insecticides  
Keywords: Forensic science  
Keywords: Quantitation  
Keywords: X 24330:Agrochemicals  
Keywords: suicide  
Keywords: Environment Abstracts; Toxicology Abstracts  
Keywords: methamidophos  
Keywords: Carbofuran  
Keywords: Residues  
Keywords: Solvents  
Keywords: Poisoning  
Keywords: Aldicarb  
Keywords: carbofuran  
Keywords: organophosphates  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Blood  
Keywords: Pesticides  
Keywords: Diazinon  
Keywords: n-Hexane  
Date revised - 2008-07-01  
Language of summary - English  
Pages - 413  
ProQuest ID - 20255256  
SubjectsTermNotLitGenreText - Insecticides; Poisoning; Pesticides; suicide; Toluene; Organophosphates; carbofuran; Chlorpyrifos; Residues; Forensic science; Blood; methamidophos; Diazinon; Solvents; Carbofuran; Carcinoembryonic antigen; Quantitation; methidathion; Aldicarb; Chloroform; n-Hexane; Malathion; organophosphates  
Last updated - 2011-12-14  
British nursing index edition - Clinical Toxicology [Clin. Toxicol.]. Vol. 46, no. 5, p. 413. Jun 2008.  
Corporate institution author - Mendonis, M; Papoutsis, I; Pistos, C; Athanaselis, S; Spiliopoulou, C; Maravelias, C  
DOI - MD-0008302738; 8342782; 1556-3650 English

889. Meng, Junwang; Yang, Bo; Zhang, Yang; Dong, Xinyu, and Shu, Jinian. Heterogeneous ozonation of suspended malathion and chlorpyrifos particles. 2010 Apr; 79, ( 4): 394-400.   
Rec #: 1230  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: The heterogeneous ozonation of suspended malathion and chlorpyrifos particles are studied in real-time with a vacuum ultraviolet photoionization aerosol time-of-flight mass spectrometer (VUV-ATOFMS). The pesticide particles with the diameter of hundreds of nanometers are generated by the homogeneous nucleation method using azelaic acid as nucleus. The reactions are carried out in an aerosol reaction chamber under ambient pressure (1 atm) and room temperature (298 K), respectively. The time-of-flight mass spectra of the solid-state ozonation products of malathion and chlorpyrifos are obtained. The assignments of the mass spectra reveal that the major ozonation products of malathion particles are s-(1,2-diethoxycarbonyl)ethyl-O,O-dimethylphosphorothioate (malaoxon), 2-mercapto-succinic acid diethylester, 1,2-dicarbethoxyethyl-dimethoxyphosphinyldisulfide and bis(1,2-bis-ethoxycarbonyl-ethyl)disulfide. The experimental results reveal that water vapor can enhance the formation of malaoxon, 2-mercapto-succinic acid diethylester and bis(1,2-bis-ethoxycarbonyl-ethyl)disulfide. In the case of chlorpyrifos, the sole ozonation product observed is 3,5,6-trichloro-2-pyridyl-diethylphosphate (chlorpyrifos oxon). The pathways of heterogeneous ozonation of malathion and chlorpyrifos particles are proposed. The atmospheric lifetimes of malathion and chlorpyrifos particles towards ozone reaction are estimated based on the time-dependent mass spectrometric signals obtained. Pesticide/ Ozonation/ Malathion/ Chlorpyrifos/ Aerosol/ AMS

890. Menn, J. J.; King, E. G., and Coleman, R. J. Future Control Strategies for Heliothis in Cotton. 1989; 10, 101-121.   
Rec #: 220  
Keywords: REVIEW  
Call Number: NO REVIEW (ACP,AZ,BFT,CPY,CYF,CYH,CYP,FNV,FVL,MOM,MP,PFF,PMR,TDC,TLM)  
Notes: EcoReference No.: 153341  
Chemical of Concern: ACP,AZ,BFT,CPY,CYF,CYH,CYP,FNV,FVL,FYT,MOM,MP,PFF,PMR,SPS,TDC,TLM

891. Menzie, C. M. Metabolism of Pesticides. 1969: 487 p.   
Rec #: 230  
Keywords: REVIEW  
Call Number: NO REVIEW (CPY)  
Notes: Chemical of Concern: CPY

892. Merbl, Y.; Aroch, I.; Klainbart, S.; Aizenberg, Z., and Kelmer, E. INTERMEDIATE SYNDROME OF CHLORPYRIPHOS TOXICITY (POLARIS (R)) IN A CARACAL (CARACAL CARACAL). 2011; 42, (1): 144-148.   
Rec #: 65189  
Keywords: INCIDENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A 5-yr-old spayed female caracal (Caracal caracal) was presented with complaints of acute onset of mental dullness, ataxia, and ventroflexion of 24-hr duration. The animal's garden territory was sprayed a day earlier with an organophosphate (OP) insecticide (**chlorpyriphos-methyl**). The caracal was treated for OP toxicosis and mildly improved. It was discharged a day later at the owner's request, although clinical signs did not resolve. During the following week, the caracal was confined to prevent further toxin exposure but did not improve and was presented 8 days later with similar clinical signs. Serum butyril-cholinesterase activity was markedly low. The relatively long interval from OP exposure, along with the duration of clinical signs, suggested an intermediate syndrome of OP toxicity. The caracal was treated symptomatically and progressively improved. It was discharged after 8 days of hospitalization and made full recovery 30 days later. This is the first report of OP toxicity in a caracal, suspected to progress to an intermediate syndrome of OP poisoning.  
Keywords: Caracal caracal, organophosphates, toxicity, intermediate syndrome  
ISI Document Delivery No.: 736EC

893. Mergler, D. Neurotoxic exposures and effects: Gender and sex matter! Hanninen Lecture 2011. 2012; 33, (4): 644-651.   
Rec #: 65199  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Although males and females differ both biologically and in their social and power relations throughout their life span, research in environmental and occupational neurotoxicology often ignore sex and/or gender as a characteristic that requires in-depth consideration. The neurotoxicology literature continues to confuse the terms sex (biological attributes) and gender (socially constructed roles and behavior) and the words are still used interchangeably. Throughout the lifespan, sex and gender are in interaction and both may play a role in influencing exposure and effect. Studies that have examined both males and females, provide evidence for sex differences in toxicokinetics and responses to neurotoxic assault as well as gender differences in exposure patterns, biomarkers of exposure, neurobehavioral performance and social consequences. Integrating sex and gender considerations into research in neurotoxicology would not only provide us with a better understanding of the mechanisms and pathways that lead to toxic assault, but also provide a means to improve preventive intervention strategies. (C) 2012 Elsevier Inc. All rights reserved.  
Keywords: Gender, Sex, Neurotoxicology, Environmental exposures, Occupational  
ISI Document Delivery No.: 990FU

894. Merli, A.; Reeves, G.; Meregalli, G.; Piccinini, A.; Negri, I.; Carmignano, P.; Balderacchi, M., and Capri, E. Surface-water exposure to quinoxyfen: Assessment in landscape vineyards. 2010; 383, (1-2): 62-72.   
Rec #: 65209  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Protection of surface- and ground-water quality is critical for economic viability, as well as for human health and the environment. Furthermore, maintenance of the biodiversity of natural aquatic ecosystems is very important. The objective of this paper is to report methodology developed for the assessment of the surface-water exposure to pesticide using as example the fungicide **quinoxyfen** because persistent, lipophylic and hazard for the aquatic organisms. Exposure monitoring was carried out over two years (2005 and 2006) following historical and subsequent applications in Italian vineyards and to investigate the presence of residue in non-target areas close to the crop receiving repeated applications. After development of the monitoring procedures, surface-water contamination and biota exposure were determined during and after field treatments. Very low concentrations were found in sediments, often in contradiction with model and laboratory results, leading to the conclusion that even the historical use of quinoxyfen in vineyards within the catchment was not contaminating sediment in water bodies, which was regarded as the natural sink for such a pesticide due to its strong sorptive properties. For biota, quinoxyfen residues in benthic macroinvertebrates and fish in the vast majority of the samples were below the corresponding limit of detection (LOD). Thus long-term accumulation of quinoxyfen in sediments and organisms of the aquatic ecosystems would not be expected due main to the environmental conditions of the landscape that mitigate the overall exposure. (C) 2009 Elsevier B.V. All rights reserved.  
Keywords: Pesticide, Quinoxyfen, Aquatic organisms, Surface-water exposure  
ISI Document Delivery No.: 574CQ

895. Merrill, Elaine; Ruark, Chris; Gearhart, Jeff, and Robinson, Peter. CHAPTER 62 - Physiologically Based Pharmacokinetic/Pharmacodynamic Modeling of Countermeasures to Nerve Agents. Ramesh C. Gupta. Handbook of Toxicology of Chemical Warfare Agents. San Diego: Academic Press; 2009: 951-964.   
Rec #: 4540  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ISSN/ISBN: 978-0-12-374484-5 Publisher Summary

896. Merugu, R; Prasad, Msk; Girisham, S; Reddy, S M, and Merugu, R. Tolerance of Certain Pesticides by Two Nitrogen Fixing Anoxygenic Phototrophic Bacteria. 2008 Sep; 7, (3): 467-469.   
Rec #: 45639  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The tolerance of some pesticides by two anoxygenic phototrophic bacteria, isolated from leather industry effluents, was investigated. Rhodobacterium capsulatus was found to be more resistant than Rhodopseudomonas acidophila to the pesticides tried in the present investigation. The pattern of inhibition of growth for both the organisms show that chlorpyrifos was most potent followed by methyl parathion, endosulfan, rogor and kitazin in a descending order.  
Keywords: Leather  
Keywords: ENVIRONMENTAL STUDIES--POLLUTION  
Keywords: Pollution Abstracts; Environmental Engineering Abstracts  
Keywords: Effluents  
Keywords: Endosulfan  
Keywords: Rhodopseudomonas acidophila  
Keywords: Chlorpyrifos  
Keywords: Pesticides  
Keywords: Phototrophic bacteria  
Keywords: Methyl parathion  
Keywords: Pollution  
Keywords: Nitrogen  
Keywords: Parathion  
Date revised - 2008-12-01  
Language of summary - English  
Pages - 467-469  
ProQuest ID - 290274613  
SubjectsTermNotLitGenreText - Rhodopseudomonas acidophila; Pesticides; Parathion; Effluents; Nitrogen; Endosulfan; Chlorpyrifos; Phototrophic bacteria; Pollution; Methyl parathion; Leather  
Last updated - 2011-11-03  
Corporate institution author - Merugu, R; Prasad, MSK; Girisham, S; Reddy, S M  
DOI - OB-MD-0008865178; 8606147; 0972-6268 English

897. Metcalf, R. L. Laboratory Model Ecosystem Evaluation of the Chemical and Biological Behavior of Radiolabeled Micropollutants. SOIL; 1975; 5, 141-151.   
Rec #: 240  
Keywords: PUBL AS  
Call Number: NO PUBL AS (CPY,CPYM,PPX)  
Notes: Chemical of Concern: AND,CPY,CPYM,DDE,DDT,DLD,EN,HCCH,MRX,PHTH,PPCP,PPX

898. Mey, A. R.; Craig, S. A., and Payne, S. M. Effects of Amino Acid Supplementation on Porin Expression and Toxr Levels in Vibrio Cholerae.   
Rec #: 50069  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY   
Abstract: ABSTRACT: Vibrio cholerae responds to environmental changes by altering the protein composition of its outer membrane. In rich medium, V. cholerae expresses almost exclusively the outer membrane porin OmpU, whereas in minimal medium, OmpT is the dominant porin. The supplementation of a minimal medium with a mixture of asparagine, arginine, glutamic acid, and serine (NRES) promotes OmpU production and OmpT repression at levels similar to those seen with rich media. Here we show that the altered Omp profile is not due to an increase in the growth rate in the presence of supplemental amino acids but requires the addition of specific amino acids. The effects of the NRES mix on Omp production were mediated by ToxR, a known regulator of omp gene expression. No changes in the Omp profile were detected in a toxR mutant. Supplementation with the NRES mix resulted in significantly higher levels of ToxR, and the elevated ToxR levels were sufficient to cause a switch in Omp synthesis. The increase in the level of the ToxR protein correlated with an increase in toxR mRNA levels and was observed only when toxR was expressed from its native promoter. ToxS, which is required for ToxR activity, was necessary for NRES-mediated omp gene regulation but not for the increase in ToxR levels. The growth of V. cholerae in the presence of bile acids also resulted in Omp switching, and this required ToxR. However, unlike the NRES mix, bile acids did not increase either ToxR protein or toxR mRNA levels, suggesting a different mechanism of omp gene regulation by bile than that by amino acids.  
MESH HEADINGS: Adhesins, Bacterial/genetics/metabolism  
MESH HEADINGS: Amino Acids/metabolism/\*pharmacology  
MESH HEADINGS: Animals  
MESH HEADINGS: Bacterial Proteins/genetics/\*metabolism  
MESH HEADINGS: Bile Acids and Salts/pharmacology  
MESH HEADINGS: Chemotaxis  
MESH HEADINGS: Culture Media  
MESH HEADINGS: DNA-Binding Proteins/genetics/\*metabolism  
MESH HEADINGS: Gene Expression Regulation, Bacterial/\*drug effects  
MESH HEADINGS: Intestines/metabolism  
MESH HEADINGS: Mucins/metabolism/pharmacology  
MESH HEADINGS: Porins/genetics/\*metabolism  
MESH HEADINGS: Promoter Regions, Genetic  
MESH HEADINGS: RNA, Bacterial/genetics/metabolism  
MESH HEADINGS: RNA, Messenger/genetics/metabolism  
MESH HEADINGS: Rabbits  
MESH HEADINGS: Temperature  
MESH HEADINGS: Transcription Factors/genetics/\*metabolism  
MESH HEADINGS: Vibrio cholerae/drug effects/\*metabolism eng

899. Meyer, A.; Koifman, S.; Koifman, R. J.; Moreira, J. C.; Chrisman, J. D., and Abreu-Villaca, Y. Mood Disorders Hospitalizations, Suicide Attempts, and Suicide Mortality Among Agricultural Workers and Residents in an Area With Intensive Use of Pesticides in Brazil. 2010; 73, (13-14): 866-877.   
Rec #: 65219  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: As suicide rates have increased in rural areas in Brazil, it was postulated that pesticide exposure may play a role in this phenomenon. Our study compared the suicide mortality rates observed among agricultural workers from a pesticide-intensive area in Brazil to the suicide mortality frequency noted in three reference populations. In addition, hospitalization rates attributed to suicide attempts and mood disorders including depression in residents of the same agricultural area were compared to two reference populations. Finally, data on pesticide sales per agricultural worker were obtained for each city of Rio de Janeiro State and suicide mortality risk was then calculated according to the quartiles of pesticide sales per agricultural workers, using the first quartile as reference. Agricultural workers were at greater risk for lethality due to suicide when compared to all three reference populations. In addition, residents of the same study area showed higher hospitalization rates by suicide attempts and mood disorders than observed in comparison populations. Results also showed that the risk of death by suicide was significantly higher among agricultural workers who lived in areas of Rio de Janeiro State displaying higher rates of pesticide expenditure per agricultural worker. These results suggest that pesticide exposure may indeed increase the risk of suicide frequency, especially among agricultural workers.  
Keywords: DEVELOPMENTAL NEUROTOXICITY, URBAN/RURAL INEQUALITIES, GESTATIONAL  
ISI Document Delivery No.: 612TB

900. Michael, H. A. and Voss, C. I. Evaluation of the Sustainability of Deep Groundwater as an Arsenic-Safe Resource in the Bengal Basin.   
Rec #: 51199  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Tens of millions of people in the Bengal Basin region of Bangladesh and India drink groundwater containing unsafe concentrations of **arsenic**. This high-arsenic groundwater is produced from shallow ( < 100 m) depths by domestic and irrigation wells in the Bengal Basin aquifer system. The government of Bangladesh has begun to install wells to depths of >150 m where groundwater arsenic concentrations are nearly uniformly low, and many more wells are needed, however, the sustainability of deep, arsenic-safe groundwater has not been previously assessed. Deeper pumping could induce downward migration of dissolved arsenic, permanently destroying the deep resource. Here, it is shown, through quantitative, large-scale hydrogeologic analysis and simulation of the entire basin, that the deeper part of the aquifer system may provide a sustainable source of arsenic-safe water if its utilization is limited to domestic supply. Simulations provide two explanations for this result: deep domestic pumping only slightly perturbs the deep groundwater flow system, and substantial shallow pumping for irrigation forms a hydraulic barrier that protects deeper resources from shallow arsenic sources. Additional analysis indicates that this simple management approach could provide arsenic-safe drinking water to >90% of the arsenic-impacted region over a 1,000-year timescale. This insight may assist water-resources managers in alleviating one of the world's largest groundwater contamination problems.  
MESH HEADINGS: Arsenic/\*analysis  
MESH HEADINGS: Computer Simulation  
MESH HEADINGS: Environmental Monitoring/\*methods  
MESH HEADINGS: Geography  
MESH HEADINGS: Models, Theoretical  
MESH HEADINGS: Reproducibility of Results  
MESH HEADINGS: Soil/analysis  
MESH HEADINGS: Soil Pollutants/\*analysis  
MESH HEADINGS: Water Supply/\*analysis/standards eng

901. Michiels, J. F.; Perrin, C.; Leccia, N.; Massi, D.; Grimaldi, P., and Wagner, N. Pparbeta Activation Inhibits Melanoma Cell Proliferation Involving Repression of the Wilms' Tumour Suppressor Wt1.   
Rec #: 50619  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Peroxisome proliferator-activated receptors (PPARs) are ligand-activated transcription factors that strongly influence molecular signalling in normal and cancer cells. Although increasing evidence suggests a role of PPARs in skin carcinogenesis, only expression of PPARgamma has been investigated in human melanoma tissues. Activation of PPARalpha has been shown to inhibit the metastatic potential, whereas stimulation of PPARgamma decreased melanoma cell proliferation. We show here that the third member of the PPAR family, PPARbeta/delta is expressed in human melanoma samples. Specific pharmacological activation of PPARbeta using GW0742 or GW501516 in low concentrations inhibits proliferation of human and murine melanoma cells. Inhibition of proliferation is accompanied by decreased expression of the Wilms' tumour suppressor 1 (WT1), which is implicated in melanoma proliferation. We demonstrate that PPARbeta directly represses WT1 as (1) PPARbeta activation represses WT1 promoter activity; (2) in chromatin immunoprecipitation and electrophoretic mobility shift assays, we identified a binding element for PPARbeta in the WT1 promoter; (3) deletion of this binding element abolishes repression by PPARbeta and (4) the WT1 downstream molecules nestin and zyxin are down-regulated upon PPARbeta activation. Our findings elucidate a novel mechanism of signalling by ligands of PPARbeta, which leads to suppression of melanoma cell growth through direct repression of WT1.  
MESH HEADINGS: Aged  
MESH HEADINGS: Aged, 80 and over  
MESH HEADINGS: Animals  
MESH HEADINGS: Cell Line, Tumor  
MESH HEADINGS: Cell Proliferation  
MESH HEADINGS: Female  
MESH HEADINGS: Gene Expression Regulation, Neoplastic/physiology  
MESH HEADINGS: Humans  
MESH HEADINGS: Male  
MESH HEADINGS: Melanoma/classification/\*metabolism  
MESH HEADINGS: Mice  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: PPAR-beta/\*metabolism  
MESH HEADINGS: Skin/metabolism  
MESH HEADINGS: WT1 Proteins/\*metabolism eng

902. Middlemore-Risher, Mary-Louise; Adam, Bao-Ling; Lambert, Nevin a, and Terry, Alvin V. Effects of Chlorpyrifos and Chlorpyrifos-Oxon on the Dynamics and Movement of Mitochondria in Rat Cortical Neurons. 2011 Nov; 339, (2): 341-349.   
Rec #: 39309  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphate (OP)-based pesticides have been used extensively for decades, and as a result, they have become almost ubiquitous in our environment. There is clinical and animal evidence to suggest that chronic exposures to OPs can lead to cognitive dysfunction and other neurological abnormalities, although the mechanism for these effects is unknown. We previously reported that repeated, subthreshold exposures (defined as doses not associated with signs of acute toxicity) to the commonly used OP chlorpyrifos (CPF) resulted in protracted impairments in the performance of attention and memory-related tasks in rodents as well as deficits in axonal transport ex vivo (in the sciatic nerve). Here, we investigated the effects of CPF and its active metabolite CPF oxon (CPO) on the dynamics and movement of mitochondria in rat primary cortical neurons using time-lapse imaging techniques. **Exposure to CPF (1.0-20.0 ÎĽM) or CPO (5.0 nM-20.0 ÎĽM) for 1 or 24 h resulted in a concentration-dependent increase in mitochondrial length, a decrease in mitochondrial number (indicative of increased fusion events), and a decrease in their movement in axons.** The changes occurred at concentrations of CPF and CPO that did not inhibit acetylcholinesterase activity (the commonly cited mechanism of acute OP toxicity), and they were not blocked by cholinergic receptor antagonists. Furthermore, the changes did not seem to be associated with direct (OP-related) effects on mitochondrial viability or function (i.e., mitochondrial membrane potential or ATP production). The results suggest that an underlying mechanism of organophosphate-based deficits in cognitive function might involve alterations in mitochondrial dynamics and/or their transport in axons.  
Keywords: 2921-88-2  
Keywords: Cerebral Cortex -- cytology  
Keywords: Animals  
Keywords: Cerebral Cortex -- drug effects  
Keywords: Acetylcholinesterase  
Keywords: Neurons -- drug effects  
Keywords: Nicotinic Antagonists  
Keywords: Superoxides  
Keywords: Receptors, Cholinergic  
Keywords: 56-65-5  
Keywords: 11062-77-4  
Keywords: Rats  
Keywords: Cerebral Cortex -- physiology  
Keywords: Superoxides -- metabolism  
Keywords: Cholinesterase Inhibitors -- toxicity  
Keywords: Insecticides  
Keywords: Axonal Transport -- drug effects  
Keywords: Mitochondria -- drug effects  
Keywords: Cell Movement -- drug effects  
Keywords: GPI-Linked Proteins -- antagonists & inhibitors  
Keywords: Adenosine Triphosphate  
Keywords: EC 3.1.1.7  
Keywords: Insecticides -- pharmacology  
Keywords: Insecticides -- toxicity  
Keywords: Mitochondria -- physiology  
Keywords: Axons -- drug effects  
Keywords: Dose-Response Relationship, Drug  
Keywords: Receptors, Cholinergic -- metabolism  
Keywords: Chlorpyrifos  
Keywords: Ache protein, rat  
Keywords: Cholinesterase Inhibitors  
Keywords: Membrane Potential, Mitochondrial -- drug effects  
Keywords: Rats, Sprague-Dawley  
Keywords: 0  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Chlorpyrifos -- analogs & derivatives  
Keywords: Adenosine Triphosphate -- metabolism  
Keywords: Nicotinic Antagonists -- pharmacology  
Keywords: Adenosine Triphosphate -- biosynthesis  
Keywords: GPI-Linked Proteins  
Date completed - 2012-01-16  
Date created - 2011-10-20  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 341-349  
ProQuest ID - 900628488  
Last updated - 2013-01-19  
British nursing index edition - The Journal of pharmacology and experimental therapeutics, November 2011, 339(2):341-349  
Corporate institution author - Middlemore-Risher, Mary-Louise; Adam, Bao-Ling; Lambert, Nevin A; Terry, Alvin V  
DOI - MEDL-21799050; 21799050; PMC3199992; 1521-0103 eng

903. Miles, J. R. W.; Harris, C. R., and Moy, P. Insecticide Residues in Organic Soil of the Holland Marsh, Ontario, Canada, 1972-75. 1978; 71, (1): 97-101.   
Rec #: 1870  
Keywords: FATE  
Call Number: NO FATE (CPY,DZ,ES)  
Notes: Chemical of Concern: AND,CPY,DDT,DLD,DZ,EN,EPRN,ES,ETN,FNF,PRN

904. Miller, P. W. Residues of Chlorpyrifos and 3,5,6-Trichloro-2-Pyridinol in or on Peanuts Receiving One or Two Applications of Lorsban Insecticides. SOIL; 1979.  
Rec #: 1130  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

905. ---. Residues of Chlorpyrifos and 3,5,6-Trichloro-2-Pyridinol in Peanut Fractions. SOIL; 1979.  
Rec #: 1140  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

906. Miller, P. W. and Ervick, D. K. Residues of Chlorpyrifos and 3,5,6-Trichloro-2-Pyridinol in or on Peanuts Receiving Multiple Applications of Lorsban Insecticides. SOIL; 1978.  
Rec #: 1120  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

907. Mineau, P. Estimating the Probability of Bird Mortality from Pesticide Sprays on the Basis of the Field Study Record. 2002; 21, (7): 1497-1506.   
Rec #: 1150  
Keywords: MODELING,REFS CHECKED  
Call Number: NO MODELING (ACP,AZ,CBF,CBL,CPY,DCTP,DMT,DS,DZ,FMP,FNT,MCB,MLN,MOM,MP,MTM,MVP,OML,PPX,TCF), NO REFS CHECKED (ACP,AZ,CBF,CBL,CPY,DCTP,DMT,DS,DZ,FMP,FNT,MCB,MLN,MOM,MP,MTM,MVP,OML,PPX,TCF)  
Notes: Chemical of Concern: ACP,AZ,BDC,CBF,CBL,CPY,DCTP,DMT,DS,DZ,EPRN,FMP,FNT,FNTH,IFP,MCB,MLN,MOM,MP,MTM,MVP,OML,PHSL,PIM,PPHP,PPX,PRN,SPS,TCF

908. Mink, P. J.; Kimmel, C. A., and Li, A. A. POTENTIAL EFFECTS OF CHLORPYRIFOS ON FETAL GROWTH OUTCOMES: IMPLICATIONS FOR RISK ASSESSMENT. 2012; 15, (4): 281-316.   
Rec #: 65269  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos (CPF) is one of the most widely used organophosphate insecticides in the United States. By December 2000, nearly all residential uses were voluntarily canceled, so that today, CPF is only used to control insect pests on a variety of crops. Periodic review of the potential effects of CPF on all developmental outcomes is necessary in the United States because the Food Quality Protection Act mandates special consideration of risk assessments for infants and children. This article reviews epidemiologic studies examining the association of potential CPF exposure with growth indices, including birth weight, birth length, and head circumference, and animal studies focusing on related somatic developmental endpoints. It differs from earlier reviews by including an additional cohort study and providing in-depth systematic evaluation of the patterns of association across different studies with respect to specificity of biomarkers for CPF, consistency, dose response, strength of association, temporality, and biological plausibility (Hill 1965), as well as consideration of the potential role of effect modification and bias. The review did not identify any strong associations exhibiting consistent exposure-response patterns that were observed in more than one of the four cohort studies evaluated. In addition, the animal data indicate that developmental effects occur at doses that produce substantial maternal toxicity and red blood cell (RBC) acetylcholinesterase (AChE) inhibition. Based on consideration of both the epidemiologic and animal data, maternal RBC AChE inhibition is a more sensitive endpoint for risk assessment than somatic developmental effects reviewed in this article.  
Keywords: ORGANOPHOSPHATE PESTICIDE EXPOSURE, BIOMONITORING DATA, BIRTH OUTCOMES,  
ISI Document Delivery No.: 940UW

909. Mirajkar, Nikita; Pope, Carey N, and Mirajkar, Nikita. In Vitro Sensitivity of Cholinesterases and [ Super(3)H]Oxotremorine-M Binding in Heart and Brain of Adult and Aging Rats to Organophosphorus Anticholinesterases . 2008 Oct; 76, (8): 1047-1058.   
Rec #: 45509  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorus (OP) insecticides elicit toxicity via acetylcholinesterase inhibition, allowing acetylcholine accumulation and excessive stimulation of cholinergic receptors. Some OP insecticides bind to additional macromolecules including butyrylcholinesterase and cholinergic receptors. While neurotoxicity from OP anticholinesterases has been extensively studied, effects on cardiac function have received less attention. **We compared the in vitro sensitivity of acetylcholinesterase, butyrylcholinesterase and [ super(3)H]oxotremorine-M binding to muscarinic receptors in the cortex and heart of adult (3 months) and aging (18 months) rats to chlorpyrifos, methyl parathion and their active metabolites chlorpyrifos oxon and methyl paraoxon.** Using selective inhibitors, the great majority of cholinesterase in brain was defined as acetylcholinesterase, while butyrylcholinesterase was the major cholinesterase in heart, regardless of age. In the heart, butyrylcholinesterase was markedly more sensitive than acetylcholinesterase to inhibition by chlorpyrifos oxon, and butyrylcholinesterase in tissues from aging rats was more sensitive than enzyme from adults, possibly due to differences in A-esterase mediated detoxification. Relatively similar differences were noted in brain. In contrast, acetylcholinesterase was more sensitive than butyrylcholinesterase to methyl paraoxon in both heart and brain, but no age-related differences were noted. Both oxons displaced [ super(3)H]oxotremorine-M binding in heart and brain of both age groups in a concentration-dependent manner. Chlorpyrifos had no effect but methyl parathion was a potent displacer of binding in heart and brain of both age groups. Such OP and age-related differences in interactions with cholinergic macromolecules may be important because of potential for environmental exposures to insecticides as well as the use of anticholinesterases in age-related neurological disorders.  
Keywords: Heart  
Keywords: Detoxification  
Keywords: Macromolecules  
Keywords: Age  
Keywords: Neurological diseases  
Keywords: Acetylcholinesterase  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: Acetylcholine receptors (muscarinic)  
Keywords: Aging  
Keywords: Brain  
Keywords: Toxicology Abstracts; CSA Neurosciences Abstracts  
Keywords: Enzymes  
Keywords: Metabolites  
Keywords: Paraoxon  
Keywords: Acetylcholine receptors  
Keywords: Cholinesterase  
Keywords: Chlorpyrifos  
Keywords: Cortex  
Keywords: Insecticides  
Keywords: Neurotoxicity  
Keywords: Methyl parathion  
Keywords: X 24330:Agrochemicals  
Keywords: Attention  
Date revised - 2009-01-01  
Language of summary - English  
Pages - 1047-1058  
ProQuest ID - 19696259  
SubjectsTermNotLitGenreText - Heart; Brain; Acetylcholinesterase; Chlorpyrifos; Insecticides; Aging; Age; Cholinesterase; Macromolecules; Neurotoxicity; Acetylcholine receptors; Paraoxon; Methyl parathion; Cortex; Enzymes; Acetylcholine receptors (muscarinic); Metabolites; Neurological diseases; Detoxification; Attention  
Last updated - 2011-12-14  
British nursing index edition - Biochemical Pharmacology [Biochem. Pharmacol.]. Vol. 76, no. 8, pp. 1047-1058. Oct 2008.  
Corporate institution author - Mirajkar, Nikita; Pope, Carey N  
DOI - MD-0009030662; 8844438; 0006-2952 English

910. Misevi&#269 ; Ien&#279; L; Anusevi&#269; Ius, Z.; Sarlauskas, J.; Sevrioukova, I. F.; C&#279, and Nas, N. Redox Reactions of the Fad-Containing Apoptosis-Inducing Factor (Aif) With Quinoidal Xenobiotics: a Mechanistic Study.   
Rec #: 50159  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY   
Abstract: COMMENTS: Cites: J Med Chem. 1976 Nov;19(11):1302-8 (medline /1003407)  
COMMENTS: Cites: Biochemistry. 2007 Nov 13;46(45):13235-44 (medline /17941648)  
COMMENTS: Cites: Biochim Biophys Acta. 1989 Mar 23;973(3):399-404 (medline /2647141)  
COMMENTS: Cites: Nature. 1999 Feb 4;397(6718):441-6 (medline /9989411)  
COMMENTS: Cites: J Exp Med. 2000 Aug 21;192(4):571-80 (medline /10952727)  
COMMENTS: Cites: J Biol Chem. 2001 May 11;276(19):16391-8 (medline /11278689)  
COMMENTS: Cites: Nat Struct Biol. 2002 Jun;9(6):442-6 (medline /11967568)  
COMMENTS: Cites: Subcell Biochem. 2002;36:151-70 (medline /12037979)  
COMMENTS: Cites: Science. 2002 Nov 22;298(5598):1587-92 (medline /12446902)  
COMMENTS: Cites: J Biol Chem. 2004 Jan 23;279(4):2583-92 (medline /14604985)  
COMMENTS: Cites: Oncogene. 2004 Feb 26;23(8):1514-21 (medline /14716299)  
COMMENTS: Cites: J Biol Chem. 2005 Feb 25;280(8):6447-54 (medline /15590628)  
COMMENTS: Cites: Cell Death Differ. 2005 Nov;12(11):1445-8 (medline /15933737)  
COMMENTS: Cites: Biochemistry. 2007 Apr 17;46(15):4661-70 (medline /17373777)  
COMMENTS: Cites: J Biol Chem. 2008 Feb 29;283(9):5622-31 (medline /18167347)  
COMMENTS: Cites: J Mol Biol. 2009 Jul 31;390(5):924-38 (medline /19447115)  
COMMENTS: Cites: Curr Mol Pharmacol. 2008 Jan;1(1):80-92 (medline /20021426)  
COMMENTS: Cites: Trends Biochem Sci. 2010 May;35(5):278-87 (medline /20138767)  
COMMENTS: Cites: Arch Biochem Biophys. 2010 Feb 1;494(1):32-9 (medline /19919822)  
COMMENTS: Cites: Arch Biochem Biophys. 1994 Dec;315(2):400-6 (medline /7986084)  
COMMENTS: Cites: Clin Cancer Res. 1998 Dec;4(12):3083-8 (medline /9865924)  
COMMENTS: Cites: FASEB J. 2001 Mar;15(3):758-67 (medline /11259394)  
COMMENTS: Cites: Arch Biochem Biophys. 2002 Aug 15;404(2):254-62 (medline /12147263)  
COMMENTS: Cites: Acta Biochim Pol. 2007;54(2):379-85 (medline /17546202)  
COMMENTS: Cites: Chem Biol Interact. 1991;80(1):1-41 (medline /1913977)  
ABSTRACT: Mitochondrial apoptosis-inducing factor (AIF) is a FAD-containing protein that under certain conditions translocates to the nucleus and causes a programmed cell death, apoptosis. The apoptogenic action of AIF is redox controlled as the NADH-reduced AIF dimer has lower affinity for DNA than the oxidized monomer. To gain further insights into the mechanism of AIF, we investigated its interaction with a series of quinone oxidants, including a number of anticancer quinones. Our data indicate that the NADH:quinone oxidoreduction catalyzed by AIF follows a &quot;ping-pong&quot; scheme, with the reductive half-reaction being rate-limiting and the FADH(-)-NAD(+) charge-transfer complex serving as an electron donor. AIF is equally reactive toward benzo- and naphthoquinones, but may discriminate structures with a higher number of aromatic rings. The reactivity of quinones is mainly defined by their one-electron reduction potential, whereas the size and nature of the substituents play a minor role. AIF is unlikely to significantly contribute to bioreductive activation of low-potential quinoidal anticancer quinones. However, high-potential quinones, e.g. a toxic natural compound naphthazarin, maintain AIF in the oxidized state when a significant excess of NADH is present. Thus, these compounds may prevent the accumulation of the reduced form of AIF in vivo, and enhance AIF-mediated apoptosis.  
MESH HEADINGS: Animals  
MESH HEADINGS: Apoptosis/physiology  
MESH HEADINGS: Apoptosis Inducing Factor/chemistry/genetics/\*metabolism  
MESH HEADINGS: Flavin-Adenine Dinucleotide/chemistry/metabolism  
MESH HEADINGS: Kinetics  
MESH HEADINGS: Mice  
MESH HEADINGS: Models, Biological  
MESH HEADINGS: Oxidants/metabolism  
MESH HEADINGS: Oxidation-Reduction  
MESH HEADINGS: Quinones/metabolism  
MESH HEADINGS: Recombinant Proteins/chemistry/genetics/metabolism  
MESH HEADINGS: Xenobiotics/metabolism eng

911. Mishra, Rupesh K; Dominguez, Rocio B; Bhand, Sunil; Muă±Oz, Roberto, and Marty, Jean-Louis. A Novel Automated Flow-Based Biosensor for the Determination of Organophosphate Pesticides in Milk. 2012 Feb 15; 32, (1): 56-61.   
Rec #: 46859  
Keywords: FOOD  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: This work describes the development of an automated flow-based biosensor that employs genetically modified acetylcholinesterase (AChE) enzymes B394, B4 and wild type B131. The biosensor was based on a screen printed carbon electrode (SPE) that was integrated into a flow cell. Enzymes were immobilised on cobalt (II) phthalocyanine (CoPC) modified electrodes by entrapment in a photocrosslinkable polymer (PVA-AWP). The automated flow-based biosensor was successfully used to quantify three organophosphate pesticides (OPs) in milk samples. The OPs used were chlorpyriphos-oxon (CPO), ethyl paraoxon (EPOx) and malaoxon (MOx). The total analysis time for the assay was less than 15 min. Initially, the biosensor performance was tested in phosphate buffer solution (PBS) using B394, B131 and B4 biosensors. The best detection limits were obtained with B394; therefore, this biosensor was used to produce calibration data in milk with three OPs in the concentration range of 5 Ă— 10(-6)M to 5 Ă— 10(-12)M. The limit of detection (LOD) obtained in milk for CPO, EPOx and MOx were 5 Ă— 10(-12)M, 5 Ă— 10(-9)M and 5 Ă— 10(-10)M, respectively, with a correlation coefficient R(2)=0.9910. The automated flow-based biosensor successfully quantified the OPs in different fat-containing milk samples. There were no false positives or false negatives observed for the analytical figures of merit for the constructed biosensors. This method is inexpensive, sensitive, portable, non-invasive and provides real-time results. This analytical system can provide rapid detection of highly toxic OPs in food matrices such as milk. Copyright Â© 2011 Elsevier B.V. All rights reserved.  
Keywords: Pesticides -- analysis  
Keywords: Organophosphorus Compounds -- analysis  
Keywords: Animals  
Keywords: Enzymes, Immobilized  
Keywords: Acetylcholinesterase  
Keywords: Enzymes, Immobilized -- metabolism  
Keywords: Biosensing Techniques -- instrumentation  
Keywords: Biosensing Techniques -- methods  
Keywords: Drosophila melanogaster -- enzymology  
Keywords: Flow Injection Analysis -- methods  
Keywords: Organophosphorus Compounds  
Keywords: Equipment Design  
Keywords: 0  
Keywords: Acetylcholinesterase -- metabolism  
Keywords: Pesticides  
Keywords: EC 3.1.1.7  
Keywords: Limit of Detection  
Keywords: Milk -- chemistry  
Keywords: Flow Injection Analysis -- instrumentation  
Date completed - 2012-05-14  
Date created - 2012-01-16  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 56-61  
ProQuest ID - 916527825  
Last updated - 2013-01-19  
British nursing index edition - Biosensors & bioelectronics, February 15, 2012, 32(1):56-61  
Corporate institution author - Mishra, Rupesh K; Dominguez, Rocio B; Bhand, Sunil; MuĂ±oz, Roberto; Marty, Jean-Louis  
DOI - MEDL-22221795; 22221795; 1873-4235 eng

912. Mishra, Rupesh K.; Istamboulie, George; Bhand, Sunil, and Marty, Jean-Louis. Detoxification of organophosphate residues using phosphotriesterase and their evaluation using flow based biosensor. 2012 Oct 1-; 745, (0): 64-69.   
Rec #: 4510  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Among known pesticide groups, organophosphates (OPs) have grasped attention due to their hazardous nature and their applications as pesticides and chemical weapons. This work presents the development of cost-effective column based biosensor for detoxification of OPs in water and milk. Enzyme phosphotriesterase (PTE) was immobilized on an activated Sepharose 4B via covalent coupling using an Omnifit glass column. Three different OPs, ethyl paraoxon (EPOx), malaoxon (MAO) and chlorpyriphos-oxon (CPO) were spiked in water and milk to test the detoxification of OPs. Mixtures of these pesticides were also tested to check the cumulative detoxification in the real samples. The efficiency of detoxification was evaluated using a highly sensitive acetylcholinesterase (AChE) B394 biosensor based flow system. The column conditions were optimized for the detoxification studied. The method was shown to be promising when we tested real milk samples spiked with OPs. Detoxification obtained in milk was up to 86% whereas in water, 100% detoxification was obtained. Organophosphate/ Detoxification/ Phosphotriesterase/ Water/ Milk/ Flow based biosensor

913. Mitch, Azalea a; Anisfeld, Shimon C, and Mitch, Azalea A. Contaminants in Long Island Sound: Data Synthesis and Analysis. 2010 May; 33, (3): 609-628.   
Rec #: 47919  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We synthesized existing data on chemical contaminants in Long Island Sound (LIS) from published reports and unpublished databases. We found several cases of systematic differences between data sources, which complicated the tasks of understanding the health of LIS and of identifying trends over time. Of the three media examined-water, sediment, and biota-sediment (especially in western LIS) most often exhibited pollutant concentrations that were high relative to guidelines and to other estuaries. These high sediment concentrations did not appear to be efficiently transmitted to biota. With the exception of Cd, median pollutant levels in embayment sediments were not higher than in open-water sediments, but the highest levels found in embayments were much higher than at open-water sites, especially for Ag and Hg. Trends over time in contaminant levels were mixed. We identify the most problematic contaminants in LIS and recommend adding Ag to the LIS Study's List of Contaminants of Concern.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Estuarine sedimentation  
Keywords: Environmental Studies  
Keywords: Biota  
Keywords: Pollutants  
Keywords: guidelines  
Keywords: SW 3020:Sources and fate of pollution  
Keywords: Sounds  
Keywords: Sediment Contamination  
Keywords: Cadmium  
Keywords: Chemical pollution  
Keywords: Synthesis  
Keywords: Sediment Concentration  
Keywords: Coasts  
Keywords: O 4060:Pollution - Environment  
Keywords: Marine  
Keywords: Sediment pollution  
Keywords: ANW, USA, Long Island Sound  
Keywords: Estuaries  
Keywords: AQ 00003:Monitoring and Analysis of Water and Wastes  
Keywords: Pollution Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Aqualine Abstracts; Water Resources Abstracts; Oceanic Abstracts  
Keywords: Coastal zone  
Keywords: P 1000:MARINE POLLUTION  
Keywords: Standards  
Keywords: Contaminants  
Date revised - 2010-02-01  
Language of summary - English  
Location - ANW, USA, Long Island Sound  
Pages - 609-628  
ProQuest ID - 810371728  
SubjectsTermNotLitGenreText - Sediment pollution; Estuarine sedimentation; Coastal zone; Biota; guidelines; Estuaries; Cadmium; Chemical pollution; Contaminants; Pollutants; Sounds; Sediment Contamination; Standards; Synthesis; Sediment Concentration; Coasts; ANW, USA, Long Island Sound; Marine  
Last updated - 2011-10-25  
Corporate institution author - Mitch, Azalea A; Anisfeld, Shimon C  
DOI - OB-433ba05f-f7a6-40a6-bb61mfgefd108; 12665841; 1559-2723; 1559-2731 English

914. Miura, P.; Andrews, M.; Holcik, M., and Jasmin, B. J. Ires-Mediated Translation of Utrophin a Is Enhanced by Glucocorticoid Treatment in Skeletal Muscle Cells.   
Rec #: 79809  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Glucocorticoids are currently the only drug treatment recognized to benefit Duchenne muscular dystrophy (DMD) patients. The nature of the mechanisms underlying the beneficial effects remains incompletely understood but may involve an increase in the expression of utrophin. Here, we show that treatment of myotubes with 6alpha-methylprednisolone-21 sodium succinate (PDN) results in enhanced expression of utrophin A without concomitant increases in mRNA levels thereby suggesting that translational regulation contributes to the increase. In agreement with this, we show that PDN treatment of cells transfected with monocistronic reporter constructs harbouring the utrophin A 5'UTR, causes an increase in reporter protein expression while leaving levels of reporter mRNAs unchanged. Using bicistronic reporter assays, we further demonstrate that PDN enhances activity of an Internal Ribosome Entry Site (IRES) located within the utrophin A 5'UTR. Analysis of polysomes demonstrate that PDN causes an overall reduction in polysome-associated mRNAs indicating that global translation rates are depressed under these conditions. Importantly, PDN causes an increase in the polysome association of endogenous utrophin A mRNAs and reporter mRNAs harbouring the utrophin A 5'UTR. Additional experiments identified a distinct region within the utrophin A 5'UTR that contains the inducible IRES activity. Together, these studies demonstrate that a translational regulatory mechanism involving increased IRES activation mediates, at least partially, the enhanced expression of utrophin A in muscle cells treated with glucocorticoids. Targeting the utrophin A IRES may thus offer an important and novel therapeutic avenue for developing drugs appropriate for DMD patients.  
MESH HEADINGS: Animals  
MESH HEADINGS: Base Sequence  
MESH HEADINGS: DNA Primers  
MESH HEADINGS: Methylprednisolone Hemisuccinate/\*pharmacology  
MESH HEADINGS: Mice  
MESH HEADINGS: Muscle, Skeletal/\*drug effects/metabolism  
MESH HEADINGS: Protein Biosynthesis/\*drug effects  
MESH HEADINGS: RNA, Messenger/genetics  
MESH HEADINGS: Ribosomes/\*metabolism  
MESH HEADINGS: Utrophin/\*genetics eng

915. Mladenova, R. and Shtereva, D. Pesticide residues in apples grown under a conventional and integrated pest management system. 2009; 26, (6): 854-858.   
Rec #: 65309  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This paper describes method validation for determination of more than 40 pesticides in apples using a GC technique. Target compounds belonged to the organochlorine, organophosphorus, carbamates, pyrethroids, triazoles, dicarboximides and strobilurins groups, among others. Sample preparation consisted of acetone extraction and subsequent cleanup/concentration by SPE with a polymer-based sorbent. Single quadrupole GC-MS operating in SIM mode and electron impact ionization was used for identification and quantification of the pesticides. Average recoveries for analytes ranged between 70 and 110% at three fortification levels - 0.01, 0.1 and 0.2 mg kg(-1). Relative standard deviations were lower than 20% for all tested compounds. Calculated limits of detection and limits of quantification were below 0.01 mg kg(-1), which were sufficiently low compared to the maximum residue levels (MRLs) established by European legislation. The proposed method was applied for determination of pesticide residue in four selected apple varieties after harvesting. Whole and processed fruits (peel and peeled fruits) were analyzed from different treatment systems: two conventional. one based oil integrated pest management (IPM) and two variants based oil organic production (controls). Higher levels of pesticide residues were found in apple fruits under conventional conditions. Fenitrothion and chlorpyrifos residues were detected frequently in apple peel at concentrations up to 0.45 and 0.77 mg kg(-1). respectively. The levels found in the whole fruits of the same samples were much lower than in peel and below the respective MRLs (0.5 mg kg(-1) for both pesticides). Measurable residues of triadimenol only, up to 0.05 mg kg(-1), concentrated in the peel. were Found in the apples from HIM.  
Keywords: GC/MS, chromatography, pesticide residues, apple fruit  
ISI Document Delivery No.: 473DJ

916. Mohan, S. V.; Sirisha, K.; Rao, R. S., and Sarma, P. N. Bioslurry phase remediation of chlorpyrifos contaminated soil: Process evaluation and optimization by Taguchi design of experimental (DOE) methodology. 2007; 68, (2): 252-262.   
Rec #: 65319  
Keywords: METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Design of experimental (DOE) methodology using Taguchi orthogonal array (OA) was applied to evaluate the influence of eight biotic and abiotic factors (substrate-loading rate, slurry phase pH, slurry phase dissolved oxygen (DO), soil water ratio, temperature, soil microflora load, application of bioaugmentation and humic substance concentration) on the soil bound chlorpyrifos bioremediation in bioslurry phase reactor. The selected eight factors were considered at three levels (18 experiments) in the experimental design. Substrateloading rate showed significant influence on the bioremediation process among the selected factors. Derived optimum operating conditions obtained by the methodology showed enhanced chlorpyrifos degradation from 1479.99 to 2458.33 mu g/g (over all 39.82% enhancement). The proposed method facilitated systematic mathematical approach to understand the complex bioremediation process and the optimization of near optimum design parameters, only with a few well-defined experimental sets. (C) 2007 Elsevier Inc. All rights reserved.  
Keywords: bioslurry phase reactor, chloroyrifos, soil, bioremediation, Taguchi  
ISI Document Delivery No.: 222TV

917. Molina-Morales, Y; Flores-Garcia, M; Balza-Quintero, a; Benitez-Diaz, P; Miranda-Contreras, L, and Molina-Morales, Y. Pesticide Levels in Superficial Waters of an Agricultural Region in Merida State, Venezuela, Between 2008 and 2010. 2012 Nov; 28, (4): 289-301.   
Rec #: 38489  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The strong demand for agricultural production has led to an indiscriminate use of agrochemicals causing the decline in the quality of surface waters. In the agricultural community of Bailadores, Municipality of Rivas Davila, Merida State, Venezuela, the rivers of Las Tapias, Las Playitas and Mocoties were monitored for the presence of pesticide residues during 2008 and 2010. Water samples were subjected to solid phase extraction and analyzed for the presence of pesticide residues by HPLC with diode array detector (SPE-HPLC-DAD) using a validated multiresidual method. The pesticide residues that were detected at higher frequencies and greater concentrations were the following: chlorpyrifos (302.9 plus or minus 0.9 mu g/L), diazinon (459 plus or minus 4.0 mu g/L), dimethoate (55 plus or minus 3.0 mu g/L), mancozeb (108 plus or minus 1.0 mu g/L) and methamidophos (107 plus or minus 8.0 mu g/L), which are all found in the list of highly dangerous pesticides by the International Pesticides Control Network. In all cases, the levels exceeded the limits set by the European Union and the Environmental Protection Agency of the United States. The total concentration of organophosphates also exceeded the limits established by the Venezuelan law. The results of this study demonstrate a high level of pesticide contamination of the principal surface water courses in the Municipality of Rivas Davila. It is recommended to implement a pesticide monitoring program and the need to change the current mode of production to a sustainable agricultural practice, which will allow to reduce the use of agrochemicals and their negative consequences to the environment and the human health.Original Abstract: La fuerte demanda de produccion agricola conlleva al uso indiscriminado de agroquimicos causando el desmejoramiento de la calidad de las aguas superficiales. En la comunidad agricola de Bailadores, municipio Rivas Davila, Estado Merida, Venezuela, fueron monitoreados los rios Las Tapias, Las Playitas y Mocoties por la presencia de residuos de plaguicidas durante 2008 y 2010. Las muestras de agua fueron sometidas a una extraccion en fase solida y se analizo la presencia de residuos de plaguicidas mediante HPLC con detector de arreglo de diodos (SPE-HPLC-DAD). Los residuos de plaguicidas detectados con mayor frecuencia y en mas altas concentraciones fueron los siguientes: clorpirifos (302.9 plus or minus 0.9 mu g/L), diazinon (459 plus or minus 4.0 mu g/L), dimetoato (55 plus or minus 3.0 mu g/L), mancozeb (108 plus or minus 1.0 mu g/L) y metamidofos (107 plus or minus 8.0 mu g/L), los cuales se encuentran en la lista de plaguicidas muy peligrosos de la Red International de Control de Plaguicidas. En todos los casos, los niveles detectados superan los limites establecidos por la Union Europea y la Agencia de Protection Ambiental de los Estados Unidos de America. La concentration total de los organofosforados supera tambien los limites establecidos por la legislation venezolana. Los resultados de este estudio demuestran un alto nivel de contamination por plaguicidas de los principales cursos de aguas superficiales del municipio Rivas Davila. Se recomienda continuar con un programa de monitoreo de plaguicidas y la necesidad de cambiar el modo de produccion actual hacia una practica agricola sostenible, que permita reducir la utilization de agroquimicos y sus consecuencias negativas para el ambiente y la salud humana.  
Keywords: Pollution monitoring  
Keywords: Water sampling  
Keywords: Pesticide residues  
Keywords: Surface water  
Keywords: Organophosphates  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Agricultural production  
Keywords: Mexico, Yucatan, Merida  
Keywords: Agrochemicals  
Keywords: Chlorpyrifos  
Keywords: EPA  
Keywords: Water Resources Abstracts; Pollution Abstracts; Aqualine Abstracts  
Keywords: USA  
Keywords: European Union  
Keywords: Venezuela  
Date revised - 2013-01-01  
Language of summary - English  
Location - USA; European Union; Mexico, Yucatan, Merida; Venezuela  
Pages - 289-301  
ProQuest ID - 1272710479  
SubjectsTermNotLitGenreText - Chlorpyrifos; EPA; Pollution monitoring; Water sampling; Organophosphates; Surface water; Pesticide residues; Agricultural production; Agrochemicals; USA; European Union; Mexico, Yucatan, Merida; Venezuela  
Last updated - 2013-01-25  
British nursing index edition - Revista Internacional de Contaminacion Ambiental [Rev. Int. Contam. Ambient.]. Vol. 28, no. 4, pp. 289-301. Nov 2012.  
Corporate institution author - Molina-Morales, Y; Flores-Garcia, M; Balza-Quintero, A; Benitez-Diaz, P; Miranda-Contreras, L  
DOI - MD-0020288940; 17532310; 0188-4999 English

918. Moliner-Martinez, Y.; Molins-Legua, C.; Verdu-Andres, J.; Herraez-Hernandez, R., and Campins-Falco, P. Advantages of monolithic over particulate columns for multiresidue analysis of organic pollutants by in-tube solid-phase microextraction coupled to capillary liquid chromatography. 2011; 1218, (37): 6256-6262.   
Rec #: 65329  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The performance of a monolithic C(18) column (150 mm x 0.2 mm i.d.) for multiresidue organic pollutants analysis by in-tube solid-phase microextraction (IT-SPME)-capillary liquid chromatography has been studied, and the results have been compared with those obtained using a particulate C(18) column (150 mm x 0.5 mm i.d., 5 mu m). Chromatographic separation has been carried out under isocratic elution conditions, and for detection and identification of the analytes a UV-diode array detector has been employed. Several compounds of different chemical structure and hydrophobicity have been used as model compounds: simazine, atrazine and terbutylazine (triazines), chlorfenvinphos and chlorpyrifos (organophosphorous), diuron and isoproturon (phenylureas), trifluralin (dinitroaniline) and di(2-ethylhexyl)phthalate. The results obtained revealed that the monolithic column was clearly advantageous in the context of multiresidue organic pollutants analysis for a number of reasons: (i) the selectivity was considerably improved, which is of particular interest for the most polar compounds triazines and phenyl ureas that could not be resolved in the particulate column, (ii) the sensitivity was enhanced, and (iii) the time required for the chromatographic separation was substantially shortened. In this study it is also proved that the mobile-phase flow rates used for separation in the capillary monolithic column are compatible with the in-valve IT-SPME methodology using extractive capillaries of dimensions similar to those used in conventional scale liquid chromatography (LC). On the basis of these results a new method is presented for the assessment of pollutants in waters, which permits the characterization of whole samples (4 mL) in less than 30 min, with limits of detection in the range of 5-50 ng/L. (C) 2011 Elsevier B.V. All rights reserved.  
Keywords: Monolithic columns, Capillary liquid chromatography, In-tube solid-phase  
ISI Document Delivery No.: 823HR

919. Monnet-Tschudi, F.; Zurich, M. G., and Honegger, P. Neurotoxicant-induced inflammatory response in three-dimensional brain cell cultures. 2007; 26, (4): 339-346.   
Rec #: 65349  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Brain inflammatory response is triggered by the activation of microglial cells and astrocytes in response to various types of CNS injury, including neurotoxic insults. Its outcome is determined by cellular interactions, inflammatory mediators, as well as trophic and/or cytotoxic signals, and depends on many additional factors such as the intensity and duration of the insult, the extent of both the primary neuronal damage and glial reactivity and the developmental stage of the brain. Depending on particular circumstances, the brain inflammatory response can promote neuroprotection, regeneration or neurodegeneration. Glial reactivity, regarded as the central phenomenon of brain inflammation, has also been used as an early marker of neurotoxicity. To study the mechanisms underlying the glial reactivity, serum-free aggregating brain cell cultures were used as an in vitro model to test the effects of conventional neurotoxicants such as organophosphate pesticides, heavy metals, excitotoxins and mycotoxins. This approach was found to be relevant and justified by the complex cell-cell interactions involved in the brain inflammatory response, the variability of the glial reactions and the multitude of mediators involved. All these variables need to be considered for the elucidation of the specific cellular and molecular reactions and their consequences caused by a given chemical insult.  
Keywords: aggregating brain cell cultures, astrocyte, brain inflammation,  
ISI Document Delivery No.: 166XG

920. Moore, M T; Denton, Debra L; Cooper, Charles M; Wrysinski, Jeanette; Miller, Jeff L; Werner, Inge; Horner, Gerald; Crane, David; Holcomb, Diane B; Huddleston, George M, and Moore, M T. Use of Vegetated Agricultural Drainage Ditches to Decrease Pesticide Transport From Tomato and Alfalfa Fields in California, Usa. 2011 May 1; 30, (5): 1044-1049.   
Rec #: 43389  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Irrigation and storm water runoff from agricultural fields has the potential to cause impairment to downstream aquatic receiving systems. Over the last several years, scientists have discovered the benefit of using edge-of-field practices, such as vegetated agricultural drainage ditches, in the mitigation of pesticides and sediment. After demonstrating this practice's feasibility in California, field trials were initiated to document irrigation runoff pesticide mitigation in California alfalfa and tomato fields. In the alfalfa field, chlorpyrifos concentration was decreased by 20% from the inflow to the ditch outflow. Thirty-two percent of the measured chlorpyrifos mass was associated with ditch plant material. In the tomato field, permethrin concentration was decreased by 67% and there was a 35% reduction in suspended sediment concentration from inflow to the ditch outflow. When surface water was not present in the ditch systems, the sediment was a significant repository for pesticides. Based on the field trials, vegetated agricultural drainage ditches can be successfully used as part of a suite of management practices to reduce pesticide and sediment runoff into aquatic receiving systems.  
Keywords: Surface water  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Risk Abstracts; Environment Abstracts; Toxicology Abstracts; Pollution Abstracts  
Keywords: Drainage  
Keywords: Irrigation  
Keywords: outflow  
Keywords: Permethrin  
Keywords: alfalfa  
Keywords: Sediments  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Lycopersicon esculentum  
Keywords: Resuspended sediments  
Keywords: mitigation  
Keywords: Storm water  
Keywords: Pesticides  
Keywords: inflow  
Keywords: USA, California  
Keywords: R2 23050:Environment  
Keywords: X 24330:Agrochemicals  
Keywords: Runoff  
Date revised - 2011-05-01  
Language of summary - English  
Location - USA, California  
Pages - 1044-1049  
ProQuest ID - 869582133  
SubjectsTermNotLitGenreText - Chlorpyrifos; Surface water; Storm water; Drainage; Irrigation; Pesticides; Permethrin; Runoff; Sediments; Resuspended sediments; mitigation; inflow; outflow; alfalfa; Lycopersicon esculentum; USA, California  
Last updated - 2012-03-29  
British nursing index edition - Environmental Toxicology and Chemistry [Environ. Toxicol. Chem.]. Vol. 30, no. 5, pp. 1044-1049. 1 May 2011.  
Corporate institution author - Moore, M T; Denton, Debra L; Cooper, Charles M; Wrysinski, Jeanette; Miller, Jeff L; Werner, Inge; Horner, Gerald; Crane, David; Holcomb, Diane B; Huddleston, George M  
DOI - 189984c7-9548-4be4-9cd2csaobj201; 14819802; 1552-8618 English

921. Moore, M. T.; Lizotte, R. E.; Knight, S. S.; Smith, S., and Cooper, C. M. Assessment of pesticide contamination in three Mississippi Delta oxbow lakes using Hyalella azteca. 2007; 67, (11): 2184-2191.   
Rec #: 65419  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Three oxbow lakes in northwestern Mississippi, USA, an area of intensive agriculture, were assessed for biological impairment from historic and current-use pesticide contamination using the amphipod, Hyalella azteca. Surface water and sediment samples from three sites in each lake were collected from Deep Hollow, Beasley, and Thighman Lakes from September 2000 to February 2001. Samples were analyzed for 17 historic and current-use pesticides and selected metabolites. Ten-day H. azteca survival and growth (as length and dry weight) were measured to determine the degree of biological impairment. Maximum number of detectable pesticides in surface water from Deep Hollow, Beasley and Thighman Lakes was 10, 11, and 17, respectively. Maximum number of detectable pesticides in lake sediments was 17, 17, and 15, respectively. Bioassay results indicated no observable survival effects on H. azteca exposed to surface water or sediment from any lake examined and no growth impairment in animals exposed to lake sediments. However, growth was significantly impaired in surface water exposures from Deep Hollow Lake (2 sites) and Beasley Lake (1 site). Statistically significant relationships between growth impairment (length) and cyanazine, methyl parathion, lambda-cyhalothrin, chlorfenapyr, and pp'DDE surface water concentrations in Deep Hollow Lake as well as trifluralin, atrazine, and methyl parathion in Beasley Lake were observed. Although pesticide frequency and concentrations were typically greater in sediment than surface water, bioassay results indicated decreased availability of these pesticides in sediment due to the presence of clay and organic carbon. Growth impairment observed in surface water exposures was likely due to complex interaction of pesticide mixtures that were present. Published by Elsevier Ltd.  
Keywords: growth impairment, DDT, triazine, organophosphate  
ISI Document Delivery No.: 165VZ

922. Moore, M. T.; Lizotte, R. E., and Smith, S. Toxicity evaluation of diazinon contaminated leaf litter. 2007; 78, (2): 158-161.   
Rec #: 65429  
Keywords: EFFLUENT, NO SPECIES  
Notes: Chemical of Concern: CPY   
Abstract: Keywords: CONSTRUCTED WETLANDS, LAMBDA-CYHALOTHRIN, PLANT DETRITUS, ATRAZINE,  
ISI Document Delivery No.: 177LI

923. Morais, S.; Carrascosa, J.; Mira, D.; Puchades, R., and Maquieira, A. Microimmunoanalysis on standard compact discs to determine low abundant compounds. 2007; 79, (20): 7628-7635.   
Rec #: 65439  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: High-density competitive indirect microimmunoassays were performed in both sides of compact discs by direct absorption of immunoreagents on polyearbonate surface, using gold- or enzyme-labeled immunoglobulins as tracers for displaying the immunoreaction. The operational principle is based on the use of a low-reflectivity compact disc as analytical platform that allows the reflection/transmission (30/70%) of the CD reader laser beam (lambda 780 nm). The reflected light is used to scan the disc track keeping it in movement. The transmitted light is detected by a planar photodiode integrated on the CD drive. The variation of the optical transmission of the light caused by the immunoreaction products is related to the sample concentration. As a proof of concept, low abundant compounds, commonly used as pesticides, were detected in a 60-min total assay time, with a limit of detection ranging from 0.02 to 0.62 mu g/L for 2,4,5-TP, chlorpyriphos, and metolachlor. The obtained results show the enormous prospective of compact discs in combination with CD players for multiresidue and drug discovery applications.  
Keywords: LINKED-IMMUNOSORBENT-ASSAY, IN-SITU HYBRIDIZATION, MICROARRAYS, PROTEIN,  
ISI Document Delivery No.: 220QW

924. Morais, Sergi; Tortajada-Genaro, Luis a; Arnandis-Chover, Tania; Puchades, Rosa, and Maquieira, Angel. Multiplexed Microimmunoassays on a Digital Versatile Disk. 2009 Jul 15; 81, (14): 5646-5654.   
Rec #: 48389  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Multiplexed microimmunoassays for five critical compounds were developed using a digital versatile disk (DVD) as an analytical support and detecting technology. To this end, coating conjugates were adsorbed on the polycarbonate face of the disk; a pool of specific antibodies, gold labeled secondary antibodies, and silver amplification were addressed for developing the assays. The detection principle is based on the capture of attenuated analog signals with the disk drive that were proportional to optical density of the immunoreaction product. The multiplexed assay achieved detection limits (IC10) of 0.06, 0.25, 0.37, 0.16, and 0.10 microg/L, sensitivities of (IC50) 0.54, 1.54, 2.62, 2.02, and 5.9 microg/L, and dynamic ranges of 2 orders of magnitude for atrazine, chlorpyrifos, metolachlor, sulfathiazole, and tetracycline, respectively. The features of the methodology were verified by analyzing natural waters and compared with reference chromatographic methods, showing its potential for high-throughput multiplexed screening applications. Analytes of different chemical nature (pesticides and antibiotics) were directly quantified without sample treatment or preconcentration in a total time of 30 min with similar sensitivity and selectivity to the ELISA plate format using the same immunoreagents. The multianalyte capabilities of immunoassaying methods developed with digital disk and drive demonstrated the competitiveness to quantify targets that require different sample treatment and instrumentation by chromatographic methods.  
Keywords: Water -- analysis  
Keywords: Pesticides -- analysis  
Keywords: Animals  
Keywords: Laboratories  
Keywords: Anti-Bacterial Agents -- analysis  
Keywords: Calibration  
Keywords: Tandem Mass Spectrometry  
Keywords: Water  
Keywords: Immunoassay -- instrumentation  
Keywords: 7732-18-5  
Keywords: Anti-Bacterial Agents  
Keywords: Cattle  
Keywords: Compact Disks  
Keywords: Immunoassay -- methods  
Keywords: 0  
Keywords: Pesticides  
Keywords: Chromatography, Liquid  
Keywords: Time Factors  
Date completed - 2009-10-06  
Date created - 2009-07-15  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 5646-5654  
ProQuest ID - 67485599  
Last updated - 2013-01-19  
British nursing index edition - Analytical chemistry, July 15, 2009, 81(14):5646-5654  
Corporate institution author - Morais, Sergi; Tortajada-Genaro, Luis A; Arnandis-Chover, Tania; Puchades, Rosa; Maquieira, Angel  
DOI - MEDL-19522512; 19522512; 1520-6882 eng

925. Moreno-Gonz+ílez, R.; Campillo, J. A.; Garc+ˇa, V., and Le+¦n, V. M. Seasonal input of regulated and emerging organic pollutants through surface watercourses to a Mediterranean coastal lagoon. (0).  
Rec #: 5660  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Seasonal input of organic pollutants through El Albuj+¦n Watercourse to the Mar Menor lagoon was estimated from Spring 2009 to Winter 2010, including regular periods and two flash flood events. 82 semivolatile organic pollutants (persistent organic pollutants, different groups of pesticides and others) were determined by stir bar sorptive extraction and thermal desorption followed by capillary gas chromatography coupled to mass spectrometry from surface waters with quantification limits of a few ng LęĆ1. Pesticide concentrations varied significantly along the watercourse due to the presence of different sources (groundwaters, wastewater effluent, tributary contributions, brackish waters, etc.) and physicochemical/biological processes that take place simultaneously. The most commonly detected analytes were propyzamide, triazine compounds and chlorpyrifos. A clear seasonal pattern has been detected, with a predominance of insecticides during Summer and of herbicides during Winter. The input of pesticides through this watercourse is particularly relevant during periods of heavy rain, representing more than 70% of total yearly input for many of them. Stir bar sorptive extraction/ Semivolatile organic pollutants/ Pesticides/ Surface water input/ Seasonal variations/ Flash flood event

926. Morgan, Marsha K; Sheldon, Linda S; Jones, Paul a; Croghan, Carry W; Chuang, Jane C; Wilson, Nancy K, and Morgan, Marsha K. The Reliability of Using Urinary Biomarkers to Estimate Children's Exposures to Chlorpyrifos and Diazinon. 2011 May; 21, (3): 280-290.   
Rec #: 39819  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A few studies have reported concurrent levels of chlorpyrifos (CPF) and diazinon (DZN) and their environmentally occurring metabolites, 3,5,6-trichloro-2-pyridinol (TCP) and 2-isopropyl-6-methyl-4-pyrimidinol (IMP), in food and in environmental media. This information raises questions regarding the reliability of using these same metabolites, TCP and IMP, as urinary biomarkers to quantitatively assess the everyday exposures of children to CPF and DZN, respectively. In this study, we quantified the distributions of CPF, DZN, TCP, and IMP in several environmental and personal media at the homes and day-care centers of 127 Ohio preschool children and identified the important sources and routes of their exposures. The children were exposed to concurrent levels of these four chemicals from several sources and routes at these locations. DZN and IMP were both detected above 50% in the air and dust samples. CPF and TCP were both detected in greater than 50% of the air, dust (solid), food, and hand wipe samples. TCP was detected in 100% of the urine samples. Results from our regression models showed that creatinine levels (<0.001), and dietary (P<0.001) and inhalation (P<0.10) doses of TCP were each significant predictors of urinary TCP, collectively explaining 27% of the urinary TCP variability. This information suggests that measurement of urinary TCP did not reliably allow quantitative estimation of the children's everyday environmental exposures to CPF.  
Keywords: Chemicals  
Keywords: Inhalation  
Keywords: Bioindicators  
Keywords: Inosine monophosphate  
Keywords: Food  
Keywords: Hand  
Keywords: Metabolites  
Keywords: Children  
Keywords: biomarkers  
Keywords: Dust  
Keywords: Models  
Keywords: Chlorpyrifos  
Keywords: Creatinine  
Keywords: Urine  
Keywords: Pesticides  
Keywords: Regression analysis  
Keywords: USA, Ohio  
Keywords: Diazinon  
Keywords: Toxicology Abstracts  
Date revised - 2011-07-01  
Language of summary - English  
Location - USA, Ohio  
Pages - 280-290  
ProQuest ID - 876243834  
SubjectsTermNotLitGenreText - Inhalation; Inosine monophosphate; Food; Hand; Metabolites; Children; biomarkers; Dust; Models; Chlorpyrifos; Creatinine; Urine; Regression analysis; Diazinon; Chemicals; Bioindicators; Pesticides; USA, Ohio  
Last updated - 2012-09-24  
British nursing index edition - Journal of Exposure Science and Environmental Epidemiology [J. Exposure Sci. Environ. Epidemiol.]. Vol. 21, no. 3, pp. 280-290. May 2011.  
Corporate institution author - Morgan, Marsha K; Sheldon, Linda S; Jones, Paul A; Croghan, Carry W; Chuang, Jane C; Wilson, Nancy K  
DOI - 96bc9976-f866-4a8a-963amfgefd101; 14873876; 1559-0631 English

927. Morisseau, Christophe; Merzlikin, Oleg; Lin, Amy; He, Guochun; Feng, Wei; Padilla, Isela; Denison, Michael S; Pessah, Isaac N, and Hammock, Bruce D. Toxicology in the Fast Lane: Application of High-Throughput Bioassays to Detect Modulation of Key Enzymes and Receptors. 2009 Dec; 117, (12): 1867-72.   
Rec #: 48239  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: BACKGROUND: Legislation at state, federal, and international levels is requiring rapid evaluation of the toxicity of numerous chemicals. Whole-animal toxicologic studies cannot yield the necessary throughput in a cost-effective fashion, leading to a critical need for a faster and more cost-effective toxicologic evaluation of xenobiotics. OBJECTIVES: **We tested whether mechanistically based screening assays can rapidly provide information on the potential for compounds to affect key enzymes and receptor targets, thus identifying those compounds requiring further in-depth analysis.** METHODS: A library of 176 synthetic chemicals was prepared and examined in a high-throughput screening (HTS) manner using nine enzyme-based and five receptor-based bioassays. RESULTS: All the assays have high Z' values, indicating good discrimination among compounds in a reliable fashion, and thus are suitable for HTS assays. On average, three positive hits were obtained per assay. Although we identified compounds that were previously shown to inhibit a particular enzyme class or receptor, we surprisingly discovered that triclosan, a microbiocide present in personal care products, inhibits carboxylesterases and that dichlone, a fungicide, strongly inhibits the ryanodine receptors. CONCLUSIONS: Considering the need to rapidly screen tens of thousands of anthropogenic compounds, our study shows the feasibility of using combined HTS assays as a novel approach toward obtaining toxicologic data on numerous biological end points. The HTS assay approach is very useful to quickly identify potentially hazardous compounds and to prioritize them for further in-depth studies.  
Keywords: Receptors, Aryl Hydrocarbon -- drug effects  
Keywords: Animals  
Keywords: Receptors, Estrogen -- drug effects  
Keywords: Receptors, Androgen -- drug effects  
Keywords: Naphthoquinones  
Keywords: Humans  
Keywords: Naphthoquinones -- pharmacology  
Keywords: High-Throughput Screening Assays -- methods  
Keywords: Carboxylesterase  
Keywords: Triclosan -- toxicity  
Keywords: Environmental Studies  
Keywords: Receptors, Androgen  
Keywords: dichlone  
Keywords: Receptors, Aryl Hydrocarbon  
Keywords: Ryanodine Receptor Calcium Release Channel  
Keywords: Toxicology -- methods  
Keywords: Carboxylesterase -- antagonists & inhibitors  
Keywords: Ryanodine Receptor Calcium Release Channel -- drug effects  
Keywords: Triclosan  
Keywords: Receptors, Estrogen  
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Language of summary - English  
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Corporate institution author - Morisseau, Christophe; Merzlikin, Oleg; Lin, Amy; He, Guochun; Feng, Wei; Padilla, Isela; Denison, Michael S; Pessah, Isaac N; Hammock, Bruce D  
DOI - 1943895271; 50348501; 67001; ENHP; 20049205; INODENHP0006174681  
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928. Moser, V C; Padilla, S, and Moser, V C. Esterase Metabolism of Cholinesterase Inhibitors Using Rat Liver in Vitro. 2011 Mar 15; 281, (1-3): 56-62.   
Rec #: 43489  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A variety of chemicals, such as organophosphate (OP) and carbamate pesticides, nerve agents, and industrial chemicals, inhibit acetylcholinesterase (AChE) leading to overstimulation of the cholinergic nervous system. The resultant neurotoxicity is similar across mammalian species; however, the relative potencies of the chemicals across and within species depend in part on chemical-specific metabolic and detoxification processes. Carboxylesterases and A-esterases (paraoxonases, PON) are two enzymatic detoxification pathways that have been widely studied. **We used an in vitro system to measure esterase-dependent detoxification of 15 AChE inhibitors.** The target enzyme AChE served as a bioassay of inhibitor concentration following incubation with detoxifying tissue. Concentration-inhibition curves were determined for the inhibitor in the presence of buffer (no liver), rat liver plus calcium (to stimulate PONs and thereby measure both PON and carboxylesterase), and rat liver plus EGTA (to inhibit calcium-dependent PONs, measuring carboxylesterase activity). Point estimates (concentrations calculated to produce 20, 50, and 80% inhibition) were compared across conditions and served as a measure of esterase-mediated detoxification. Results with well-known inhibitors (chlorpyrifos oxon, paraoxon, methyl paraoxon, malaoxon) were in agreement with the literature, serving to support the use of this assay. Only a few other inhibitors showed slight or a trend towards detoxification via carboxylesterases or PONs (mevinphos, aldicarb, oxamyl). There was no apparent PON- or carboxylesterase-mediated detoxification of the remaining inhibitors (carbofuran, chlorfenvinphos, dicrotophos, fenamiphos, methamidophos, methomyl, monocrotophos, phosphamidon), suggesting that the influence of esterases on these chemicals is minimal. Thus, generalizations regarding these metabolic pathways may not be appropriate. As with other aspects of AChE inhibitors, their metabolic patterns appear to be chemical-specific.  
Keywords: Detoxification  
Keywords: nerve agents  
Keywords: Calcium  
Keywords: Acetylcholinesterase  
Keywords: esterase  
Keywords: monocrotophos  
Keywords: Cholinergic nerves  
Keywords: Aryldialkylphosphatase  
Keywords: Chlorfenvinphos  
Keywords: Paraoxon  
Keywords: Cholinesterase  
Keywords: Metabolic pathways  
Keywords: X 24330:Agrochemicals  
Keywords: Pharmacy And Pharmacology  
Keywords: Carbofuran  
Keywords: methamidophos  
Keywords: Aldicarb  
Keywords: Carboxylesterase  
Keywords: Enzymes  
Keywords: organophosphates  
Keywords: Pesticides (carbamates)  
Keywords: fenamiphos  
Keywords: Chlorpyrifos  
Keywords: Neurotoxicity  
Keywords: Pesticides  
Keywords: Liver  
Keywords: Phosphamidon  
Keywords: Toxicology Abstracts  
Keywords: Pons  
Keywords: Metabolism  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 56-62  
ProQuest ID - 886635749  
SubjectsTermNotLitGenreText - Detoxification; nerve agents; Calcium; Acetylcholinesterase; esterase; monocrotophos; Cholinergic nerves; Aryldialkylphosphatase; Chlorfenvinphos; Paraoxon; Cholinesterase; Metabolic pathways; methamidophos; Carbofuran; Enzymes; Carboxylesterase; Aldicarb; organophosphates; Pesticides (carbamates); Chlorpyrifos; fenamiphos; Pesticides; Neurotoxicity; Liver; Phosphamidon; Pons; Metabolism  
Last updated - 2011-12-13  
Corporate institution author - Moser, V C; Padilla, S  
DOI - OB-da29cd6d-c467-4928-bf77csamfg201; 14515423; 0300-483X English

929. Mosquin, Paul L; Licata, Amy Collins; Liu, Bing; Sumner, Susan C J, and Okino, Miles S. Reconstructing Exposures From Small Samples Using Physiologically Based Pharmacokinetic Models and Multiple Biomarkers. 2009 Mar; 19, (3): 284-97.   
Rec #: 44989  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study examines the use of physiologically based pharmacokinetic (PBPK) models for inferring exposure when the number of biomarker observations per individual is limited, as commonly occurs in population exposure surveys. The trade-off between sampling multiple biomarkers at a specific time versus fewer biomarkers at multiple time points was investigated, using a simulation-based approach based on a revised and updated chlorpyrifos PBPK model originally published. Two routes of exposure, oral and dermal, were studied as were varying levels of analytic measurement error. It is found that adding an additional biomarker at a given time point adds substantial additional information to the analysis, although not as much as the addition of another sampling time. Furthermore, the precision of the estimates of exposed dose scaled approximately with the analytic precision of the biomarker measurement. For acute exposure scenarios such as those considered here, the results of this study suggest that the number of biomarkers can be balanced against the number of sampling times to obtain the most efficient estimator after consideration of cost, intrusiveness, and other relevant factors.  
Keywords: Reproducibility of Results  
Keywords: Humans  
Keywords: Chlorpyrifos -- blood  
Keywords: Insecticides -- urine  
Keywords: Likelihood Functions  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos  
Keywords: Biological Markers -- blood  
Keywords: Insecticides  
Keywords: Insecticides -- pharmacokinetics  
Keywords: Biological Markers  
Keywords: Biological Markers -- urine  
Keywords: Biological Markers -- metabolism  
Keywords: Chlorpyrifos -- pharmacokinetics  
Keywords: Models, Theoretical  
Keywords: Insecticides -- blood  
Keywords: Chlorpyrifos -- urine  
Copyright - Copyright Nature Publishing Group Mar 2009  
Language of summary - English  
Pages - 284-97  
ProQuest ID - 219569528  
Last updated - 2012-11-20  
Place of publication - Tuxedo  
Corporate institution author - Mosquin, Paul L; Licata, Amy Collins; Liu, Bing; Sumner, Susan C J; Okino, Miles S  
DOI - 1646259551; 41927201; 68909; ENNP; 18461092; NTPGENNPjes200817 English

930. Mouslim, C. ; Aittaleb, M.; Hume, R. I., and Akaaboune, M. A Role for the Calmodulin Kinase Ii-Related Anchoring Protein (&Alpha;Kap) in Maintaining the Stability of Nicotinic Acetylcholine Receptors.   
Rec #: 49989  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Front Biosci. 2002 Jul 1;7:d1697-711 (medline /12086924)  
COMMENTS: Cites: EMBO J. 1998 Oct 1;17(19):5598-605 (medline /9755160)  
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COMMENTS: Cites: Nature. 1992 Oct 22;359(6397):739-41 (medline /1331805)  
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COMMENTS: Cites: Science. 1997 Dec 19;278(5346):2075-80 (medline /9405336)  
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COMMENTS: Cites: J Cell Biol. 2000 Sep 18;150(6):1385-98 (medline /10995443)  
COMMENTS: Cites: Nat Rev Neurosci. 2001 Nov;2(11):791-805 (medline /11715056)  
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COMMENTS: Cites: Biochem J. 2003 Mar 15;370(Pt 3):873-80 (medline /12470297)  
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COMMENTS: Cites: Nature. 1995 Sep 21;377(6546):232-6 (medline /7675108)  
COMMENTS: Cites: Biochem Biophys Res Commun. 1995 Apr 17;209(2):457-65 (medline /7733913)  
COMMENTS: Cites: J Biol Chem. 1995 Feb 3;270(5):2074-81 (medline /7836435)  
COMMENTS: Cites: Cell. 1994 Sep 9;78(5):761-71 (medline /8087844)  
COMMENTS: Cites: J Biol Chem. 1993 Apr 25;268(12):8394-7 (medline /8386159)  
COMMENTS: Cites: Mol Cell Biol. 1996 Jan;16(1):29-36 (medline /8524307)  
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COMMENTS: Cites: Nat Neurosci. 2003 Mar;6(3):231-42 (medline /12577062)  
COMMENTS: Cites: Cell. 1996 May 17;85(4):501-12 (medline /8653786)  
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COMMENTS: Cites: Development. 2006 Dec;133(24):4993-5000 (medline /17119023)  
COMMENTS: Cites: J Cell Biol. 2007 Jun 18;177(6):1077-89 (medline /17576800)  
COMMENTS: Cites: Cell. 2008 Oct 17;135(2):334-42 (medline /18848351)  
COMMENTS: Cites: Neuron. 2008 Oct 23;60(2):285-97 (medline /18957220)  
COMMENTS: Cites: EMBO Rep. 2009 Jul;10(7):755-61 (medline /19465887)  
COMMENTS: Cites: J Biol Chem. 2009 Oct 9;284(41):28212-21 (medline /19671701)  
COMMENTS: Cites: Proteins. 2010 Feb 1;78(2):365-80 (medline /19722269)  
COMMENTS: Cites: Curr Biol. 2003 May 27;13(11):899-910 (medline /12781128)  
ABSTRACT: &alpha;kap, a muscle specific anchoring protein encoded within the Camk2a gene, is thought to play a role in targeting multiple calcium/calmodulin kinase II isoforms to specific subcellular locations. Here we demonstrate a novel function of &alpha;kap in stabilizing nicotinic acetylcholine receptors (AChRs). Knockdown of &alpha;kap expression with shRNA significantly enhanced the degradation of AChR &alpha;-subunits (AChR&alpha;), leading to fewer and smaller AChR clusters on the surface of differentiated C2C12 myotubes. Mutagenesis and biochemical studies in HEK293T cells revealed that &alpha;kap promoted AChR&alpha; stability by a ubiquitin-dependent mechanism. In the absence of &alpha;kap, AChR&alpha; was heavily ubiquitinated, and the number of AChR&alpha; was increased by proteasome inhibitors. However, in the presence of &alpha;kap, AChR&alpha; was less ubiquitinated and proteasome inhibitors had almost no effect on AChR&alpha; accumulation. The major sites of AChR&alpha; ubiquitination reside within the large intracellular loop and mutations of critical lysine residues in this loop to arginine increased AChR&alpha; stability in the absence of &alpha;kap. These results provide an unexpected mechanism by which &alpha;kap controls receptor trafficking onto the surface of muscle cells and thus the maintenance of postsynaptic receptor density and synaptic function.  
MESH HEADINGS: Animals  
MESH HEADINGS: Blotting, Western  
MESH HEADINGS: Calcium-Calmodulin-Dependent Protein Kinase Type 2/\*metabolism  
MESH HEADINGS: Cell Line  
MESH HEADINGS: Cysteine Proteinase Inhibitors/pharmacology  
MESH HEADINGS: DNA, Complementary/biosynthesis/genetics  
MESH HEADINGS: Fluorescent Antibody Technique  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunoprecipitation  
MESH HEADINGS: Leupeptins/pharmacology  
MESH HEADINGS: Mice  
MESH HEADINGS: Microscopy, Confocal  
MESH HEADINGS: Muscle Cells/physiology  
MESH HEADINGS: Muscle Fibers, Skeletal/metabolism  
MESH HEADINGS: Mutagenesis, Site-Directed  
MESH HEADINGS: Patch-Clamp Techniques  
MESH HEADINGS: Plasmids/genetics  
MESH HEADINGS: RNA, Small Interfering/pharmacology  
MESH HEADINGS: Real-Time Polymerase Chain Reaction  
MESH HEADINGS: Receptors, Nicotinic/genetics/metabolism/\*physiology  
MESH HEADINGS: Transfection eng

931. Moussaoui, Yacine; Tuduri, Ludovic; Kerchich, Yacine; Meklati, B Y; Eppe, Gauthier, and Moussaoui, Yacine. Atmospheric Concentrations of Pcdd/Fs, Dl-Pcbs and Some Pesticides in Northern Algeria Using Passive Air Sampling. 2012 Jul; 88, (3): 270-277.   
Rec #: 42679  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Two monitoring campaigns were conducted in northern Algeria to assess the contamination level of pesticides and persistent organic pollutants (POPs) in ambient air. Six pesticides ( alpha - and gamma -hexachlorocyclohexane, fenitrothion, malathion, chlorpyrifos and lambda -cyhalothrin) were monitored at two different sampling locations during the first campaign. The passive sampling was performed at a semi urban/industrial site but also in a rural area between July to September 2008. The pesticides levels, analyzed by GC/MS/MS, ranged from 16pgm-3 to 11ngm-3. The second campaign was carried out from May to November 2009. The polychlorodibenzo-p-dioxins, dibenzofurans (PCDD/Fs) and dioxin-like polychlorinated biphenyls (dl-PCBs) concentrations were evaluated at an urban/industrial and at an industrial site. The PCDD/Fs and dl-PCBs, analyzed by HRGC/HRMS, ranged from 249 to 923fg TEQ m-3. In addition to passive sampling, active sampling using an isokinetic sampler was also performed at an industrial waste incinerator. The PCDD/Fs and dl-PCBs found was 268pg TEQ m-3. This paper presents the first measurements of PCDD/Fs, dl-PCBs and pesticides in rural, urban and industrial areas of northern Algeria.  
Keywords: Contamination  
Keywords: Dioxins  
Keywords: Malathion  
Keywords: Industrial wastes  
Keywords: Agricultural Chemicals  
Keywords: M2 551.510.42:Air Pollution (551.510.42)  
Keywords: Pollutants  
Keywords: Environment Abstracts; Meteorological & Geoastrophysical Abstracts; Aqualine Abstracts; Water Resources Abstracts; Pollution Abstracts  
Keywords: Industrial Wastes  
Keywords: Air sampling  
Keywords: Sampling  
Keywords: PCDD  
Keywords: Atmospheric pollution  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: persistent organic pollutants  
Keywords: P 0000:AIR POLLUTION  
Keywords: Samplers  
Keywords: Chlorpyrifos  
Keywords: AQ 00007:Industrial Effluents  
Keywords: Pesticides  
Keywords: Incinerators  
Keywords: Persistent organic pollutants  
Keywords: Monitoring  
Keywords: Algeria  
Keywords: ENA 01:Air Pollution  
Keywords: Rural areas  
Date revised - 2012-05-01  
Language of summary - English  
Location - Algeria  
Pages - 270-277  
ProQuest ID - 1017977408  
SubjectsTermNotLitGenreText - Atmospheric pollution; Rural areas; Chlorpyrifos; Industrial wastes; persistent organic pollutants; Pesticides; Air sampling; Persistent organic pollutants; Incinerators; Dioxins; Malathion; PCDD; Agricultural Chemicals; Contamination; Pollutants; Industrial Wastes; Sampling; Monitoring; Samplers; Algeria  
Last updated - 2012-09-10  
British nursing index edition - Chemosphere [Chemosphere]. Vol. 88, no. 3, pp. 270-277. Jul 2012.  
Corporate institution author - Moussaoui, Yacine; Tuduri, Ludovic; Kerchich, Yacine; Meklati, B Y; Eppe, Gauthier  
DOI - 7bdd568a-4484-4597-b497csamfg201; 16730500; 0045-6535 English

932. Mu, Yusong and Carroll, Mark J. Thatch and Soil Pesticide Degradation and Microbial Activity as Influenced by Turf Cultivation Practices. 2009: (UMI# 1465512 ).   
Rec #: 51809  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticide degradation in turf is complicated by presence of an organic matter enriched layer called thatch. It is not well understood how the extensive pesticide sorption capacity of thatch may affect the aerobic degradation of pesticides in thatch. Hollow tine cultivation and vertical mowing are two commonly used cultivation practices used to control thatch. **Two studies were conducted to determine how these two cultural practices may affect microbial activity and pesticide degradation within thatch and soil.** Hollow tine cultivation briefly enhanced microbial activity within thatch while vertical mowing had no consistent effect on thatch or soil microbial activity. Neither cultivation practice consistently altered the aerobic degradation of 2,4-D, flutolanil or chlorpyrifos. Thatch and soil aerobic degradation constants obtained for flutolanil and chlorpyrifos supported the hypothesis that strongly adsorbed pesticides are shielded from microbial populations that degrade pesticides within thatch.  
Start Page: 124  
ISSN/ISBN: 9781109215137  
Keywords: Thatch  
Keywords: Turf cultivation  
Keywords: 0285:Agronomy  
Keywords: 0481:Soil sciences  
Keywords: Microbial activity  
Keywords: Pesticide degradation  
Keywords: Biological sciences  
0285: Agronomy  
2009  
Turf cultivation  
Microbial activity  
66569  
Pesticide degradation  
n/a  
English  
Copyright ProQuest, UMI Dissertations Publishing 2009  
Thatch  
1465512  
9781109215137  
304919374  
2010-08-06  
47305811  
Mu, Yusong  
0481: Soil sciences  
1809689551  
Biological sciences English

933. Mugni, H.; Ronco, A., and Bonetto, C. Insecticide Toxicity to Hyalella curvispina in Runoff and Stream Water Within a Soybean Farm (Buenos Aires, Argentina). ILPLA (CCT La Plata-CONICET)--UNLP, Instituto de Limnologia "Dr. Raul. A. Ringuelet", Av. Calchaqui Km 23.5, 1888 Florencio Varela, Buenos Aires, Argentina. Elsevier BV//: 2011; 74, (3): 350-354.   
Rec #: 2720  
Keywords: MIXTURE  
Call Number: NO MIXTURE (ATZ,CPY,CYP,CuS,DMB,ES,GYP)  
Notes: Chemical of Concern: ACO,ATZ,CPY,CYP,CuS,DMB,ES,GYP

934. Mukamal, K. J.; Ghimire, S.; Pandey, R.; O'meara, E. S., and Gautam, S. Antihypertensive Medications and Risk of Community-Acquired Pneumonia.   
Rec #: 50659  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: OBJECTIVE: To determine whether angiotensin-converting enzyme (ACE) inhibitors and other antihypertensives are associated with risk of pneumonia.  
ABSTRACT: METHODS: We conducted a nested case-control study of incident pneumonia in a subcohort of hypertensive adults insured by several large commercial plans throughout the United States. Individuals with pneumonia were matched on age, sex, region, and subscriber status with up to 10 controls free of pneumonia at the time of case diagnosis. We examined use of beta-blockers, calcium channel blockers, ACE inhibitors (lipophilic and hydrophilic), angiotensin receptor blockers, and thiazides in the prior 3 and 12 months.  
ABSTRACT: RESULTS: A total of 7429 cases of pneumonia occurred among 305 958 hypertensive individuals. Risk of pneumonia was higher among users of beta-blockers [adjusted odds ratio (OR) 1.11; 95% confidence interval (CI) 1.03-1.19], calcium channel blockers (adjusted OR 1.09, 95% CI 1.00-1.17), and lipophilic ACE inhibitors (adjusted OR 1.15, 95% CI 1.03-1.28) in the preceding 3 months; risks were also higher for use in the preceding 12 months. We observed lower risk with thiazide use in the preceding 3 months (adjusted OR 0.90, 95% CI 0.81-0.99) and hydrophilic ACE inhibitor use in the preceding year (adjusted OR 0.86, 95% CI 0.75-0.99).  
ABSTRACT: CONCLUSION: In this population of middle-aged Americans with hypertension, we observed a modestly higher risk of pneumonia with use of beta-blockers, calcium channel blockers, and lipophilic ACE inhibitors. These results are consistent with possible differences in noncardiovascular outcomes among users of antihypertensives and other commonly used cardiovascular drugs but require confirmation in other populations.  
MESH HEADINGS: Adrenergic beta-Antagonists/adverse effects  
MESH HEADINGS: Aged  
MESH HEADINGS: Angiotensin-Converting Enzyme Inhibitors/adverse effects  
MESH HEADINGS: Antihypertensive Agents/\*adverse effects  
MESH HEADINGS: Calcium Channel Blockers/adverse effects  
MESH HEADINGS: Case-Control Studies  
MESH HEADINGS: Cohort Studies  
MESH HEADINGS: Community-Acquired Infections/\*etiology  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: Hypertension/complications/drug therapy  
MESH HEADINGS: Male  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: Odds Ratio  
MESH HEADINGS: Pneumonia/\*etiology  
MESH HEADINGS: Risk Factors  
MESH HEADINGS: Sodium Chloride Symporter Inhibitors/pharmacology eng

935. Mukherjee, Irani. Determination of Pesticide Residues in Honey Samples. 2009 Dec; 83, (6): 818-21.   
Rec #: 44439  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Protocol for the determination of pesticides residues in honey samples have been standardized using a simple technique of liquid-liquid extraction. The method is sensitive to detect low levels of pesticides in honey. Honey sample was fortified with pesticides, namely, cypermethrin, fenvalerate, alphamethrin, lamba-cyhalothrin, endosulfan (Î±, Î² and sulfate) and chlorpyrifos. The method of extraction and clean up was optimized and validated in the laboratory. The method was applied to screen six samples of honey locally available for pesticides residues. Recoveries ranged from 60% to 90.6% with RSDs from 2% to 10%. Low recoveries were recorded for Î± and Î² -endosulfan in the range of 60%-71%. The LOQs, varied from 0.05 to 1.0 mg kg-1. [PUBLICATION ABSTRACT]  
Keywords: Chromatography, Gas  
Keywords: Food Contamination -- analysis  
Keywords: Pesticide Residues  
Keywords: Environmental Studies  
Keywords: Endosulfan  
Keywords: Nitriles  
Keywords: Chlorpyrifos  
Keywords: Chlorpyrifos -- analysis  
Keywords: Honey -- analysis  
Keywords: cypermethrin  
Keywords: Pyrethrins -- analysis  
Keywords: Pyrethrins  
Keywords: Endosulfan -- analysis  
Keywords: Nitriles -- analysis  
Keywords: fenvalerate  
Keywords: Chromatography, Liquid  
Keywords: cyhalothrin  
Keywords: Pesticide Residues -- analysis  
Copyright - Springer Science+Business Media, LLC 2009  
Language of summary - English  
Pages - 818-21  
ProQuest ID - 233185496  
Last updated - 2012-03-03  
Place of publication - New York  
Corporate institution author - Mukherjee, Irani  
DOI - 1903467681; 49537521; 108019; BVCX; 19547905; SPVLBVCX128839772 English

936. Mukherjee, Irani; Arora, Sumitra, and Mukherjee, Irani. Impact Analysis of Ipm Programs in Basmati Rice by Estimation of Pesticide Residues. 2011 Mar; 86, ( 3): 307-313.   
Rec #: 39939  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Samples of Basmati rice grain, soil and water were collected, from IPM and non-IPM field trials conducted at four regions of Haryana, Uttar Pradesh and Uttarakhand in India, for pesticide residue analysis. Out of 45 soil samples collected, only four non-IPM samples indicated the presence of chlorpyrifos and endosulfan in the range of ND (<0.001) to 0.05mg/kg. Carbendazim used at two locations of Dehradun and Kaithal was found below detectable limit (<0.05mg/kg) in both IPM and non-IPM trials. Out of total 22 samples of water analyzed, chlorpyriphos was detected in samples from Kaithal and Pant Nagar in the range 0.003-0.006 mu L/L, alpha -endosulfan isomer was detected in the range 0.005-0.03 mu L/L and the beta-isomer in the range 0.005-0.02 mu L/L in sample from Pant Nagar and Kaithal. The residues in all the grain sample of paddy were below detectable limit (<0.001-0.05mg/kg). The insecticides applied in IPM as well as non-IPM trials were found to be below maximum residue level (MRL).  
Keywords: India, Haryana  
Keywords: impact analysis  
Keywords: Pesticide residues  
Keywords: P 5000:LAND POLLUTION  
Keywords: Environment Abstracts; Pollution Abstracts; Toxicology Abstracts  
Keywords: Oryza sativa  
Keywords: India, Uttar Pradesh  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Isomers  
Keywords: Endosulfan  
Keywords: Soil  
Keywords: Chlorpyrifos  
Keywords: Insecticides  
Keywords: Rice fields  
Keywords: Pesticides  
Keywords: Grain  
Keywords: Carbendazim  
Keywords: X 24330:Agrochemicals  
Date revised - 2011-05-01  
Language of summary - English  
Location - India, Haryana; India, Uttar Pradesh  
Pages - 307-313  
ProQuest ID - 864962203  
SubjectsTermNotLitGenreText - Chlorpyrifos; Soil; Insecticides; Rice fields; Pesticide residues; Grain; Carbendazim; Endosulfan; Isomers; impact analysis; Pesticides; Oryza sativa; India, Haryana; India, Uttar Pradesh  
Last updated - 2012-03-29  
British nursing index edition - Bulletin of Environmental Contamination and Toxicology [Bull. Environ. Contam. Toxicol.]. Vol. 86, no. 3, pp. 307-313. Mar 2011.  
Corporate institution author - Mukherjee, Irani; Arora, Sumitra  
DOI - b4fc040a-6239-45aa-86demfgefd107; 14444708; 0007-4861; 1432-0800 English

937. Mukherjee, S. and Mukherjee, U. A Comprehensive Review of Immunosuppression Used for Liver Transplantation.   
Rec #: 50699  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Gastroenterology. 1999 Nov;117(5):1198-204 (medline /10535884)  
COMMENTS: Cites: EMBO J. 2000 Feb 1;19(3):434-44 (medline /10654941)  
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ABSTRACT: Since liver transplantation was approved for the treatment of end stage liver disease, calcineurin inhibitors (CNI's) have played a critical role in the preservation of allograft function. Unfortunately, these medications cause a variety of Side effects such as diabetes, hypertension and nephrotoxicity which in turn result in significant morbidity and reduced quality of life. A variety of newer immunosuppressants have been evaluated over the last decade in an attempt to either substitute for CNI's or use with reduced dose CNI's while still preserving allograft function However, current data does not recommend complete cessation of CNI's due to unacceptably high rates of allograft rejection. As these medications have their own unique adverse effects, a careful assessment on their risks and benefits is essential, particularly when additive or synergistic effects with CNI's may occur. Furthermore, the impact of these newer medications on the risk of hepatitis C recurrence and progression remains to be elucidated. Controlled trials are urgently required to assist transplant physicians with choosing the optimum immunosuppressive regimen for their patients. This review will discuss commonly used immunosuppressants prescribed in liver transplantation, emerging therapties and where appropriate, the impact of these medications on the recurrence of hepatitis C after liver transplantation. eng

938. Munoz, A.; Vera, T.; Sidebottom, H.; Mellouki, A.; Borras, E.; Rodenas, M.; Clemente, E., and Vazquez, M. Studies on the Atmospheric Degradation of Chlorpyrifos-Methyl. 2011; 45, (5): 1880-1886.   
Rec #: 65669  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The gas-phase atmospheric degradation of chlorpyrifos-methyl (a widely used organophosphate insecticide in Southern European regions) has been investigated at the large outdoor European Photoreactor (EUPHORE) in Valencia, Spain. Photolysis under sunlight conditions and reaction with ozone were shown to be unimportant. The rate constant for reaction of chlorpyrifos-methyl with OH radicals was measured using a conventional relative rate method with cyclohexane and n-octane employed as reference compounds with k = (4.1 +/- 0.4) x 10(-11) cm(3) molecule(-1) s(-1) at 300 +/- 5 K and atmospheric pressure. The available evidence indicates that tropospheric degradation of chlorpyrifos-methyl is mainly controlled by reaction with OH radicals and that the tropospheric lifetime is estimated to be around 3.5 h. Significant aerosol formation was observed following the reaction of chlorpyrifos-methyl with OH radicals, and the main carbon-containing products detected in the gas phase were chlorpyrifos-methyl oxone and 3,5,6-trichloro..2-pyridinol.  
Keywords: GAS-PHASE REACTIONS, OH RADICALS, ORGANIC-COMPOUNDS, RATE CONSTANTS,  
ISI Document Delivery No.: 725HZ

939. Munoz, D; Bonner, Plr; Hargreaves, a J, and Munoz, D. Effects of Chlorpyrifos on Transglutaminase Activity in Differentiating Rat C6 Glioma Cells. 2010 Dec; 24, (8): 2104-2107.   
Rec #: 40219  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The organophosphorothioate compound chlorpyrifos (CPF) is a widely used pesticide, which is known to inhibit the differentiation of mouse N2a neuroblastoma and rat C6 glioma cells. This study in focused on the possible effects of CPF in the activity and expression of tissue transglutaminase (TGase 2) in differentiating C6 cells. **Cells exposed** for 24h to 10I14M CPF, which had no effect on cell viability, exhibited a significant increase in cytosolic TGase 2 activity. Western blotting analysis indicated that there was no change in the cytosolic TGase 2 protein levels, suggesting that the enzyme was activated under these conditions. When commercially available TGase 2 was incubated with CPF in vitro, an increase in activity was also observed, suggesting that CPF might interact directly with TGase 2.  
Keywords: CSA Neurosciences Abstracts; Toxicology Abstracts  
Keywords: Western blotting  
Keywords: Pharmacy And Pharmacology  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: Enzymes  
Keywords: Transglutaminase 2  
Keywords: Neuroblastoma  
Keywords: Chlorpyrifos  
Keywords: Differentiation  
Keywords: Glioma cells  
Keywords: Pesticides  
Keywords: Proteins  
Keywords: X 24330:Agrochemicals  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 2104-2107  
ProQuest ID - 849079201  
SubjectsTermNotLitGenreText - Chlorpyrifos; Western blotting; Differentiation; Pesticides; Glioma cells; Enzymes; Proteins; Transglutaminase 2; Neuroblastoma  
Last updated - 2011-12-12  
Corporate institution author - Munoz, D; Bonner, PLR; Hargreaves, A J  
DOI - OB-49f29b89-587d-472e-b897csaobj202; 14040942; 0887-2333 English

940. Munoz-Quezada, M. T.; Iglesias, V.; Lucero, B.; Steenland, K.; Barr, D. B.; Levy, K.; Ryan, P. B.; Alvarado, S., and Concha, C. Predictors of exposure to organophosphate pesticides in schoolchildren in the Province of Talca, Chile. 2012; 47, 28-36.   
Rec #: 65709  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Few data exist in Latin America concerning the association between organophosphate (OP) urinary metabolites and the consumption of fruits and vegetables and other exposure risk variables in schoolchildren. Methods: We collected samples of urine from 190 Chilean children aged 6-12 years, fruits and vegetables, water and soil from schools and homes, and sociodemographic data through a questionnaire. We measured urinary dialkylphosphate (DAP) OP metabolites and OP pesticide residues in food consumed by these 190 children during two seasons: December 2010 (summer) and May 2011 (fall). We analyzed the relationship between urinary DAP concentrations and pesticide residues in food, home pesticide use, and residential location. Results: Diethylalkylphosphates (DEAP) and dimethylalkylphosphates (DMAP) were detected in urine in 76% and 27% of the samples, respectively. Factors associated with urinary DEAP included chlorpyrifos in consumed fruits (p<0.0001), urinary creatinine (p<0.0001), rural residence (p = 0.02) and age less than 9 years (p = 0.004). Factors associated with urinary DMAP included the presence of phosmet residues in fruits (p<0.0001), close proximity to a farm (p = 0.002), home fenitrothion use (p = 0.009), and season (p<0.0001). Conclusions: Urinary DAP levels in Chilean school children were high compared to previously reported studies. The presence of chlorpyrifos and phosmet residues in fruits was the major factor predicting urinary DAP metabolite concentrations in children. (C) 2012 Elsevier Ltd. All rights reserved.  
Keywords: Dialkylphosphate metabolites, Organophosphate pesticide residues,  
ISI Document Delivery No.: 996AS

941. Muramatsu, D.; Iwai, A.; Aoki, S.; Uchiyama, H.; Kawata, K.; Nakayama, Y.; Nikawa, Y.; Kusano, K.; Okabe, M., and Miyazaki, T. &Beta;-Glucan Derived From Aureobasidium Pullulans Is Effective for the Prevention of Influenza in Mice.   
Rec #: 50049  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Cell. 1978 Sep;15(1):261-7 (medline /212198)  
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ABSTRACT: &beta;-(1&rarr;3)-D-glucans with &beta;-(1&rarr;6)-glycosidic linked branches produced by mushrooms, yeast and fungi are known to be an immune activation agent, and are used in anti-cancer drugs or health-promoting foods. **In this report, we demonstrate that oral administration of Aureobasidium pullulans-cultured fluid (AP-CF) enriched with the &beta;-(1&rarr;3),(1&rarr;6)-D-glucan exhibits efficacy to protect mice infected with a lethal titer of the A/Puerto Rico/8/34 (PR8; H1N1) strain of influenza virus.** The survival rate of the mice significantly increased by AP-CF administration after sublethal infection of PR8 virus. The virus titer in the mouse lung homogenates was significantly decreased by AP-CF administration. No significant difference in the mRNA expression of inflammatory cytokines, and in the population of lymphocytes was observed in the lungs of mice administered with AP-CF. Interestingly, expression level for the mRNA of virus sensors, RIG-I (retinoic acid-inducible gene-I) and MDA5 (melanoma differentiation-associated protein 5) strongly increased at 5 hours after the stimulation of A. pullulans-produced purified &beta;-(1&rarr;3),(1&rarr;6)-D-glucan (AP-BG) in murine macrophage-derived RAW264.7 cells. Furthermore, the replication of PR8 virus was significantly repressed by pre-treatment of AP-BG. These findings suggest the increased expression of virus sensors is effective for the prevention of influenza by the inhibition of viral replication with the administration of AP-CF.  
MESH HEADINGS: Administration, Oral  
MESH HEADINGS: Animals  
MESH HEADINGS: Ascomycota/\*metabolism  
MESH HEADINGS: Cell Line  
MESH HEADINGS: Culture Media, Conditioned/metabolism  
MESH HEADINGS: Cytokines/biosynthesis  
MESH HEADINGS: DEAD-box RNA Helicases/metabolism  
MESH HEADINGS: Gene Expression Regulation/drug effects/immunology  
MESH HEADINGS: Immunization/\*methods  
MESH HEADINGS: Influenza A Virus, H1N1 Subtype/immunology/pathogenicity  
MESH HEADINGS: Intercellular Signaling Peptides and Proteins/biosynthesis  
MESH HEADINGS: Lung/drug effects/immunology/metabolism/virology  
MESH HEADINGS: Macrophages/drug effects/immunology/metabolism/virology  
MESH HEADINGS: Male  
MESH HEADINGS: Membrane Proteins/metabolism  
MESH HEADINGS: Mice  
MESH HEADINGS: Nerve Tissue Proteins/metabolism  
MESH HEADINGS: Orthomyxoviridae Infections/\*prevention &amp  
MESH HEADINGS: control  
MESH HEADINGS: Survival Rate  
MESH HEADINGS: Time Factors  
MESH HEADINGS: beta-Glucans/metabolism/\*pharmacology eng

942. Muranli, F. D. G. GENOTOXIC AND CYTOTOXIC EFFECTS OF A PYRETHROID INSECTICIDE LAMBDA-CYHALOTHRIN ON HUMAN PERIPHERAL BLOOD LYMPHOCYTES INVESTIGATED BY CHROMOSOME ABERRATION AND FLOW CYTOMETRY ASSAYS. 2009; 18, (9A): 1758-1763.   
Rec #: 65719  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Genotoxic and cytotoxic effect of different concentrations of Lambda-cyhalothrin (LCT) (3.75, 7.5, 15 and 30 mu M/ml) were investigated in human peripheral blood lymphocyte culture by chromosome aberration (CA) and flow cytometry (FC) assays. Human peripheral whole blood cultures were treated with four concentrations of LCT which were prepared by using distilled water and Dimethyl Sulfoxide (DMSO) for 48 hours. Although LCT did not significantly induce CA frequency in human peripheral blood, the insecticide showed a genotoxic effect due to decrease of Mitotic Index (MI) and G2 phase ratios and high concentrations of LCT demonstrated an accumulation of aneuploid population in early S phase that might mean its damaging effect on DNA molecule.  
Keywords: Flow cytometry, Chromosome aberrations, Human peripheral blood culture,  
ISI Document Delivery No.: 505OC

943. Murphy, J. N.; Durbin, K. J., and Saltikov, C. W. Functional Roles of Arca, Etra, Cyclic Amp (Camp)-Camp Receptor Protein, and Cya in the Arsenate Respiration Pathway in Shewanella Sp. Strain Ana-3.   
Rec #: 50989  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Annu Rev Biochem. 1993;62:749-95 (medline /8394684)  
COMMENTS: Cites: Biotechniques. 1994 May;16(5):800-2 (medline /8068328)  
COMMENTS: Cites: Arch Microbiol. 1987 Mar;147(2):195-200 (medline /3036034)  
COMMENTS: Cites: J Bacteriol. 1977 Sep;131(3):854-65 (medline /19422)  
COMMENTS: Cites: FEBS Lett. 2004 Mar 12;561(1-3):11-21 (medline /15043055)  
COMMENTS: Cites: Curr Opin Microbiol. 2003 Oct;6(5):482-9 (medline /14572541)  
COMMENTS: Cites: FEMS Microbiol Lett. 2003 Sep 12;226(1):107-12 (medline /13129615)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2003 Sep 16;100(19):10983-8 (medline /12939408)  
COMMENTS: Cites: BMC Genomics. 2002 Nov 27;3(1):33 (medline /12456267)  
COMMENTS: Cites: J Bacteriol. 2003 Jun;185(12):3668-71 (medline /12775705)  
COMMENTS: Cites: Appl Environ Microbiol. 2003 May;69(5):2800-9 (medline /12732551)  
COMMENTS: Cites: Nucleic Acids Res. 2003 Jan 1;31(1):266-9 (medline /12519998)  
COMMENTS: Cites: J Biol Chem. 2002 Dec 20;277(51):49841-9 (medline /12393891)  
COMMENTS: Cites: Science. 2002 Nov 22;298(5598):1602-6 (medline /12446905)  
COMMENTS: Cites: J Bacteriol. 2002 Aug;184(16):4612-6 (medline /12142431)  
COMMENTS: Cites: J Bacteriol. 2001 Aug;183(16):4918-26 (medline /11466298)  
COMMENTS: Cites: Nat Rev Microbiol. 2008 Aug;6(8):613-24 (medline /18628769)  
COMMENTS: Cites: Curr Opin Microbiol. 2008 Apr;11(2):87-93 (medline /18359269)  
COMMENTS: Cites: BMC Genomics. 2008;9:42 (medline /18221523)  
COMMENTS: Cites: J Bacteriol. 2008 Jan;190(1):135-42 (medline /17951391)  
COMMENTS: Cites: Annu Rev Microbiol. 2007;61:237-58 (medline /18035608)  
COMMENTS: Cites: J Bacteriol. 2007 Mar;189(6):2283-90 (medline /17209025)  
COMMENTS: Cites: Science. 2006 Dec 15;314(5806):1687-8 (medline /17170279)  
COMMENTS: Cites: Environ Sci Technol. 2006 Oct 1;40(19):5950-5 (medline /17051784)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2005 Dec 27;102(52):18819-23 (medline /16357194)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2005 Dec 6;102(49):17693-8 (medline /16301522)  
COMMENTS: Cites: Bioinformatics. 2005 Nov 15;21(22):4187-9 (medline /16109747)  
COMMENTS: Cites: J Bacteriol. 2005 Nov;187(21):7390-6 (medline /16237022)  
COMMENTS: Cites: Mol Microbiol. 2005 Jun;56(5):1347-57 (medline /15882425)  
COMMENTS: Cites: Trends Microbiol. 2005 Feb;13(2):45-9 (medline /15680760)  
COMMENTS: Cites: Nucleic Acids Res. 2004;32(19):5874-93 (medline /15520470)  
COMMENTS: Cites: J Mol Biol. 1998 Nov 27;284(2):241-54 (medline /9813115)  
COMMENTS: Cites: Eur J Biochem. 1998 Aug 1;255(3):647-53 (medline /9738904)  
COMMENTS: Cites: Biochim Biophys Acta. 1997 Jul 4;1320(3):217-34 (medline /9230919)  
COMMENTS: Cites: Microbiol Rev. 1992 Mar;56(1):100-22 (medline /1315922)  
ABSTRACT: **Microbial arsenate respiration** can enhance arsenic release from arsenic-bearing minerals--a process that can cause arsenic contamination of water. In Shewanella sp. strain ANA-3, the arsenate respiration genes (arrAB) are induced under anaerobic conditions with arsenate and arsenite. Here we report how genes that encode anaerobic regulator (arcA and etrA [fnr homolog]) and carbon catabolite repression (crp and cya) proteins affect arsenate respiration in ANA-3. Transcription of arcA, etrA, and crp in ANA-3 was similar in cells grown on arsenate and cells grown under aerobic conditions. ANA-3 strains lacking arcA and etrA showed minor to moderate growth defects, respectively, with arsenate. However, crp was essential for growth on arsenate. In contrast to the wild-type strain, arrA was not induced in the crp mutant in cultures shifted from aerobic to anaerobic conditions containing arsenate. This indicated that cyclic AMP (cAMP)-cyclic AMP receptor (CRP) activates arr operon transcription. Computation analysis for genome-wide CRP binding motifs identified a putative binding motif within the arr promoter region. This was verified by electrophoretic mobility shift assays with cAMP-CRP and several DNA probes. Lastly, four putative adenylate cyclase (cya) genes were identified in the genome. One particular cya-like gene was differentially expressed under aerobic versus arsenate respiration conditions. Moreover, a double mutant lacking two of the cya-like genes could not grow with arsenate as a terminal electron acceptor; exogenous cAMP could complement growth of the double cya mutant. It is concluded that the components of the carbon catabolite repression system are essential to regulating arsenate respiratory reduction in Shewanella sp. strain ANA-3.  
MESH HEADINGS: Arsenates/\*metabolism  
MESH HEADINGS: Bacterial Outer Membrane Proteins/genetics/metabolism/\*physiology  
MESH HEADINGS: Bacterial Proteins/genetics/metabolism/\*physiology  
MESH HEADINGS: Binding Sites  
MESH HEADINGS: Cyclic AMP Receptor Protein/genetics/metabolism/\*physiology  
MESH HEADINGS: Electrophoretic Mobility Shift Assay  
MESH HEADINGS: Mutation  
MESH HEADINGS: Operon/genetics  
MESH HEADINGS: Shewanella/genetics/growth &amp  
MESH HEADINGS: development/\*metabolism  
MESH HEADINGS: Signal Transduction/genetics/physiology  
MESH HEADINGS: Transcription Factors/genetics/metabolism/\*physiology  
MESH HEADINGS: Transcription, Genetic/genetics eng

944. Murphy, J. N. and Saltikov, C. W. The Cyma Gene, Encoding a Tetraheme C-Type Cytochrome, Is Required for Arsenate Respiration in Shewanella Species.   
Rec #: 51429  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Bacteriol. 2000 Jan;182(1):67-75 (medline /10613864)  
COMMENTS: Cites: J Biol Chem. 1998 Oct 30;273(44):28785-90 (medline /9786877)  
COMMENTS: Cites: J Biol Chem. 2000 Mar 24;275(12):8515-22 (medline /10722689)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2001 Aug 14;98(17):9853-8 (medline /11493693)  
COMMENTS: Cites: Eur J Biochem. 2002 Feb;269(4):1086-95 (medline /11856339)  
COMMENTS: Cites: Environ Sci Technol. 2002 Feb 1;36(3):381-6 (medline /11871552)  
COMMENTS: Cites: FEBS Lett. 2002 Jul 3;522(1-3):83-7 (medline /12095623)  
COMMENTS: Cites: Environ Sci Technol. 2002 Jul 15;36(14):3096-103 (medline /12141489)  
COMMENTS: Cites: Biochem J. 2002 Dec 1;368(Pt 2):425-32 (medline /12186631)  
COMMENTS: Cites: Science. 2002 Nov 22;298(5598):1602-6 (medline /12446905)  
COMMENTS: Cites: Appl Environ Microbiol. 2003 May;69(5):2800-9 (medline /12732551)  
COMMENTS: Cites: Science. 2003 May 9;300(5621):939-44 (medline /12738852)  
COMMENTS: Cites: Biochemistry. 2003 Aug 12;42(31):9491-7 (medline /12899636)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2003 Sep 16;100(19):10983-8 (medline /12939408)  
COMMENTS: Cites: FEMS Microbiol Lett. 2003 Sep 12;226(1):107-12 (medline /13129615)  
COMMENTS: Cites: Nature. 2004 Jul 1;430(6995):68-71 (medline /15229598)  
COMMENTS: Cites: Science. 2004 Oct 15;306(5695):455 (medline /15486292)  
COMMENTS: Cites: Trends Microbiol. 2005 Feb;13(2):45-9 (medline /15680760)  
COMMENTS: Cites: Biochem J. 2005 Sep 15;390(Pt 3):689-93 (medline /15907193)  
COMMENTS: Cites: J Bacteriol. 1992 Jun;174(11):3429-38 (medline /1592800)  
COMMENTS: Cites: J Bacteriol. 2005 Nov;187(21):7390-6 (medline /16237022)  
COMMENTS: Cites: Biochem Soc Trans. 2006 Feb;34(Pt 1):150-1 (medline /16417507)  
COMMENTS: Cites: Biotechniques. 1994 May;16(5):800-2 (medline /8068328)  
COMMENTS: Cites: Mol Microbiol. 1996 Mar;19(6):1193-204 (medline /8730862)  
COMMENTS: Cites: J Bacteriol. 1997 Feb;179(4):1143-52 (medline /9023196)  
COMMENTS: Cites: Biochim Biophys Acta. 1997 Jun 12;1326(2):307-18 (medline /9218561)  
COMMENTS: Cites: Eur J Biochem. 1998 Aug 1;255(3):647-53 (medline /9738904)  
COMMENTS: Cites: Arch Microbiol. 2000 Jan;173(1):49-57 (medline /10648104)  
ABSTRACT: In Shewanella sp. strain ANA-3, utilization of arsenate as a terminal electron acceptor is conferred by a two-gene operon, arrAB, which lacks a gene encoding a membrane-anchoring subunit for the soluble ArrAB protein complex. Analysis of the genome sequence of Shewanella putrefaciens strain CN-32 showed that it also contained the same arrAB operon with 100% nucleotide identity. Here, we report that CN-32 respires arsenate and that this metabolism is dependent on arrA and an additional gene encoding a membrane-associated tetraheme c-type cytochrome, cymA. Deletion of cymA in ANA-3 also eliminated growth on and reduction of arsenate. The DeltacymA strains of CN-32 and ANA-3 negatively affected the reduction of Fe(III) and Mn(IV) but not growth on nitrate. Unlike the CN-32 DeltacymA strain, growth on fumarate was absent in the DeltacymA strain of ANA-3. Both homologous and heterologous complementation of cymA in trans restored growth on arsenate in DeltacymA strains of both CN-32 and ANA-3. Transcription patterns of cymA showed that it was induced under anaerobic conditions in the presence of fumarate and arsenate. Nitrate-grown cells exhibited the greatest level of cymA expression in both wild-type strains. Lastly, site-directed mutagenesis of the first Cys to Ser in each of the four CXXCH c-heme binding motifs of the CN-32 CymA nearly eliminated growth on and reduction of arsenate. Together, these results indicate that the biochemical mechanism of arsenate respiration and reduction requires the interactions of ArrAB with a membrane-associated tetraheme cytochrome, which in the non-arsenate-respiring Shewanella species Shewanella oneidensis strain MR-1, has pleiotropic effects on Fe(III), Mn(IV), dimethyl sulfoxide, nitrate, nitrite, and fumarate respiration.  
MESH HEADINGS: Amino Acid Sequence  
MESH HEADINGS: Arsenate Reductases/genetics/\*metabolism  
MESH HEADINGS: Arsenates/\*metabolism  
MESH HEADINGS: Culture Media  
MESH HEADINGS: Cytochrome c Group/\*genetics/metabolism  
MESH HEADINGS: \*Gene Expression Regulation, Bacterial  
MESH HEADINGS: Iron-Sulfur Proteins/metabolism  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Molybdenum/metabolism  
MESH HEADINGS: Mutation  
MESH HEADINGS: Oxidation-Reduction  
MESH HEADINGS: Shewanella/\*classification/enzymology/genetics/\*metabolism/physiology  
MESH HEADINGS: Shewanella putrefaciens/enzymology/genetics/physiology eng

945. Musilek, Kamil; Dolezal, Martin; Gunn-Moore, Frank, and Kuca, Kamil. Design, Evaluation and Structure-Activity Relationship Studies of the Ache Reactivators Against Organophosphorus Pesticides. 2011 Jul; 31, (4): 548-575.   
Rec #: 47249  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphate pesticides (OPPs; e.g. chlorpyrifos, diazinon, paraoxon) are a wide and heterogeneous group of organophosphorus compounds. Their biological activity of inhibiting acetylcholinesterase (AChE) or butyrylcholinesterase (BChE) ranks them as life endangering agents. The necessary treatment after OPP exposure involves the use of parasympatolytics (e.g. atropine), oxime reactivators (e.g. obidoxime), and anticonvulsive drugs (e.g. diazepam). Therefore, the reactivators of AChE are essential compounds in the treatment of OPP intoxications. Commercial AChE reactivators (e.g. pralidoxime, HI-6, obidoxime, trimedoxime, methoxime) were originally developed for other members of the organophosphate family, such as nerve agents (e.g. sarin, soman, tabun, VX). Pralidoxime, HI-6, and methoxime were found to be weak reactivators of OPP-inhibited AChE. Obidoxime and trimedoxime showed satisfactory reactivation against various OPPs with minor toxicity issues. During the last two decades, the treatment of OPP exposure has become more widely discussed because of growing agricultural production, industrialization, and harmful social issues (e.g. suicides). In this review is the summarized design, evaluation, and structure-activity relationship studies of recently produced AChE reactivators. Since pralidoxime, over 300 oximes have been produced or tested against OPP poisoning, and several novel compounds show very promising abilities as comparable (or higher) to commercial oximes. Some of these are highlighted for their further testing of OPP exposure and, additionally, the main structure-activity relationship of AChE reactivators against OPP is discussed. Â© 2009 Wiley Periodicals, Inc.  
Keywords: Animals  
Keywords: Cholinesterase Reactivators -- chemistry  
Keywords: Cholinesterase Reactivators  
Keywords: Organophosphorus Compounds -- antagonists & inhibitors  
Keywords: Acetylcholinesterase  
Keywords: Humans  
Keywords: Drug Design  
Keywords: Structure-Activity Relationship  
Keywords: Organophosphorus Compounds  
Keywords: Pesticides -- antagonists & inhibitors  
Keywords: Cholinesterase Reactivators -- pharmacology  
Keywords: 0  
Keywords: Acetylcholinesterase -- metabolism  
Keywords: Pesticides  
Keywords: EC 3.1.1.7  
Date completed - 2012-02-02  
Date created - 2011-06-28  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 548-575  
ProQuest ID - 874186205  
Last updated - 2013-01-19  
British nursing index edition - Medicinal research reviews, July 2011, 31(4):548-575  
Corporate institution author - Musilek, Kamil; Dolezal, Martin; Gunn-Moore, Frank; Kuca, Kamil  
DOI - MEDL-20027669; 20027669; 1098-1128 eng

946. Muă±Oz-Carpena, Rafael; Fox, Garey a, and Sabbagh, George J. Parameter Importance and Uncertainty in Predicting Runoff Pesticide Reduction With Filter Strips. 2010 Mar-2010 Apr 30; 39, (2): 630-641.   
Rec #: 48049  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Vegetative filter strips (VFS) are an environmental management tool used to reduce sediment and pesticide transport from surface runoff. Numerical models of VFS such as the Vegetative Filter Strip Modeling System (VFSMOD-W) are capable of predicting runoff, sediment, and pesticide reduction and can be useful tools to understand the effectiveness of VFS and environmental conditions under which they may be ineffective. However, as part of the modeling process, it is critical to identify input factor importance and quantify uncertainty in predicted runoff, sediment, and pesticide reductions. This research used state-of-the-art global sensitivity and uncertainty analysis tools, a screening method (Morris) and a variance-based method (extended Fourier Analysis Sensitivity Test), to evaluate VFSMOD-W under a range of field scenarios. **The three VFS studies analyzed were conducted on silty clay loam and silt loam soils under uniform, sheet flow conditions and included atrazine, chlorpyrifos, cyanazine, metolachlor, pendimethalin, and terbuthylazine data.** Saturated hydraulic conductivity was the most important input factor for predicting infiltration and runoff, explaining >75% of the total output variance for studies with smaller hydraulic loading rates (~100-150 mm equivalent depths) and ~50% for the higher loading rate (~280-mm equivalent depth). Important input factors for predicting sedimentation included hydraulic conductivity, average particle size, and the filter's Manning's roughness coefficient. Input factor importance for pesticide trapping was controlled by infiltration and, therefore, hydraulic conductivity. Global uncertainty analyses suggested a wide range of reductions for runoff (95% confidence intervals of 7-93%), sediment (84-100%), and pesticide (43-100%). Pesticide trapping probability distributions fell between runoff and sediment reduction distributions as a function of the pesticides' sorption. Seemingly equivalent VFS exhibited unique and complex trapping responses dependent on the hydraulic and sediment loading rates, and therefore, process-based modeling of VFS is required. [PUBLICATION ABSTRACT]  
Keywords: Environmental Studies  
Copyright - Copyright American Society of Agronomy Mar/Apr 2010  
Language of summary - English  
Pages - 630-641  
ProQuest ID - 347524349  
Document feature - Graphs; Equations; References; Tables  
Last updated - 2011-05-16  
CODEN - JEVQAA  
Place of publication - Madison  
Corporate institution author - MuĂ±oz-Carpena, Rafael; Fox, Garey A; Sabbagh, George J  
DOI - 2045003021; 52376161; 13216; JEVQAA; STEQ; INNNSTEQ0000439696  
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MuĂ±oz-Carpena, R., J.E. Parsons, and J.W. Gilliam. 1999. Modeling hydrology and sediment transport in vegetative filter strips. J. Hydrol. 214:111-129.  
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947. Mwila, K.; Burton, M. H.; Van Dyk, J. S., and Pletschke, B. I. The effect of mixtures of organophosphate and carbamate pesticides on acetylcholinesterase and application of chemometrics to identify pesticides in mixtures. 2013; 185, (3): 2315-2327.   
Rec #: 65749  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphate (OP) and carbamate (CP) pesticides act by the inhibition of acetylcholinesterase (AChE). This enables the use of this enzyme for the detection of these pesticides in the environment. While many studies have looked at the effect of single pesticides on AChE, the effect of mixtures of pesticides still requires extensive investigation. This is important to evaluate the cumulative risk in the case of simultaneous exposure to multiple pesticides. Therefore we examined the effect of five different pesticides (c**arbaryl, carbofuran, parathion, demeton-S-methyl, and aldicarb**) on AChE activity to determine whether combinations had an additive, synergistic, or antagonistic inhibitory effect. Results indicated that the mixtures had an additive inhibitory effect on AChE activity. The data from the assays of the mixtures were used to develop and train an artificial neural network (ANN) which was then utilised successfully for the identification of pesticides and their concentrations in mixtures. This study is significant because it evaluated mixtures of OPs and CPs where previous studies focused on either OPs or CPs. Previous studies have only examined up to three pesticides while this study evaluated mixtures of five pesticides simultaneously. This is also the first study where an ANN was able to utilise data from the inhibition of a single enzyme to differentiate five different pesticides and their concentrations from mixtures.  
Keywords: Acetylcholinesterase, Carbamate pesticides, Chemometrics, Neural  
ISI Document Delivery No.: 077NB

948. Myresiotis, C. K.; Vryzas, Z., and Papadopoulou-Mourkidou, E. Biodegradation of soil-applied pesticides by selected strains of plant growth-promoting rhizobacteria (PGPR) and their effects on bacterial growth. 2012; 23, (2): 297-310.   
Rec #: 65759  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A laboratory study was conducted to investigate the influence of four PGPR strains on the degradation of five soil applied pesticides and their effects on bacterial growth. Interactions of Bacillus subtilis GB03, Bacillus subtilis FZB24, Bacillus amyloliquefaciens IN937a and Bacillus pumilus SE34 with two concentrations of **acibenzolar-S-methyl, metribuzin, napropamide, propamocarb hydrochloride and thiamethoxam** in liquid culture and soil microcosm were studied. The degradation of acibenzolar-S-methyl by all PGPR tested in low and high concentration, was 5.4 and 5.7 times, respectively, faster than that in non-inoculated liquid culture medium. At the end of the 72-h liquid cultured experiments, 8-18, 9-11, 15-36 and 11-22% of metribuzin, napropamide, propamocarb hydrochloride and thiamethoxam, respectively, had disappeared from PGPR inoculated medium. Under the soil microcosm experimental conditions, the half-lives of acibenzolar-S-methyl incubated in the presence of PGPR strains spiked at 1.0 and 10.0 mg kg(-1) were 10.3-16.4 and 9.2-15.9 days, respectively, markedly lower compared with > 34.2 days in the control. From the rest pesticides studied degradation of propamocarb hydrochloride and thiamethoxam was enhanced in the presence of B. amyloliquefaciens IN937a and B. pumilus SE34. Acibenzolar-S-methyl, propamocarb hydrochloride and thiamethoxam significantly increased the PGPR growth. However, the stimulatory effect was related to the level of pesticide spiked.  
Keywords: Pesticides, Biodegradation, Plant growth-promoting rhizobacteria (PGPR),  
ISI Document Delivery No.: 912JE

949. Nakajima, S.; Ueda, Y.; Ebina, J.; Adachi, M., and Matsuno, K. Acute Toxicity Tests of Pesticides to Freshwater Animals. 1989; 34, 154-156(JPN) (ENG ABS).   
Rec #: 1160  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CAP,CPY,DDVP,DZ)  
Notes: Chemical of Concern: CAP,CHX,CPY,DDVP,DZ

950. Nakamura, R.; Kimura, Y.; Matsuoka, H.; Hachisuka, A.; Nakamura, R.; Nakamura, A.; Shibutani, M., and Teshima, R. [Effects of Transplacental and Trans-Breast Milk Exposure to the Organophosphate Compound Chlorpyrifos on the Developing Immune System of Mice].   
Rec #: 74839  
Keywords: NON-ENGLISH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Navarro et al (2001) have reported that neonatal exposure of rat to the organophosphate compound chlorpyrifos (CPF) resulted in long-term deficits in T lymphocyte mitogenic response, although the mechanism has been unclear. In this study, pregnant BALB/c mice were exposed to 0, 2.8, 14, 70 ppm CPF via diet from gestational day 10 to postnatal day (PND) 21, and subpopulational changes in T lymphocytes of offspring were analyzed at PND21. The irreversibility of the effects was also investigated at PND77 after ceasing exposure by weaning at PND21. Serum cholinesterase activity was significantly reduced after exposure to CPF at PND21. An increase in the proportion of CD4 positive splenocytes was observed after exposure to CPF, which remained until PND77. We found that regulatory T cells were the only one CD4 positive subset which increased in the spleen of CPF-exposed mice at PND77.  
MESH HEADINGS: Animals  
MESH HEADINGS: CD4 Lymphocyte Count  
MESH HEADINGS: \*CD4-Positive T-Lymphocytes/immunology  
MESH HEADINGS: Chlorpyrifos/\*metabolism/\*toxicity  
MESH HEADINGS: Female  
MESH HEADINGS: Immune System/\*embryology/\*growth &amp  
MESH HEADINGS: development/immunology  
MESH HEADINGS: Maternal-Fetal Exchange/\*immunology/physiology  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred BALB C  
MESH HEADINGS: Milk, Human/\*metabolism  
MESH HEADINGS: Placenta/\*metabolism  
MESH HEADINGS: Pregnancy  
MESH HEADINGS: Prenatal Exposure Delayed Effects/\*immunology  
MESH HEADINGS: Rats  
MESH HEADINGS: Spleen/cytology/immunology  
MESH HEADINGS: T-Lymphocytes, Regulatory jpn

951. Nasehi, F. and Fataei, E. Measurement of residue levels of agro-chemicals in water and sediment of Aras River. 2012; 10, (1): 933-936.   
Rec #: 65799  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Extreme use of pesticides and the adjacency of agricultural lands to rivers have brought about the contamination of water sources. Identifying the residue level of pesticides in water and sediments has been considered as one of the important measures for management of aquatic ecosystems. Aras River is one of the main rivers of Ardabil province in respect of agriculture. This river rises from Turkey's Bingol Daghlari (mountains) and after crossing from countries of Turkey, Armenia, Iran and Azerbayjan, flows into Khazar Sea (Caspian). Aras catchment basin, due to its vastness, receives annually a considerable amount of those agricultural toxins which are widely used by agronomists. The present study by a cross-sectional design was conducted over one year (March 2010 - February 2011) in that part of Aras River which crosses Mughan (situated at the northern part of Ardabil province). In the current study 20 water samples and 20 sediment samples were collected from 5 sites, during four seasons of the year. After extraction and concentration, toxins were detected and their levels were identified by means of GC-MS. Based on the results of analysis, the residue levels of pesticides (endosulfan, Dursban and fenproparthrin) were determined for the water samples collected in spring and summer, but their levels were very slight in autumn and winter. The examination of sediment samples revealed the presence of (2,4-D) in autumn and winter and Dursban only in spring. Because of the high debbi of Aras River and non detection of toxin residues in autumn and winter as well as supervision of agricultural campaign over the use of pesticides, one can be optimistic about the improvement of Aras Rivers' quality.  
Keywords: Pesticide, residue of toxins, Aras River, Ardabil, Iran  
ISI Document Delivery No.: 900XD

952. Nazimek, T. ; Wasak, M.; Zgrajka, W., and Turski, W. A. CONTENT OF TRANSFLUTHRIN IN INDOOR AIR DURING THE USE OF ELECTRO-VAPORIZERS. 2011; 18, (1): 85-88.   
Rec #: 65859  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The quality of indoor air evokes increasing interest; however, no standards have been developed which determine the content of pesticides in the air of living space. At present, insecticides are increasingly more frequently applied to control household pests, flies, mosquitoes, termites and other harmful insects. In this study, the content of transfluthrin was measured indoors after the application of two consumer products containing this active substance, using commercially available electro-vaporizers. It was found that during the application of insecticides in the form of gel and liquid the mean concentration of transfluthrin in the air was 1.295-2.422 mu g/m(3) and 3.817-5.227 mu g/m(3), respectively. The concentration of an active agent in the air did not depend on the day of application. The concentration of transfluthrin was higher when used in the form of a liquid than a gel preparation. 18-24 hours after the discontinuation of the use of the preparation no active agent was found in the air. As long as the standards are developed regulating the content of insecticides in the air of living spaces and utility rooms, the most important method of preventing their potential hazardous effect is informing the users of these preparations about the occurrence of active substances in indoor air, and eventual risk of exposure to the effect of pesticides during their application at home.  
Keywords: transfluthrin, indor air, electro-vaporizer  
ISI Document Delivery No.: 788HU

953. Neely, W. B. An Analysis of Aquatic Toxicity Data: Water Solubility and Acute LC50 Fish Data. 1984; 13, (7): 813-819.   
Rec #: 1660  
Keywords: MODELING,REFS CHECKED  
Call Number: NO MODELING (ACL,CPY,DCB), NO REFS CHECKED (ACL,CPY,DCB)  
Notes: Chemical of Concern: 3CE,4NP,ACL,CF,CHD,CPY,CTC,DCB

954. Nenaah, G. Individual and synergistic toxicity of solanaceous glycoalkaloids against two coleopteran stored-product insects. 2011; 84, (1 ): 77-86.   
Rec #: 65899  
Keywords: BIOLOGICAL TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Toxicity of solanaceous glycoalkaloids against stored-grain insects was investigated under laboratory conditions. The total glycoalkaloids (TGAs), alpha-chaconine and alpha-solanine from potatoes, Solanum tuberosum L. and alpha-tomatine from tomatoes, Lycopersicon esculentum Mill. were isolated and tested in this bioassay. Their acute and residual toxicity were assessed against the rust red flour beetle, **Tribolium castaneum** Herbst (Coleoptera: Tenebrionidae), and the rice weevil, **Sitophilus oryzae** L. (Coleoptera: Curculionidae). All compounds were tested either individually or as binary mixtures. Results revealed considerable toxicity of the tested glycoalkaloids against the target insects. When adults of S. oryzae were exposed to a dry-film residue of these phytochemicals, the total glycoalkaloids (TGAs) fraction was the most toxic, followed by alpha-solanine, alpha-chaconine, and alpha-tomatine with LC(50s) of (38.6 and 22.1), (48.2 and 38.9), (52.00 and 41.6), and (82.3 and 67.00) mu g/cm(2) at 24 and 48 h post-treatment, respectively. The order of toxicity against T. castaneum in a descending order was TGAs > alpha-chaconine > alpha-solanine > alpha-tomatine. All compounds were more toxic when insects were fed grains treated with these phytochemicals (LC(50s) of TGAs were 7.4 and 16.2 mg/kg grains at 48 h post-treatment against S. oryzae and T. castaneum, respectively. All compounds, particularly the TGAs, exhibited promising residual toxicity effects. Toxicity of glycoalkaloids was exceeded when tested as binary mixtures indicating their synergistic interaction. The study recommends the use of glycoalkaloids of Solanaceae as biorationals and natural leads to protect stored grains from insect infestation.  
Keywords: Bioinsecticides, Glycoalkaloids, Stored-grain insects, Synergistic  
ISI Document Delivery No.: 754JJ

955. Nenaah, G. E. Toxic and antifeedant activities of potato glycoalkaloids against Trogoderma granarium (Coleoptera: Dermestidae). 2011; 47, (3): 185-190.   
Rec #: 65909  
Keywords: BIOLOGICAL TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The total glycoalkaloid fraction (TGA) and the two glycoalkaloids, alpha-chaconine and alpha-solanine of potato, Solanum tuberosum, were isolated. Their toxic and antifeedant activities against the Khapra beetle, **Trogoderma granarium** Everts were investigated. Results indicated considerable toxicity, especially when adults were topically treated with the glycoalkaloids. The TGA fraction was the most toxic with LC(50)'s of 16.7 and 11.9 mu g/mg insect, 48 and 96 h post treatment, respectively. LC50's of alpha-chaconine and alpha-solanine 96 h post treatment were 18.1 and 22.5 mu g/mg insect, respectively. Moderate toxicities were recorded when insects were confined on dry-film residues of botanicals with LC(50)'s ranging between 26.1 and 56.6, and 19.4 and 45.7, mu g/cm(2) 48 and 96 h post treatment, respectively. Nutritional studies using the flour disc bioassay revealed significant reduction in the growth rate (RGR), food consumption rate (RCR) and food utilization (ECI) by T. granarium at concentrations ranging between 20 and 30 mg g(-1) food with feeding deterrent indices reaching 82.4% with the TGA fraction. When tested as binary or crude alkaloidal mixtures, toxic and antifeedant activities of glycoalkaloids were increased, indicating some additive interaction among these botanicals. There is potential for use of such compounds to protect stored grains from insect infestation. (C) 2011 Elsevier Ltd. All rights reserved.  
Keywords: Glycoalkaloids, Potato, Bioinsecticides, Antifeedants, Khapra beetle,  
ISI Document Delivery No.: 795DR

956. Nettleton, D. M. Field Experiences with an Airtec Twin Fluid Spraying System. SOIL; 1991; 46, 107-112.   
Rec #: 250  
Keywords: METHODS  
Call Number: NO METHODS (CPY,DFQ,EPH,FNPE,GYP,MTSM,PDM)  
Notes: Chemical of Concern: CPY,DFPM,DFQ,EPH,FNPE,GYP,MTSM,PDM,PIM

957. Nevarez, G. G.; Pando, F. J. Q.; Ontiveros, C. G. B., and Sanchez, N. C. Dispersal of Trichogramma spp. on Pecan Trees and Its Susceptibility to Selective Insecticides (Dispersion de Trichogramma spp. en Arboles de Nogal y Susceptibilidad a Insecticidas Selectivos). 2009; 34, (3): 319-326(SPA) (ENG ABS).   
Rec #: 2480  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY,TUZ)  
Notes: Chemical of Concern: CPY,SS,TUZ

958. Nfon, E.; Armitage, J. M., and Cousins, I. T. Development of a dynamic model for estimating the food web transfer of chemicals in small aquatic ecosystems. 2011; 409, (24): 5416-5422.   
Rec #: 65939  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: **A dynamic combined fate and food web model** was developed to estimate the food web transfer of chemicals in small aquatic ecosystems (i.e. ponds). A novel feature of the modeling approach is that aquatic macrophytes (submerged aquatic vegetation) were included in the fate model and were also a food item in the food web model. The paper aims to investigate whether macrophytes are effective at mitigating chemical exposure and to compare the modeling approach developed here with previous modeling approaches recommended in the European Union (EU) guideline for risk assessment of pesticides. The model was used to estimate bioaccumulation of three hypothetical chemicals of varying hydrophobicity in a pond food web comprising 11 species. Three different macrophyte biomass densities were simulated in the model experiments to determine the influence of macrophytes on fate and bioaccumulation. Macrophytes were shown to have a significant effect on the fate and food web transfer of highly hydrophobic compounds with log K(ow)> = 5. Modeled peak concentrations in biota were highest for the scenarios with the lowest macrophyte biomass density. The distribution and food web transfer of the hypothetical compound with the lowest hydrophobicity (log K(ow) = 3) was not affected by the inclusion of aquatic macrophytes in the pond environment. For the three different hypothetical chemicals and at all macrophyte biomass densities, the maximum predicted concentrations in the top predator in the food web model were at least one order of magnitude lower than the values estimated using methods suggested in EU guidelines. The EU guideline thus provides a highly conservative estimate of risk. In our opinion, and subject to further model evaluation, a realistic assessment of dynamic food web transfer and risk can be obtained using the model presented here. (C) 2011 Elsevier B.V. All rights reserved.  
Keywords: Fate, Exposure, Dynamic model, Bioaccumulation, Macrophytes, Risk  
ISI Document Delivery No.: 853SA

959. Ng, M. G.; Semple, S.; Cherrie, J. W.; Christopher, Y.; Northage, C.; Tielemans, E.; Veroughstraete, V., and Van Tongeren, M. The Relationship Between Inadvertent Ingestion and Dermal Exposure Pathways: A New Integrated Conceptual Model and a Database of Dermal and Oral Transfer Efficiencies. 2012; 56, (9): 1000-1012.   
Rec #: 65949  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Occupational inadvertent ingestion exposure is ingestion exposure due to contact between the mouth and contaminated hands or objects. Although individuals are typically oblivious to their exposure by this route, it is a potentially significant source of occupational exposure for some substances. Due to the continual flux of saliva through the oral cavity and the non-specificity of biological monitoring to routes of exposure, direct measurement of exposure by the inadvertent ingestion route is challenging; predictive models may be required to assess exposure. The work described in this manuscript has been carried out as part of a project to develop a predictive model for estimating inadvertent ingestion exposure in the workplace. As inadvertent ingestion exposure mainly arises from hand-to-mouth contact, it is closely linked to dermal exposure. We present a new integrated conceptual model for dermal and inadvertent ingestion exposure that should help to increase our understanding of ingestion exposure and our ability to simultaneously estimate exposure by the dermal and ingestion routes. The conceptual model consists of eight compartments (source, air, surface contaminant layer, outer clothing contaminant layer, inner clothing contaminant layer, hands and arms layer, perioral layer, and oral cavity) and nine mass transport processes (emission, deposition, resuspension or evaporation, transfer, removal, redistribution, decontamination, penetration and/or permeation, and swallowing) that describe event-based movement of substances between compartments (e.g. emission, deposition, etc.). This conceptual model is intended to guide the development of predictive exposure models that estimate exposure from both the dermal and the inadvertent ingestion pathways. For exposure by these pathways the efficiency of transfer of materials between compartments (for example from surfaces to hands, or from hands to the mouth) are important determinants of exposure. A database of transfer efficiency data relevant for dermal and inadvertent ingestion exposure was developed, containing 534 empirically measured transfer efficiencies measured between 1980 and 2010 and reported in the peer-reviewed and grey literature. The majority of the reported transfer efficiencies (84%) relate to transfer between surfaces and hands, but the database also includes efficiencies for other transfer scenarios, including surface-to-glove, hand-to-mouth, and skin-to-skin. While the conceptual model can provide a framework for a predictive exposure assessment model, the database provides detailed information on transfer efficiencies between the various compartments. Together, the conceptual model and the database provide a basis for the development of a quantitative tool to estimate inadvertent ingestion exposure in the workplace.  
Keywords: dermal exposure, determinants of exposure, exposure modelling,  
ISI Document Delivery No.: 044TC

960. Nguyen, T. D.; Han, E. M.; Seo, M. S.; Kim, S. R.; Yun, M. Y.; Lee, D. M., and Lee, G. H. A Multi-Residue Method for the Determination of 203 Pesticides in Rice Paddies Using Gas Chromatography/Mass Spectrometry. SOIL; 2008; 619, (1): 67-74.   
Rec #: 1170  
Keywords: CHEM METHODS  
Call Number: NO CHEM METHODS (ACR,AMZ,AZ,BFT,BMC,CAP,CBX,CPP,CPY,CPYM,CTN,CYP,Captan,DCF,DCNA,DDVP,DM,DMT,DS,DU,DZ,EFV,EP,ES1,ES2,ESS,FMP,FNT,FPN,FPP,FRM,FTL,FTZ,FVL,FYC,FZQ,Folpet,IPD,MCZ,MDT,MLN,MLT,MLX,MP,MTC,MVP,MYC,OMT,PDM,PFF,PMR,PMT,PNB,PPG,PPN,PPX,PRB,PRT,PSM,SDF,SZ,TBC,TBO,TBZ,TDF,TFN,TFZ,TLM,VCZ)  
Notes: Chemical of Concern: ACO,ACR,AMZ,AND,AZ,BFT,BMC,BPZ,BTN,CAP,CBX,CDF,CPP,CPY,CPYM,CPZ,CTN,CYD,CYP,Captan,DCF,DCNA,DDT,DDVP,DFPM,DINO,DLD,DM,DMM,DMT,DPA,DS,DTP,DU,DZ,EFL,EFV,EN,EP,EPRN,ES1,ES2,ESS,ETN,EXZ,FFC,FMP,FNB,FNT,FNTH,FPN,FPP,FRM,FTL,FTZ,FUZ,FVL,FYC,FYT,FZQ,Folpet,HCCH,HPT,HRF,IDC,IFP,ILL,IPD,KRSM,LUF,MBZ,MCZ,MDT,MLN,MLT,MLX,MP,MTC,MVP,MYC,ODL,ODZ,OFX,OMT,PDM,PFF,PHSL,PIM,PMR,PMT,PNB,PPCP,PPG,PPN,PPX,PRB,PRN,PRT,PSM,SDF,SZ,TBC,TBO,TBZ,TCM,TDF,TDM,TEF,TFN,TFY,TFZ,TLM,TPZ,TYF,TZA,VCZ

961. Nigam, P. C. Chemical Insecticides. 1975: 8,24 -.   
Rec #: 1180  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ACP,CBF,CBL,CPY,DDVP,DMT,DZ,ES,FNT,MLN,MOM,Naled,PPX,RSM,TCF,TMP,TVP), NO REVIEW (ACP,CBF,CBL,CPY,DDVP,DMT,DZ,ES,FNT,MLN,MOM,Naled,PPX,RSM,TCF,TMP,TVP)  
Notes: Chemical of Concern: ACP,CBF,CBL,CPY,DDT,DDVP,DMT,DZ,ES,FNT,FNTH,MLN,MOM,MXC,Naled,PPHD,PPX,PYN,RSM,TCF,TMP,TVP

962. Nikolenko, A. G. and Amirkhanov, D. V. Comparative Harmfulness of Insecticides of Different Chemical Classes for Soil Algae. A.G.Nikolenko, Inst. Org. Khim., Ufa, Russia////: SOIL; 1993; 4, 115-121(RUS).   
Rec #: 1190  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

963. Nikolov, N. and Davidkova, L. Effect of Some Pesticides on the Mesobionts in Maize Canopies. Collembola. 1994; 31, (1-2): 91-94(RUS) (ENG ABS).   
Rec #: 1200  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (ACP,CPY,ES,FNT,MTM,PFF,PMR)  
Notes: Chemical of Concern: ACP,CPY,ES,FNT,MTM,PFF,PMR

964. Nishiuchi, Y. Toxicity of Pesticides to Fresh Water Organisms. LXXXI. Effects of Pesticides on Tadpoles. 1982; 30, (3): 167-171(JPN).   
Rec #: 1210  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY,PCP)  
Notes: Chemical of Concern: CPY,PCP

965. Niu, M-F; Liu, Z-Y; Li, Z-P; Cui, W; Pang, X-P; Zhang, D, and Niu, M-F. Preparating and Researching the Efficient Comple Microbial Community for Degradating Chlorpyrifos. 2010 Feb; 29, (2): 381-385.   
Rec #: 40769  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The purpose of this research was to study the growth conditions of two complex microbial community I, II, which composed upon D1 and D2 between Cunninghamella respectively, and to select the one with better effect on degrading chlorpyrifos and to measure its degrading effect, under adequate oxygen condition. The result showed: when the concentration of microorganism is 0.906(OD sub(560)) value), the optimum temperature of them were the same 30 degree and the optimum pH value were the same 7.0. When the chlorpyrifos concentration was 100 mg times L super(-1), the degradation rate of them after 5 days were 81.21% and 86.1%. Under the condition of 30 degree C, pH varying between 6.0 and 8.0 and chlorpyrifos concentration of 20 mg times L super(-1), the degradation rate was maximum. Tne results showed that its figures could offer theoretical figures in complex microbial community large-scale. Fermentation production and the bacterial might potentially be used in bioremediation of the soil which polluted by organic phosphorus pesticides.  
Keywords: A 01380:Plant Protection, Fungicides & Seed Treatments  
Keywords: Temperature effects  
Keywords: Microbiology Abstracts A: Industrial & Applied Microbiology; Microbiology Abstracts B: Bacteriology; Pollution Abstracts; Biotechnology and Bioengineering Abstracts; Environment Abstracts  
Keywords: Bioremediation  
Keywords: Degradation  
Keywords: ENA 09:Land Use & Planning  
Keywords: Fermentation  
Keywords: Growth conditions  
Keywords: P 5000:LAND POLLUTION  
Keywords: growth conditions  
Keywords: Temperature  
Keywords: Phosphorus  
Keywords: J 02320:Cell Biology  
Keywords: Microbial activity  
Keywords: organic phosphorus  
Keywords: Chlorpyrifos  
Keywords: Soil  
Keywords: Oxygen  
Keywords: W 30950:Waste Treatment & Pollution Clean-up  
Keywords: Cunninghamella  
Keywords: Pesticides  
Keywords: Microorganisms  
Keywords: pH effects  
Keywords: pH  
Date revised - 2010-02-01  
Language of summary - English  
Pages - 381-385  
ProQuest ID - 813585553  
SubjectsTermNotLitGenreText - Temperature effects; Soil; Chlorpyrifos; Oxygen; Bioremediation; Growth conditions; Fermentation; Pesticides; Phosphorus; Microorganisms; pH effects; Degradation; growth conditions; Temperature; Microbial activity; organic phosphorus; pH; Cunninghamella  
Last updated - 2012-08-02  
Corporate institution author - Niu, M-F; Liu, Z-Y; Li, Z-P; Cui, W; Pang, X-P; Zhang, D  
DOI - OB-MD-0013444312; 12913354; 1672-2043 English

966. Noort, D; Hulst, a G; Zuylen, a; Rijssel, E; Schans, Mj, and Noort, D. Covalent Binding of Organophosphorothioates to Albumin: a New Perspective for Op-Pesticide Biomonitoring? 2009 Nov; 83, (11): 1031-1036.   
Rec #: 44509  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We here report on the covalent binding of various organophosphorothioate (OPT) pesticides to albumin at in vitro exposure levels that did not give rise to butyrylcholinesterase inhibition. Adduct formation occurred at the Tyr-411 residue of albumin, as was firmly corroborated by LC-tandem MS analysis of a pepsin digest of OPT-modified albumin. It cannot be excluded that other (tyrosine) residues become modified as well. A convenient method for mass spectrometric determination of the OPT tyrosine adduct has also been developed based on the pronase digestion of albumin and subsequent LC-tandem MS analysis of the digest. The resulting tyrosine phosphorothioate ester displayed favorable chromatographic and mass spectrometric properties for sensitive analysis. In vitro exposure levels of parathion and chlorpyrifos down to 1kM could readily be assessed. The remarkable affinity of OPTs for albumin opens the way for a more complete assessment of OP pesticide exposure.  
Keywords: Adducts  
Keywords: Pronase  
Keywords: Pepsin A  
Keywords: Tyrosine  
Keywords: Esters  
Keywords: Chlorpyrifos  
Keywords: Digestion  
Keywords: phosphorothioate  
Keywords: Albumin  
Keywords: Pesticides  
Keywords: biomonitoring  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Parathion  
Date revised - 2009-12-01  
Language of summary - English  
Pages - 1031-1036  
ProQuest ID - 21173467  
SubjectsTermNotLitGenreText - Digestion; Chlorpyrifos; phosphorothioate; Pronase; Adducts; Pesticides; Albumin; Pepsin A; biomonitoring; Tyrosine; Esters; Parathion  
Last updated - 2012-12-28  
British nursing index edition - Archives of Toxicology [Arch. Toxicol.]. Vol. 83, no. 11, pp. 1031-1036. Nov 2009.  
Corporate institution author - Noort, D; Hulst, A G; Zuylen, A; Rijssel, E; Schans, MJ  
DOI - MD-0010854220; 11238871; 0340-5761; 1432-0738 English

967. Norberg-King, T. J. An Evaluation of the Fathead Minnow Seven-Day Subchronic Test for Estimating Chronic Toxicity. 1989: 52 p. (Publ As 5313 and 17878).   
Rec #: 1670  
Keywords: PUBL AS  
Call Number: NO PUBL AS (AgN,CBL,CPY,DZ,FNV,Na2Cr2,ZnS)  
Notes: Chemical of Concern: AgN,CBL,CPY,DZ,FNV,Na2Cr2,ZnS

968. Nougadere, Alexandre; Sirot, Veronique; Kadar, Ali; Fastier, Antony; Truchot, Eric; Vergnet, Claude; Hommet, Frederic; Bayle, Joeelle; Gros, Philippe; Leblanc, Jean-Charles, and Nougadere, Alexandre. Total Diet Study on Pesticide Residues in France: Levels in Food as Consumed and Chronic Dietary Risk to Consumers. 2012 Sep 15; 45, 135-150.   
Rec #: 46489  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chronic dietary exposure to pesticide residues was assessed for the French population using a total diet study (TDS) to take into account realistic levels in foods as consumed at home (table-ready). Three hundred and twenty-five pesticides and their transformation products, grouped into 283 pesticides according to their residue definition, were sought in 1235 composite samples corresponding to 194 individual food items that cover 90% of the adult and child diet. To make up the composite samples, about 19,000 food products were bought during different seasons from 2007 to 2009 in 36 French cities and prepared according to the food preparation practices recorded in the individual and national consumption survey (INCA2). The results showed that 37% of the samples contained one or more residues. Seventy-three pesticides were detected and 55 quantified at levels ranging from 0.003 to 8.7mg/kg. The most frequently detected pesticides, identified as monitoring priorities in 2006, were the post-harvest insecticides pirimiphos-methyl and chlorpyrifos-methyl-particularly in wheat-based products-together with chlorpyrifos, iprodione, carbendazim and imazalil, mainly in fruit and fruit juices. Dietary intakes were estimated for each subject of INCA2 survey, under two contamination scenarios to handle left-censored data: lower-bound scenario (LB) where undetected results were set to zero, and upper-bound (UB) scenario where undetected results were set to the detection limit. For 90% of the pesticides, exposure levels were below the acceptable daily intake (ADI) under the two scenarios. Under the LB scenario, which tends to underestimate exposure levels, only dimethoate intakes exceeded the ADI for high level consumers of cherry (0.6% of children and 0.4% of adults). This pesticide, authorised in Europe, and its metabolite were detected in both cherries and endives. Under the UB scenario, that overestimates exposure, a chronic risk could not be excluded for nine other pesticides (dithiocarbamates, ethoprophos, carbofuran, diazinon, methamidophos, disulfoton, dieldrin, endrin and heptachlor). For these pesticides, more sensitive analyses of the main food contributors are needed in order to refine exposure assessment.  
Keywords: Environmental Engineering Abstracts (EN); CSA / ASCE Civil Engineering Abstracts (CE)  
Date revised - 2012-08-01  
Language of summary - English  
Pages - 135-150  
ProQuest ID - 1028026878  
Last updated - 2012-12-05  
British nursing index edition - Environment International [Environ. Int.]. Vol. 45, pp. 135-150. 15 Sep 2012.  
Corporate institution author - Nougadere, Alexandre; Sirot, Veronique; Kadar, Ali; Fastier, Antony; Truchot, Eric; Vergnet, Claude; Hommet, Frederic; Bayle, Joeelle; Gros, Philippe; Leblanc, Jean-Charles  
DOI - 4a96bc85-076c-48a2-8d18csamfg201; 16816997; 0160-4120 English

969. Ntow, William J; Drechsel, Pay; Botwe, Benjamin Osei; Kelderman, Peter; Gijzen, Huub J, and Ntow, William J. The Impact of Agricultural Runoff on the Quality of Two Streams in Vegetable Farm Areas in Ghana. 2008; 37, (2): 696-703.   
Rec #: 46269  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A study of two small streams at Akumadan and Tono, Ghana, was undertaken during the rain and dry season periods between February 2005 and January 2006 to investigate the impact of vegetable field runoff on their quality. In each stream we compared the concentration of current-use pesticides in one site immediately upstream of a vegetable field with a second site immediately downstream. Only trace concentrations of endosulfan and chlorpyrifos were detected at both sites in both streams in the dry season. In the wet season, rain-induced runoff transported pesticides into downstream stretches of the streams. Average peak levels in the streams themselves were 0.07 mu g L super(-1) endosulfan, 0.02 mu g L super(-1) chlorpyrifos (the Akumadan stream); 0.04 mu g L super(-1) endosulfan, 0.02 mu g L super(-1) chlorpyrifos (the Tono stream). Respective average pesticide levels associated with streambed sediment were 1.34 and 0.32 mu g kg super(-1) (the Akumadan stream), and 0.92 and 0.84 mu g kg super(-1) (the Tono stream). Further investigations are needed to establish the potential endosulfan and chlorpyrifos effects on aquatic invertebrate and fish in these streams. Meanwhile measures should be undertaken to reduce the input of these chemicals via runoff.  
Keywords: Chemicals  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Aquatic organisms  
Keywords: Environmental Quality  
Keywords: Agricultural pollution  
Keywords: SW 3030:Effects of pollution  
Keywords: Q2 02261:General  
Keywords: Invertebrates  
Keywords: Freshwater  
Keywords: Toxicity tests  
Keywords: Streams  
Keywords: upstream  
Keywords: Rainy season  
Keywords: Agricultural Chemicals  
Keywords: Pollution Abstracts; ASFA 2: Ocean Technology Policy & Non-Living Resources; ASFA 3: Aquatic Pollution & Environmental Quality; Water Resources Abstracts; Aqualine Abstracts  
Keywords: farms  
Keywords: Downstream  
Keywords: Agricultural runoff  
Keywords: Ghana  
Keywords: Sediment pollution  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: AQ 00008:Effects of Pollution  
Keywords: dry season  
Keywords: Water pollution  
Keywords: Endosulfan  
Keywords: Chlorpyrifos  
Keywords: Pesticides  
Keywords: downstream  
Keywords: Fish  
Keywords: Rain  
Keywords: Dry season  
Keywords: Runoff  
Date revised - 2008-05-01  
Language of summary - English  
Location - Ghana  
Pages - 696-703  
ProQuest ID - 20864918  
SubjectsTermNotLitGenreText - Sediment pollution; Rainy season; Agricultural pollution; Pesticides; Dry season; Toxicity tests; Agricultural runoff; Water pollution; Chemicals; Chlorpyrifos; Aquatic organisms; upstream; farms; downstream; dry season; Streams; Endosulfan; Agricultural Chemicals; Environmental Quality; Fish; Downstream; Rain; Invertebrates; Runoff; Ghana; Freshwater  
Last updated - 2011-12-14  
British nursing index edition - Journal of Environmental Quality [J. Environ. Qual.]. Vol. 37, no. 2, pp. 696-703. 2008.  
Corporate institution author - Ntow, William J; Drechsel, Pay; Botwe, Benjamin Osei; Kelderman, Peter; Gijzen, Huub J  
DOI - MD-0008077554; 8178998; CS0820183; 0047-2425; 1537-2537 English

970. Nuyttens, D.; Braekman, P.; Windey, S., and Sonck, B. Potential dermal pesticide exposure affected by greenhouse spray application technique. 2009; 65, (7): 781-790.   
Rec #: 66019  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: Operator safety is still one of the main problems concerning greenhouse spray applications in South European horticulture. The main objective of this study was to compare potential dermal exposure (PDE) between traditional handheld spray application techniques (i.e. a standard spray gun walking forwards, a spray lance walking forwards and backwards) and novel spray application techniques with spray booms (i.e. a trolley, the Fumimatic and the Fumicar). RESULTS: PDE varied from 19.7 mLh(-1) for the Fumimatic to 460 mLh(-1) for the spray lance walking forwards. Walking backwards reduced PDE by a factor 7. With the trolley, Fumimatic and Fumicar, PDE was respectively 20,60 and 8 times lower than with the standard spray gun. With the spray lance, PDE was about 2.5 times higher than with the spray gun. Pesticide distribution over the operator's body was non-uniform and correlated strongly with the application technique. With the traditional techniques, exposure to the legs and feet represents 60-80% of the total exposure. CONCLUSIONS: Novel spray application techniques using spray booms greatly decrease operator exposure because the operator is not walking directly into the spray cloud and the sprayed crop, and because of their higher capacity. Depending on the type of spray application, different parts of the body need to be protected most. (C) 2009 Society of Chemical Industry  
Keywords: operator safety, horticulture, pesticide applications, spray boom,  
ISI Document Delivery No.: 465WH

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Rec #: 50709  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Curr Opin Neurol. 2003 Oct;16(5):577-83 (medline /14501841)  
COMMENTS: Cites: EMBO Rep. 2004 Nov;5(11):1071-7 (medline /15472711)  
COMMENTS: Cites: Mol Cancer Ther. 2004 Oct;3(10):1229-37 (medline /15486190)  
COMMENTS: Cites: Bioinformatics. 2005 Apr 1;21(7):1237-45 (medline /15531612)  
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COMMENTS: Cites: J Biol Chem. 2005 Sep 23;280(38):32700-11 (medline /16076844)  
COMMENTS: Cites: Mol Cell Biol. 2005 Nov;25(22):10111-21 (medline /16260624)  
COMMENTS: Cites: Int J Mol Med. 2006 Feb;17(2):323-9 (medline /16391833)  
COMMENTS: Cites: Oligonucleotides. 2005 Dec;15(4):284-97 (medline /16396622)  
COMMENTS: Cites: Hum Mol Genet. 2006 Mar 15;15(6):999-1013 (medline /16461336)  
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COMMENTS: Cites: Nat Med. 2006 Oct;12(10):1147-50 (medline /16980968)  
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COMMENTS: Cites: Cell. 1987 Jul 31;50(3):509-17 (medline /3607877)  
COMMENTS: Cites: Arch Neurol. 1987 Aug;44(8):818-22 (medline /3632394)  
COMMENTS: Cites: Mol Biol (Mosk). 1981 May-Jun;15(3):690-705 (medline /6166855)  
COMMENTS: Cites: Environ Mutagen. 1980;2(1):67-73 (medline /7327161)  
COMMENTS: Cites: Mol Cell Biol. 1994 Nov;14(11):7499-506 (medline /7935465)  
COMMENTS: Cites: Cell Tissue Res. 2000 Jun;300(3):447-57 (medline /10928275)  
COMMENTS: Cites: Eur J Hum Genet. 2000 Oct;8(10):793-6 (medline /11039581)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2001 Jan 2;98(1):42-7 (medline /11120883)  
COMMENTS: Cites: Arch Pharm (Weinheim). 2000 Nov;333(11):373-80 (medline /11129979)  
COMMENTS: Cites: Nat Genet. 2001 Jan;27(1):48-54 (medline /11137997)  
COMMENTS: Cites: Nucleic Acids Res. 2001 Oct 1;29(19):3965-74 (medline /11574678)  
COMMENTS: Cites: Hum Genet. 2001 Oct;109(4):402-7 (medline /11702221)  
COMMENTS: Cites: Gene Ther. 2001 Oct;8(20):1532-8 (medline /11704813)  
COMMENTS: Cites: Hum Mol Genet. 2001 Nov 15;10(24):2841-9 (medline /11734549)  
COMMENTS: Cites: Nat Genet. 2002 Apr;30(4):377-84 (medline /11925564)  
COMMENTS: Cites: J Biol Chem. 2002 Oct 11;277(41):38954-64 (medline /12151389)  
COMMENTS: Cites: BMC Bioinformatics. 2003 Jan 13;4:2 (medline /12525261)  
COMMENTS: Cites: J Neurochem. 2003 Aug;86(3):669-77 (medline /12859680)  
COMMENTS: Cites: Anal Biochem. 2003 Aug 15;319(2):335-6 (medline /12871732)  
ABSTRACT: One therapeutic approach to Duchenne Muscular Dystrophy (DMD) recently entering clinical trials aims to convert DMD phenotypes to that of a milder disease variant, Becker Muscular Dystrophy (BMD), by employing antisense oligonucleotides (AONs) targeting splice sites, to induce exon skipping and restore partial dystrophin function. In order to search for small molecule and genetic modulators of AON-dependent and independent exon skipping, we screened approximately 10,000 known small molecule drugs, >17,000 cDNA clones, and >2,000 kinase- targeted siRNAs against a 5.6 kb luciferase minigene construct, encompassing exon 71 to exon 73 of human dystrophin. As a result, we identified several enhancers of exon skipping, acting on both the reporter construct as well as endogenous dystrophin in mdx cells. Multiple mechanisms of action were identified, including histone deacetylase inhibition, tubulin modulation and pre-mRNA processing. Among others, the nucleolar protein NOL8 and staufen RNA binding protein homolog 2 (Stau2) were found to induce endogenous exon skipping in mdx cells in an AON-dependent fashion. An unexpected but recurrent theme observed in our screening efforts was the apparent link between the inhibition of cell cycle progression and the induction of exon skipping.  
MESH HEADINGS: Alternative Splicing/drug effects  
MESH HEADINGS: Animals  
MESH HEADINGS: Cell Cycle/drug effects  
MESH HEADINGS: Cell Line  
MESH HEADINGS: DNA, Complementary/genetics  
MESH HEADINGS: Dystrophin/\*genetics  
MESH HEADINGS: Enhancer Elements, Genetic/genetics  
MESH HEADINGS: Enzyme Assays  
MESH HEADINGS: Exons/\*genetics  
MESH HEADINGS: Genes, Reporter  
MESH HEADINGS: Genome, Human/genetics  
MESH HEADINGS: High-Throughput Screening Assays/\*methods  
MESH HEADINGS: Histone Deacetylase Inhibitors/pharmacology  
MESH HEADINGS: Humans  
MESH HEADINGS: Hydroxamic Acids/pharmacology  
MESH HEADINGS: Luciferases/metabolism  
MESH HEADINGS: Mice  
MESH HEADINGS: Mitotic Index  
MESH HEADINGS: Muscular Dystrophy, Duchenne/genetics  
MESH HEADINGS: Oligonucleotides, Antisense/\*pharmacology  
MESH HEADINGS: Phosphotransferases/metabolism  
MESH HEADINGS: RNA, Small Interfering/metabolism  
MESH HEADINGS: Reproducibility of Results  
MESH HEADINGS: Small Molecule Libraries/\*analysis/pharmacology  
MESH HEADINGS: Tubulin Modulators/pharmacology eng

972. O'regan, K. J.; Brignati, M. J.; Murphy, M. A.; Bucks, M. A., and Courtney, R. J. Virion Incorporation of the Herpes Simplex Virus Type 1 Tegument Protein Vp22 Is Facilitated by Trans-Golgi Network Localization and Is Independent of Interaction With Glycoprotein E.   
Rec #: 49969  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Virology. 2007 Feb 5;358(1):192-200 (medline /16997344)  
COMMENTS: Cites: J Virol. 1991 Mar;65(3):1066-81 (medline /1847436)  
COMMENTS: Cites: Virology. 2007 Dec 20;369(2):263-80 (medline /17888478)  
COMMENTS: Cites: J Virol. 1974 Sep;14(3):640-51 (medline /4369085)  
COMMENTS: Cites: J Virol. 1995 Dec;69(12):7932-41 (medline /7494306)  
COMMENTS: Cites: J Biol Chem. 1998 May 29;273(22):13430-6 (medline /9593675)  
COMMENTS: Cites: J Virol. 1999 Oct;73(10):8677-88 (medline /10482621)  
COMMENTS: Cites: J Virol. 1999 Nov;73(11):9515-20 (medline /10516060)  
COMMENTS: Cites: Annu Rev Cell Dev Biol. 1999;15:705-32 (medline /10611976)  
COMMENTS: Cites: J Virol. 2000 Jan;74(2):975-86 (medline /10623760)  
COMMENTS: Cites: J Virol. 2000 May;74(9):4004-16 (medline /10756012)  
COMMENTS: Cites: Nat Struct Biol. 2000 Aug;7(8):639-43 (medline /10932246)  
COMMENTS: Cites: J Virol. 2000 Nov;74(21):10041-54 (medline /11024133)  
COMMENTS: Cites: J Virol. 2001 Feb;75(4):1928-40 (medline /11160692)  
COMMENTS: Cites: J Virol. 2001 Dec;75(24):12209-19 (medline /11711612)  
COMMENTS: Cites: J Virol. 2002 Feb;76(4):1537-47 (medline /11799148)  
COMMENTS: Cites: Cell Signal. 2002 Mar;14(3):183-9 (medline /11812645)  
COMMENTS: Cites: J Virol. 2002 Aug;76(16):8208-17 (medline /12134026)  
COMMENTS: Cites: J Virol. 2002 Oct;76(19):9934-51 (medline /12208970)  
COMMENTS: Cites: J Virol. 2003 Aug;77(15):8481-94 (medline /12857917)  
COMMENTS: Cites: J Virol. 2003 Nov;77(21):11417-24 (medline /14557627)  
COMMENTS: Cites: J Virol. 2005 Aug;79(15):9566-71 (medline /16014918)  
COMMENTS: Cites: Mol Cell Biol. 2005 Aug;25(16):7092-106 (medline /16055720)  
COMMENTS: Cites: J Virol. 2005 Oct;79(20):13082-93 (medline /16189010)  
COMMENTS: Cites: J Virol. 2006 Mar;80(5):2582-4 (medline /16474165)  
COMMENTS: Cites: J Virol. 2006 Sep;80(17):8664-75 (medline /16912314)  
COMMENTS: Cites: J Virol. 2006 Nov;80(21):10534-41 (medline /16928743)  
COMMENTS: Cites: J Virol. 2007 Jan;81(1):319-31 (medline /17035313)  
COMMENTS: Cites: Virology. 2008 Jul 5;376(2):279-89 (medline /18452963)  
COMMENTS: Cites: Virology. 2008 Sep 1;378(2):347-54 (medline /18602131)  
COMMENTS: Cites: Virology. 2009 May 10;387(2):449-58 (medline /19307008)  
COMMENTS: Cites: Virus Res. 2009 Aug;143(2):222-34 (medline /19651457)  
COMMENTS: Cites: J Virol. 2009 May;83(10):5204-18 (medline /19279114)  
COMMENTS: Cites: Virology. 1994 May 1;200(2):831-6 (medline /8178468)  
COMMENTS: Cites: Virology. 1996 Jun 1;220(1):60-8 (medline /8659129)  
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COMMENTS: Cites: Cell. 1998 Jul 24;94(2):205-16 (medline /9695949)  
COMMENTS: Cites: J Virol. 1999 Jan;73(1):377-87 (medline /9847342)  
COMMENTS: Cites: Adv Virus Res. 1998;51:237-347 (medline /9891589)  
COMMENTS: Cites: J Virol. 1999 Apr;73(4):2921-9 (medline /10074141)  
COMMENTS: Cites: J Virol. 1999 Jul;73(7):5364-72 (medline /10364283)  
COMMENTS: Cites: J Virol. 2001 Jun;75(12):5697-702 (medline /11356979)  
COMMENTS: Cites: J Virol. 2003 Jan;77(2):1403-14 (medline /12502856)  
COMMENTS: Cites: J Virol. 2003 Apr;77(8):4888-98 (medline /12663795)  
COMMENTS: Cites: Proc Soc Exp Biol Med. 1964 Mar;115:814-6 (medline /14155835)  
COMMENTS: Cites: J Gen Virol. 2005 Feb;86(Pt 2):253-61 (medline /15659744)  
COMMENTS: Cites: J Virol. 2005 Aug;79(15):9735-45 (medline /16014935)  
COMMENTS: Cites: J Virol. 2005 Oct;79(19):12185-98 (medline /16160145)  
COMMENTS: Cites: J Virol. 2006 Oct;80(20):10117-27 (medline /17005689)  
COMMENTS: Cites: Virology. 2007 May 10;361(2):316-24 (medline /17223150)  
COMMENTS: Cites: J Gen Virol. 1992 Mar;73 ( Pt 3):723-6 (medline /1312128)  
ABSTRACT: HSV-1 virions contain a proteinaceous layer termed the tegument that lies between the nucleocapsid and viral envelope. The molecular mechanisms that facilitate incorporation of tegument proteins are poorly characterized. The tegument protein VP22 interacts with VP16 and the cytoplasmic tail of glycoprotein E (gE). Virion incorporation of VP22 occurs independently of interaction with VP16; however, the contribution of gE binding remains undefined. Site-directed mutagenesis was used to identify VP22 mutants which abrogate interaction with gE but retain VP16 binding. Virion incorporation assays demonstrated that failure to bind gE did not abrogate VP22 packaging. A region of VP22 which binds to both VP16 and gE failed to be packaged efficiently, with wild-type levels of incorporation only attained when residues 43-86 of VP22 were present. Mutational analysis of an acidic cluster of amino acids within this region indicates that this motif facilitates trans-Golgi network (TGN) localization and optimal virion incorporation of VP22.  
MESH HEADINGS: Amino Acid Sequence  
MESH HEADINGS: Amino Acids/chemistry/metabolism  
MESH HEADINGS: Animals  
MESH HEADINGS: Cercopithecus aethiops  
MESH HEADINGS: Gene Expression Regulation, Viral/physiology  
MESH HEADINGS: Herpesvirus 1, Human/\*physiology  
MESH HEADINGS: Humans  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Mutagenesis, Site-Directed  
MESH HEADINGS: Point Mutation  
MESH HEADINGS: Protein Binding  
MESH HEADINGS: Protein Transport  
MESH HEADINGS: Vero Cells  
MESH HEADINGS: Viral Envelope Proteins/genetics/\*metabolism  
MESH HEADINGS: Viral Structural Proteins/chemistry/genetics/\*metabolism  
MESH HEADINGS: Virus Assembly  
MESH HEADINGS: trans-Golgi Network/\*physiology eng

973. Ochi, A.; Graffeo, C. S.; Zambirinis, C. P.; Rehman, A.; Hackman, M.; Fallon, N.; Barilla, R. M.; Henning, J. R.; Jamal, M.; Rao, R.; Greco, S.; Deutsch, M.; Medina-Zea, M. V.; Bin Saeed, U.; Ego-Osuala, M. O.; Hajdu, C., and Miller, G. Toll-Like Receptor 7 Regulates Pancreatic Carcinogenesis in Mice and Humans.   
Rec #: 73439  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY   
Abstract: ABSTRACT: Pancreatic ductal adenocarcinoma is an aggressive cancer that interacts with stromal cells to produce a highly inflammatory tumor microenvironment that promotes tumor growth and invasiveness. The precise interplay between tumor and stroma remains poorly understood. TLRs mediate interactions between environmental stimuli and innate immunity and trigger proinflammatory signaling cascades. Our finding that TLR7 expression is upregulated in both epithelial and stromal compartments in human and murine pancreatic cancer led us to postulate that carcinogenesis is dependent on TLR7 signaling. In a mouse model of pancreatic cancer, TLR7 ligation vigorously accelerated tumor progression and induced loss of expression of PTEN, p16, and cyclin D1 and upregulation of p21, p27, p53, c-Myc, SHPTP1, TGF-&beta;, PPAR&gamma;, and cyclin B1. Furthermore, TLR7 ligation induced STAT3 activation and interfaced with Notch as well as canonical NF-&kappa;B and MAP kinase pathways, but downregulated expression of Notch target genes. Moreover, blockade of TLR7 protected against carcinogenesis. Since pancreatic tumorigenesis requires stromal expansion, we proposed that TLR7 ligation modulates pancreatic cancer by driving stromal inflammation. Accordingly, we found that mice lacking TLR7 exclusively within their inflammatory cells were protected from neoplasia. These data suggest that targeting TLR7 holds promise for treatment of human pancreatic cancer.  
MESH HEADINGS: Animals  
MESH HEADINGS: Carcinoma, Pancreatic Ductal/genetics/immunology/\*metabolism/pathology  
MESH HEADINGS: Cell Transformation, Neoplastic/genetics/immunology/\*metabolism/pathology  
MESH HEADINGS: Gene Expression Regulation, Neoplastic/genetics/immunology  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunity, Innate/genetics  
MESH HEADINGS: Inflammation/genetics/immunology/metabolism/pathology  
MESH HEADINGS: MAP Kinase Signaling System/genetics/immunology  
MESH HEADINGS: Membrane Glycoproteins/genetics/immunology/\*metabolism  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Mutant Strains  
MESH HEADINGS: Neoplasm Proteins/genetics/immunology/\*metabolism  
MESH HEADINGS: Pancreatic Neoplasms/genetics/immunology/\*metabolism/pathology  
MESH HEADINGS: Toll-Like Receptor 7/genetics/immunology/\*metabolism eng

974. Odabasi, M. and Cetin, B. Determination of octanol-air partition coefficients of organochlorine pesticides (OCPs) as a function of temperature: Application to air-soil exchange. 2012; 113, 432-439.   
Rec #: 66039  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Octanol-air partition coefficients (K(OA)) for 7 organochlorine pesticides (OCPs) were determined as a function of temperature using the GC retention time method. Log K(OA) values at 25 degrees C ranged over two orders of magnitude, between 8.32 (chlorpyrifos) and 10.48 (methoxychlor). The determined K(OA) values were within a factor of 0.5 (endosulfan sulfate) to 7.9 (endrin aldehyde) for values calculated as the ratio of octanol-water partition coefficient to dimensionless Henry's law constant. The internal energies of phase transfer between octanol and air (Delta U(OA)) ranged between 71.8 and 95.4 kJ mol(-1) and they were within the reported range for OCPs (55.8-105 kJ mol(-1)). Atmospheric and soil OCP concentrations were also measured in Izmir, Turkey, and data used to investigate the soil-air gas exchange. Net soil-air gas exchange fluxes of OCPs ranged from -0.01 (volatilization, cis-nonachlor) to 56.4 ng m(-2) day(-1) (deposition, chlorpyrifos) in winter, while in summer they ranged from -0.03 (trans-nonachlor) to 329 ng m(-2) day(-1) (endosulfan I). In both sampling periods, endosulfan I and II, trans-nonachlor, p,p'-DDD and p,p'-DDT were generally deposited to the soil while gamma-HCH and heptachlor epoxide mostly volatilized. Fluxes of other OCPs were variable (volatilization or absorption) due to their largely fluctuating ambient air concentrations. Calculated dry deposition and recently measured wet deposition fluxes were used to estimate the relative importance of different mechanisms (i.e., dry deposition, wet deposition, gas absorption, and volatilization) to the local soil pollutant inventory. Generally, all mechanisms contributed significantly to the soil OCP inventory. Volatilization fluxes were generally much lower than the sum of input fluxes (dry deposition, wet deposition and gas absorption) for most of the OCPs indicating a net deposition to the soil. (C) 2012 Elsevier Ltd. All rights reserved.  
Keywords: Organochlorine pesticides, Polybrominated diphenyl ethers, Octanol-air  
ISI Document Delivery No.: 065MQ

975. Odenkirchen, E. W. Hazards of Chlorpyrifos, an Organophosphorus Pesticide, to Natural Resources: A Review. 1987: 63 p.   
Rec #: 2410  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY

976. Odenkirchen, E. W. and Eisler, R. Chlorpyrifos Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review. SOIL; 1988: 34 p.   
Rec #: 1710  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (As,CBF,CPY,Cr,Cr element,DZ), NO REVIEW (As,CBF,CPY,Cr,Cr element,DZ)  
Notes: Chemical of Concern: As,CBF,CPY,Cr,DXN,DZ,MRX,PCB,TCDD,TXP

977. Odhiambo, T. R. Aspects of Integrated Pest and Vector Management in Africa. 1989; 1, (2): 4-10.   
Rec #: 260  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ACP,CBL,CPY,DDVP,DM,DZ,FNT,FNV,LCYT,MLN,PIRM,PPX), NO REVIEW (ACP,CBL,CPY,DDVP,DM,DZ,FNT,FNV,LCYT,MLN,PIRM,PPX)  
Notes: Chemical of Concern: ACP,ACYP,BDC,CBL,CPY,DDVP,DLD,DM,DZ,FNT,FNV,LCYT,MLN,PIRM,PPX

978. Oellig, C. and Schwack, W. Planar solid phase extraction clean-up for pesticide residue analysis in tea by liquid chromatography-mass spectrometry. 2012; 1260, 42-53.   
Rec #: 66059  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Efficient clean-up is indispensable for preventing matrix effects in multi-residue analysis of pesticides in food by liquid and gas chromatography (LC and GC) coupled to mass spectrometry (MS). High-throughput planar solid phase extraction (HTpSPE) was recently introduced as a new clean-up concept in residue analysis of pesticides in fruit and vegetables (C. Oellig, W. Schwack, 2011 [451). Thin-layer chromatography (TLC) was used to completely separate pesticides from matrix compounds and to focus them into a sharp zone, followed by extraction of the target zone by the TLC-MS interface. As rather challenging matrices, tea samples were chosen in this study. Besides chlorophylls and polyphenols, high amount of caffeine is co-extracted resulting in strong matrix effects both in LC-MS and GC-MS. The former HTpSPE procedure was adapted to initial extracts of green and black tea resulting in colorless extracts nearly free of matrix effects and interferences, as shown for seven chemically representative pesticides (acetamiprid, penconazole, azoxystrobin, chlorpyrifos, pirimicarb, fenarimol, and mepanipyrim). LC-MS/MS calibration curves obtained in the range of 0.002-0.5 mg/kg from matrix-matched standards and solvent standards were nearly identical and demonstrated the effectiveness of clean-up by HTpSPE. Mean recoveries determined by LC-MS/MS against solvent standards at spiking levels of 0.01 and 0.1 mg/kg ranged between 72 and 114% with relative standard deviations (RSDs) of 0.7-4.7% (n = 4), while LC-MS measurements of tea samples spiked at 1 mg/kg provided recoveries of 81-104% with RSDs of 1.2-4.9% (n = 6). Using LC-MS/MS, the method showed high sensitivity with signal-to-noise ratios >10 for concentrations below 0.002 mg/kg. HTpSPE of one sample was done in a few minutes, while numerous samples were cleaned in parallel at minimal costs with very low sample and solvent consumption. (C) 2012 Elsevier B.V. All rights reserved.  
Keywords: Pesticide residue analysis, Tea, Clean-up, Matrix effects,  
ISI Document Delivery No.: 020BE

979. Ogg, C. Research: Pesticide Exposure Extends to Applicator's Family. 2008(8).  
Rec #: 53839  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: Internet resource  
1022964686

980. Ohata, K. and Terashima, S. Synthesis and Biological Activity of Enantiomeric Pairs of 5-[(E)-Cycloalk-2-Enylidenemethyl]Thiolactomycin Congeners.   
Rec #: 51069  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: The title congeners were synthesized by employing our efficient synthetic route previously explored for preparing enantiomeric pairs of thiolactomycin and its 3-demethyl derivative. While all the synthesized congeners lacked in vitro antibacterial activity, some of the congeners bearing an (E)-cyclohept-2-enylidenemethyl or an (E)-cyclooct-2-enylidenemethyl group were found to exhibit more potent type I FAS inhibitory activity than (S)-3-demethylthiolactomycin having an unnatural configuration.  
MESH HEADINGS: Animals  
MESH HEADINGS: Anti-Bacterial Agents/chemistry  
MESH HEADINGS: Anti-Infective Agents/chemistry  
MESH HEADINGS: Cell Line  
MESH HEADINGS: Chemistry, Pharmaceutical/\*methods  
MESH HEADINGS: Drug Design  
MESH HEADINGS: Fatty Acid Synthetase Complex/\*antagonists &amp  
MESH HEADINGS: inhibitors/chemistry  
MESH HEADINGS: Humans  
MESH HEADINGS: Inhibitory Concentration 50  
MESH HEADINGS: Microbial Sensitivity Tests  
MESH HEADINGS: Models, Chemical  
MESH HEADINGS: Molecular Conformation  
MESH HEADINGS: Structure-Activity Relationship  
MESH HEADINGS: Thiophenes/\*chemical synthesis/chemistry/pharmacology eng

981. Ohno, K.; Minami, T.; Matsui, Y., and Magara, Y. Effects of chlorine on organophosphorus pesticides adsorbed on activated carbon: Desorption and oxon formation. 2008; 42, (6-7): 1753-1759.   
Rec #: 66089  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We investigated effects of chlorination on four organophosphorus pesticides (**diazinon, isoxathion, malathion, and tolclofos-methyl**) adsorbed on powdered activated carbon (PAC). Following adsorption of each pesticide on 10mg/L of PAC in water, chlorine was added. After 30min of chlorination, the corresponding oxons were detected in the water, but the parent compounds were not detected. Molar ratios of the oxon concentration in solution after 30min of chlorine addition to the initial pesticide concentration before the adsorption process were 4.1% and 7.9% for diazinon, 3.9% and 5.8% for isoxathion, 1.2% and 1.7% for malathion, and 1.4% and 1.4% for tolchlofos-methyl, in the case of 2 and 5 mg/L of chlorine addition. The results suggested that the oxons were desorbed from the PAC by chlorination. The concentrations of the desorbed oxons gradually decreased with time, apparently owing to their readsorption by the PAC. Results from additional experiments suggest the following sequence of events: (i) adsorbed pesticides are oxidized by chlorine on the surface of the PAC and transformed into corresponding oxons; (ii) the oxons are released from the PAC; (iii) the released oxons are gradually readsorbed by the PAC, decreasing their concentrations in the water phase. (c) 2007 Elsevier Ltd. All rights reserved.  
Keywords: activated carbon, chlorination, organophosphorus pesticides, oxon  
ISI Document Delivery No.: 291BF

982. Ojha, Anupama; Srivastava, Nalini, and Ojha, Anupama. Redox Imbalance in Rat Tissues Exposed With Organophosphate Pesticides and Therapeutic Potential of Antioxidant Vitamins. 2012 Jan 1; 75, 230-241.   
Rec #: 42899  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphate pesticides are among the most widely used synthetic chemicals for controlling domestic and agricultural pests. Present study was aimed to evaluate the potential of chlorpyrifos, parathion and malathion, to disturb glutathione homeostasis in **rat tissues** and to find out whether the pre-feeding of antioxidant vitamins has some ameliorating effect on the pesticide-induced alterations. The results showed that these pesticides, alone or in combination, caused decrease in the levels of GSH and the corresponding increase in the levels of GSSG, decreasing the GSH/GSSG ratio. The results also showed NADPH/NADP+ and NADH/NAD+ ratios were also decreased in the rat tissues on pesticide exposure. These pesticides, alone or in combination, caused increase in the activities of glutathione reductase and glucose-6-phosphate dehydrogenase in all the rat tissues studied. The findings show that these pesticides generate oxidative stress and prior feeding of mixture of antioxidant vitamins tend to reduce the toxicities of these pesticides.  
Keywords: Chemicals  
Keywords: glutathione reductase  
Keywords: Pesticides (organophosphorus)  
Keywords: Feeding  
Keywords: Tissues  
Keywords: Environment Abstracts; Toxicology Abstracts  
Keywords: Antioxidants  
Keywords: Organophosphates  
Keywords: NADH  
Keywords: Toxicity  
Keywords: Homeostasis  
Keywords: Malathion  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: NADP  
Keywords: Glucosephosphate dehydrogenase  
Keywords: Chlorpyrifos  
Keywords: vitamins  
Keywords: Oxidative stress  
Keywords: Vitamins  
Keywords: Pesticides  
Keywords: Pests  
Keywords: X 24330:Agrochemicals  
Keywords: Parathion  
Date revised - 2011-12-01  
Language of summary - English  
Pages - 230-241  
ProQuest ID - 911152195  
SubjectsTermNotLitGenreText - glutathione reductase; Pesticides (organophosphorus); Feeding; Antioxidants; NADH; Toxicity; Homeostasis; Malathion; Glucosephosphate dehydrogenase; NADP; Chlorpyrifos; Oxidative stress; Vitamins; Pests; Parathion; Chemicals; Tissues; vitamins; Organophosphates; Pesticides  
Last updated - 2012-03-29  
British nursing index edition - Ecotoxicology and Environmental Safety [Ecotoxicol. Environ. Saf.]. Vol. 75, pp. 230-241. 1 Jan 2012.  
Corporate institution author - Ojha, Anupama; Srivastava, Nalini  
DOI - 7d48e646-add1-4232-aa92csamfg201; 16000871; 0147-6513 English

983. Ojha, Anupama; Yaduvanshi, Santosh K., and Srivastava, Nalini. Effect of combined exposure of commonly used organophosphate pesticides on lipid peroxidation and antioxidant enzymes in rat tissues. 2011 Feb; 99, (2): 148-156.   
Rec #: 2780  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Organophosphate compounds are among the most widely used synthetic chemicals for controlling a wide variety of pests. Organophosphate (OP) poisoning continues to be major cause of morbidity and mortality in the third world countries. Indiscriminate use of these pesticides tends to leave residues on the objects of the environment. **Present study is aimed to compare the potential of three commonly used OP pesticides, chlorpyrifos (CPF), methyl parathion (MPT) and malathion (MLT), to generate oxidative stress in rat tissues and to evaluate whether the combined exposure of these pesticides exerts synergistic or antagonistic effects.** Results of the present study showed that CPF, MPT and MLT exposure to rats caused accumulation of malondialdehyde (MDA) and 4-hydroxynonanal (4HNE), the two major end products of lipid peroxidation, in liver, kidney, brain and spleen of rats. Combined exposure of these pesticides also resulted in accumulation of MDA and 4HNE in rat tissues but the increase was almost of the same order as observed in rat tissues given these pesticides singly. Exposure with CPF, MPT and MLT singly or in mixture, caused dose-dependent decrease in the activities of antioxidant enzymes namely, catalase (CAT), superoxide dismutase (SOD) and glutathione peroxidase (GPx), in rat tissues when compared with control, and the decrease observed was of the same order in all the groups. Acetylcholinesterase (AChE) activity, an indicator of OP poisoning, was also decreased in rat tissues in dose-dependent manner in CPF, MPT, MLT and mixture treated group. Differential increase in the levels of cytochrome P450 (cyt P450) in hepatic and extra-hepatic tissues of rats given CPF, MPT or MLT singly or in mixture, indicate different rates of metabolism of these pesticides. Results of the present study clearly show that CPF, MPT and MLT exposure singly or in mixture, induced oxidative stress in rat tissues which may be the major contributor of the overall toxicity of the OP pesticides. Combined exposure of these pesticides does not seem to potentiate the toxicity of each other and their toxic effects are not additive. Chlorpyrifos/ Parathion/ Malathion/ Oxidative stress/ Lipid peroxidation/ Antioxidant enzymes

984. Olea, C.; Boon, E. M.; Pellicena, P.; Kuriyan, J., and Marletta, M. A. Probing the Function of Heme Distortion in the H-Nox Family.   
Rec #: 51049  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Inorg Chem. 2006 Dec 11;45(25):9985-10001 (medline /17140194)  
COMMENTS: Cites: EMBO J. 2007 Jan 24;26(2):578-88 (medline /17215864)  
COMMENTS: Cites: Nat Chem Biol. 2005 Jun;1(1):53-9 (medline /16407994)  
COMMENTS: Cites: Biochemistry. 2005 Sep 27;44(38):12690-9 (medline /16171383)  
COMMENTS: Cites: BMC Genomics. 2003;4(1):5 (medline /12590654)  
COMMENTS: Cites: Acta Crystallogr D Biol Crystallogr. 2005 Apr;61(Pt 4):458-64 (medline /15805601)  
COMMENTS: Cites: J Biol Chem. 2005 Mar 11;280(10):9192-202 (medline /15590662)  
COMMENTS: Cites: Acta Crystallogr D Biol Crystallogr. 2004 Dec;60(Pt 12 Pt 1):2126-32 (medline /15572765)  
COMMENTS: Cites: Acta Crystallogr D Biol Crystallogr. 1998 Sep 1;54(Pt 5):905-21 (medline /9757107)  
COMMENTS: Cites: J Bacteriol. 1997 Sep;179(17):5598-601 (medline /9287020)  
COMMENTS: Cites: Biophys J. 1998 Feb;74(2 Pt 1):753-63 (medline /9533688)  
COMMENTS: Cites: Biochim Biophys Acta. 1999 May 5;1411(2-3):334-50 (medline /10320667)  
COMMENTS: Cites: Acta Crystallogr D Biol Crystallogr. 1999 Apr;55(Pt 4):941-4 (medline /10089342)  
COMMENTS: Cites: Biochemistry. 1998 Sep 8;37(36):12431-42 (medline /9730815)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1998 Dec 22;95(26):15177-82 (medline /9860942)  
COMMENTS: Cites: Biochemistry. 1998 Apr 14;37(15):5118-28 (medline /9548742)  
COMMENTS: Cites: Science. 1982 Dec 17;218(4578):1244-6 (medline /7146910)  
COMMENTS: Cites: Methods Enzymol. 1978;54:411-35 (medline /732578)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1972 Aug;69(8):2263-7 (medline /4506096)  
COMMENTS: Cites: Biochemistry. 2007 Dec 4;46(48):13677-83 (medline /17988156)  
COMMENTS: Cites: J Am Chem Soc. 2006 Sep 27;128(38):12455-61 (medline /16984195)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2004 Aug 31;101(35):12854-9 (medline /15326296)  
COMMENTS: Cites: Acta Crystallogr D Biol Crystallogr. 1996 Jul 1;52(Pt 4):829-32 (medline /15299648)  
COMMENTS: Cites: Biochemistry. 2004 Aug 10;43(31):10203-11 (medline /15287748)  
COMMENTS: Cites: J Biol Chem. 2004 Jun 18;279(25):26489-99 (medline /15066989)  
COMMENTS: Cites: Biochemistry. 2003 Aug 26;42(33):9829-40 (medline /12924932)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2003 Apr 1;100(7):3778-83 (medline /12642672)  
COMMENTS: Cites: Acta Crystallogr D Biol Crystallogr. 2002 Nov;58(Pt 11):1948-54 (medline /12393927)  
COMMENTS: Cites: J Am Chem Soc. 2001 May 16;123(19):4635-6 (medline /11457264)  
COMMENTS: Cites: J Am Chem Soc. 2002 Jul 10;124(27):8099-103 (medline /12095355)  
COMMENTS: Cites: J Am Chem Soc. 2002 Jun 12;124(23):6751-8 (medline /12047196)  
COMMENTS: Cites: Biochemistry. 2001 Sep 25;40(38):11327-37 (medline /11560480)  
COMMENTS: Comment in: ACS Chem Biol. 2008 Nov 21;3(11):673-5 (medline /19032089)  
ABSTRACT: Hemoproteins carry out diverse functions utilizing a wide range of chemical reactivity while employing the same heme prosthetic group. It is clear from high-resolution crystal structures and biochemical studies that protein-bound hemes are not planar and adopt diverse conformations. The crystal structure of an H-NOX domain from Thermoanaerobacter tengcongensis (Tt H-NOX) contains the most distorted heme reported to date. In this study, Tt H-NOX was engineered to adopt a flatter heme by mutating proline 115, a conserved residue in the H-NOX family, to alanine. Decreasing heme distortion in Tt H-NOX increases affinity for oxygen and decreases the reduction potential of the heme iron. Additionally, flattening the heme is associated with significant shifts in the N-terminus of the protein. These results show a clear link between the heme conformation and Tt H-NOX structure and demonstrate that heme distortion is an important determinant for maintaining biochemical properties in H-NOX proteins.  
MESH HEADINGS: Bacterial Proteins/chemistry  
MESH HEADINGS: Heme/\*chemistry  
MESH HEADINGS: Hemeproteins/\*chemistry/genetics  
MESH HEADINGS: Molecular Conformation  
MESH HEADINGS: Mutagenesis, Site-Directed  
MESH HEADINGS: Oxygen/metabolism  
MESH HEADINGS: Protein Binding  
MESH HEADINGS: Protein Conformation  
MESH HEADINGS: Thermoanaerobacter/\*chemistry eng

985. Oliveira, M. M.; Silva, M. V.; Bastos, Vlfc; Fernandes, F. C., and Bastos, J. C. Brain acetylcholinesterase as a marine pesticide biomarker using Brazilian fishes. 2007; 63, (4): 303-312.   
Rec #: 66119  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Brain acetylcholinesterase (AChE) of some fishes from the coast of Rio de Janeiro State was studied as a possible pesticide biomarker in marine environmental monitoring. AChE specific activity in brain varied from 145 to 530U/g of proteins and the Michaelis-Menten constant (K(M)) for acetylthiocholine varied from 104 to 291 mu M among the 20 species studied. The enzyme sensitivity to **methyl paraoxon**, evaluated by the inhibition kinetic constants, shows that some species (Paralonchurus brasiliensis and Genidens genidens) are more sensitive (IC50-30min = 455 and 468 nM, respectively). The less sensitive Merluccius hubbsi and Percophis brasiliensis (IC50-30 min = 3339 and 3259nM, respectively) belong to the super-order Paracanthopterygii, which includes the more ancient species. On the other hand, more susceptible species belong to the super-order Acanthopterygii, which includes more recent species. These results suggest a possible evolutionary linkage for AChE sensitivity to methyl paraoxon. The application of inhibition kinetic constants for fish brain AChE in phylogenetic studies is still being investigated. The results have shown that a fish sentinel species should have the highest brain AChE level among the more sensitive ones. (c) 2006 Elsevier Ltd. All rights reserved.  
Keywords: acetylcholinesterase, organophosphate, pollutant, biomarker  
ISI Document Delivery No.: 157EG

986. Oliver, D. P.; Kookana, R. S.; Anderson, J. S.; Cox, J.; Waller, N., and Smith, L. The off-site transport of pesticide loads from two land uses in relation to hydrological events in the Mt. Lofty Ranges, South Australia. 2012; 106, 70-77.   
Rec #: 66129  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the Mediterranean climate of this study the growing period (and hence spraying period) for horticultural crops usually occurs from late spring to summer (i.e. October-March). However, runoff predominantly occurs in winter (late April-October) since there is insufficient rain in the spring and summer period for runoff to occur. It is therefore important to establish the runoff potential of pesticide, despite the long contact time with soil. We studied the distribution of the loads transported during individual runoff events, and the proportion of total annual load transported in each event over three seasons. Some insecticides and fungicides (pirimicarb, procymidone, carbaryl, fenarimol and penconazole) transported off-site from and apple and cherry orchard over a period of 30 months showed a strong association between peak pesticide load and peak flow during individual flow events. Others (particularly chlorpyrifos) however showed no obvious relationship between flow and load transported off-site. Throughout the year certain pesticides demonstrated behaviour characteristic of those chemicals that move in the first flush of drainage water in the season. This was particularly evident for pirimicarb, bupirimate, carbaryl and fenarimol, which all have K(oc) values < 1000 L/kg. However, for other pesticides the percentage of total annual load transported off-site either increased or remained fairly constant for several runoff events during the season which was most obvious for chlorpyrifos followed by penconazole and procymidone - all with Koc values >= 1500 L/kg. Generally, the total amount of pesticide moving off-site from both orchards was < 0.5% of the total mass of active ingredient applied, except fenarimol (0.54-2.1%). Only chlorpyrifos, however, showed a positive linear relationship between the load transported off-site during an event and total rainfall (R(2) = 0.48, n = 26). The results from this study have implications for the development of management strategies to minimise pesticide transport to waterways. Crown Copyright 2011 Published by Elsevier B.V. All rights reserved.  
Keywords: Water quality, Pesticide transport, Management, Mediterranean climate  
ISI Document Delivery No.: 929PO

987. Oliver, D. P.; Kookana, R. S.; Anderson, J. S.; Cox, J. W.; Fleming, N.; Wallerd, N., and Smith, L. Off-site transport of pesticides from two horticultural land uses in the Mt. Lofty Ranges, South Australia. 2012; 106, 60-69.   
Rec #: 66139  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Local runoff from the catchments in the Mt. Lofty Ranges provides a major source of drinking water for the city of Adelaide, South Australia, Australia. In this study two major land uses (apples and cherries) in the Mt. Lofty Ranges were monitored for off-site transport of pesticides over approximately 30 months. While fungicides have been rarely reported in the literature to be present in surface water, in our studies several fungicides (fenarimol, bupirimate, penconazole, procymidone, propiconazole) were found to be transported off-site in a persistent manner over the study period. Two pesticides (chlorpyrifos and fenari-mol) from the apple orchard were of particular concern. The average chlorpyrifos concentrations in 2007 and 2009 were more than ten times the environmental guideline value (0.01 mu g/L), suggesting potential deleterious effects on aquatic organisms immediately downstream of the apple orchard. Fenarimol was detected in 19 water samples collected from early April to early June 2007 and in 95% of these cases the total concentration exceeded the Australian Drinking Water Quality Guideline (no environmental guidelines are available in Australia for this chemical). For pesticides such as chlorpyrifos and fenarimol at least a ten-fold dilution would be required in the receiving environment for the concentrations to be below current guideline values. Generally more pesticides were detected in drainage water leaving the apple orchard than the cherry orchard, reflecting higher pesticide use at the former. The results from this study indicate that pesticides are of concern in this catchment and strategies for minimising off-site transport need to be developed and evaluated. Data from this study show that while some pesticides move off-site predominantly with the first runoff event some pesticides continue to be transported off-site for months. Some pesticides in the Mt. Lofty Ranges are persisting in soils or on the crop canopy for considerable time periods and being detected in surface runoff water months after the last application. Crown Copyright (C) 2011 Published by Elsevier B.V. All rights reserved.  
Keywords: Water quality, Pesticide transport, Management  
ISI Document Delivery No.: 929PO

988. Oliver, D. P.; Kookana, R. S.; Anderson, J. S.; Cox, J. W.; Waller, N., and Smith, L. H. Off-site transport of pesticides in dissolved and particulate forms from two land uses in the Mt. Lofty Ranges, South Australia. 2012; 106, 78-85.   
Rec #: 66149  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The form in which pesticides are transported off-site can have implications for their bioavailability, ecotoxicological impact and the effectiveness of any management strategies implemented to minimise their movement. We have investigated the form in which nine pesticides (carbaryl, fenarimol, azinphos methyl, penconazole, pirimicarb, chlorpyrifos. propiconazole, procymidone and bupirimate) were transported in surface water from an apple and cherry orchard in the Mt. Lofty Ranges, South Australia, over three years. The majority of pesticides monitored were found to move off-site in the dissolved (< 1.2 mu m) phase. Only propiconazole moved off-site predominantly (70-90%) by colloidal transport in association with particulate (> 1.2 mu m) material. Chlorpyrifos was detected in surface drainage water for several months and the predominant phase in which it moved varied between events in a year and during an event. The effectiveness of pesticide physicochemical properties as surrogates for predicting mode of transport of pesticides, in this region was determined by regression of average proportion (%) of each pesticide in the dissolved phase for each event against the relevant physicochemical parameters. There was no relationship between average proportion in the dissolved phase (< 1.2 mu m) and any of the pesticide characteristics considered. This suggests that off-site transport of pesticides is governed by complex biological and hydrological interactions and the use of simple physicochemical properties as surrogates for predicting offsite transport may not be applicable. These results have implications for the effectiveness of management strategies, including buffer strips and sedimentation ponds, to minimise transport and suggest that, unless adequate residency time is available for sorption of the pesticides, these strategies may have limited use for minimising the transport of the pesticides used in the two land uses studied here. This study has highlighted the importance of understanding the mode of transport of pesticides for informing the choice of management strategies to minimise potential offsite transport of pesticides under different field conditions. Crown Copyright (C) 2011 Published by Elsevier B.V. All rights reserved.  
Keywords: Pesticide, Surface water, Off-site transport, Transport mode  
ISI Document Delivery No.: 929PO

989. Oliver, Danielle P.; Pan, Yi Fong; Anderson, Jenny S.; Lin, Tsair Fuh; Kookana, Rai S.; Douglas, Grant B., and Wendling, Laura A. Sorption of pesticides by a mineral sand mining by-product, neutralised used acid (NUA). 2013 Jan 1-; 442, (0): 255-262.   
Rec #: 3010  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: This study investigated the sorptionÇôdesorption behaviour of four pesticides by a by-product from mineral sand mining, commonly referred to as neutralised used acid (NUA). In batch studies the average amount of pesticide removed after 6 h was 69% for atrazine, 89% for diuron, 61% for 2,4-D and 83% for chlorpyrifos. The lower sorption of 2,4-D to NUA compared with the other pesticides studied is most likely to be due to the high pH of the solutions (7.8 to 8.8) which would have resulted in 2,4-D being predominantly in an anionic form. The presence of other pesticides only significantly decreased the amount of 2,4-D sorbed from 59% to 34% when present in a mixture. Little (2 to 17%) diuron, chlorpyrifos, atrazine or 2,4-D were found to desorb from the NUA. The presence of nitrate or phosphate had minimal effect on the amount of diuron or atrazine sorbed to the NUA. However, all phosphate and nitrate treatments significantly (P &lt; 0.05) decreased the amount of 2,4-D sorbed (&lt; 50%) compared with when 2,4-D was present alone (65%). This study has shown that NUA has potential to be used as a sorbent for pesticides. Water quality/ Atrazine/ Diuron/ 2,4-D/ Chlorpyrifos

990. Olsson, O.; Khodorkovsky, M.; Gassmann, M.; Friedler, E.; Schneider, M., and Dubowski, Y. Fate of Pesticides and Their Transformation Products: First Flush Effects in a Semi-Arid Catchment. 2013; 41, (2): 134-142.   
Rec #: 66189  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Although it is known for many years, that transformation products (TPs) of pesticides are often more persistent, mobile, and sometimes more toxic than the parent compound, former catchment scale studies of substance release and flushing effects focused only on the parent compound. In this study, four river points were sampled in the Hula Valley, Israel, and samples were analyzed in the lab for chlorpyrifos (CP) and endosulfan residues (including transformation products; TPs). Sampling results of the first rainfall in autumn 2009 identified a strong release of most substances to the rivers. First flush effects of these substances were assessed regarding the risk for drinking water supply and ecology, like fresh water invertebrates and fish. Although, these substances were found in Jordan River water during the first significant rainfall the observed levels are below international drinking water guideline values with no adverse effects on human health in the region. However, the observed CP and chlorpyrifos oxon (CPO) levels are above the acute toxicity for fresh water invertebrates and fish. The study shows that the Hula Valley was an important source of pesticides and TPs at the Upper Jordan River basin and that substance flushing is extremely important for pesticides-monitoring campaigns.  
Keywords: Assessment, Chlorpyrifos residues, Endosulfan residues, Monitoring,  
ISI Document Delivery No.: 075JA

991. Omeroglu, P. Y.; Ambrus, A., and Boyacioglu, D. Estimation of Sample Processing Uncertainty of Large-Size Crops in Pesticide Residue Analysis. 2013; 6, (1): 238-247.   
Rec #: 66199  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Sample processing procedure should result in analytical portions that are representative of the analytical sample, even if 1-5 g portion are withdrawn from a large-size crops. Therefore, the efficiency of sample processing should be regularly tested during method validation and internal quality control studies. In the scope of this study, sample processing uncertainty was investigated by surface treatment of the cucumber, papaya, and jackfruit representing large-size crops with radio-labelled chlorpyrifos methyl. After homogenization in a chopper, five small and five large test portions were withdrawn from "statistically" well-mixed materials and their residue content was determined with liquid scintillation counter, which provided a quick and well reproducible mode of quantitative determination of residues. The efficiency of sample processing characterized with the sampling constant, changed between 0.78 and 3.01 kg with typical value of 1.61 kg for processing at ambient temperature. Once the sampling constant was established, it was used to predict the uncertainty of sample processing for different test portion sizes. Uncertainty of sample processing at 30 g analytical portion varied between 4.70 and 10.55 %. Furthermore, addition of dry ice to papaya resulted in well-mixed samples as well as 50 % reduction in sampling constant value.  
Keywords: Pesticide, Pesticide residue analysis, Uncertainty, Sample processing  
ISI Document Delivery No.: 066GO

992. ---. Estimation of the uncertainties of extraction and clean-up steps in pesticide residue analysis of plant commodities. 2013; 30, (2): 308-320.   
Rec #: 66209  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Extraction and clean-up constitute important steps in pesticide residue analysis. For the correct interpretation of analytical results, uncertainties of extraction and clean-up steps should be taken into account when the combined uncertainty of the analytical result is estimated. In the scope of this study, uncertainties of extraction and clean-up steps were investigated by spiking 14C-labelled chlorpyrifos to analytical portions of tomato, orange, apple, green bean, cucumber, jackfruit, papaya and starfruit. After each step, replicate measurements were carried out with a liquid scintillation counter. Uncertainties in extraction and clean-up steps were estimated separately for every matrix and method combination by using within-laboratory reproducibility standard deviation and were characterised with the CV of recoveries. It was observed that the uncertainty of the ethyl acetate extraction step varied between 0.8% and 5.9%. The relative standard uncertainty of the clean-up step with dispersive SPE used in the method known as QuEChERS was estimated to be around 1.5% for tomato, apple and green beans. The highest variation of 4.8% was observed in cucumber. The uncertainty of the clean-up step with gel permeation chromatography ranged between 5.3% and 13.1%, and it was relatively higher than that obtained with the dispersive SPE method.  
Keywords: ethyl acetate extraction, extraction and clean-up, gel permeation  
ISI Document Delivery No.: 072KW

993. Oostingh, G. J.; Wichmann, G.; Schmittner, M.; Lehmann, I., and Dusch, A. The Cytotoxic Effects of the Organophosphates Chlorpyrifos and Diazinon Differ from Their Immunomodulating Effects. 2009; 6, (2): 136-145.   
Rec #: 270  
Keywords: HUMAN HEALTH  
Call Number: NO HUMAN HEALTH (CPY,DZ)  
Notes: Chemical of Concern: CPY,DZ

994. Opong-Mensah, K. A Review of Temephos with Particular Reference to the West African Onchocerciasis Control Program. 1984; 91, 47-69.   
Rec #: 1650  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (CPY,FNT,MLN,TMP), NO REVIEW (CPY,FNT,MLN,TMP)  
Notes: Chemical of Concern: CPY,FNT,FNTH,MLN,TMP

995. Ormad, M P; Miguel, N; Claver, a; Matesanz, J M; Ovelleiro, J L, and Ormad, M P. Pesticides Removal in the Process of Drinking Water Production. 2008 Mar; 71, (1): 97-106.   
Rec #: 46049  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The aim of this research work was to study the effectiveness of the treatments commonly used in drinking water plants in Spain to degrade 44 pesticides systematically detected in the Ebro River Basin. The pesticides studied are: alachlor, aldrin, ametryn, atrazine, chlorfenvinfos, chlorpyrifos, pp'-DDD, op'-DDE, op'-DDT, pp'-DDT, desethylatrazine, 3,4-dichloroaniline, 4,4'-dichlorobenzophenone, dicofol, dieldrin, dimethoate, diuron, alpha -endosulphan, endosulphan-sulphate, endrin, alpha -HCH, beta -HCH, gamma -HCH, delta -HCH, heptachlor, heptachlor epoxide A, heptachlor epoxide B, hexachlorobenzene, isodrin, 4-isopropylaniline, isoproturon, metholachlor, methoxychlor, molinate, parathion methyl, parathion ethyl, prometon, prometryn, propazine, simazine, terbuthylazine, terbutryn, tetradifon and trifluralin. The techniques applied are: preoxidation by chlorine or ozone, chemical precipitation with aluminium sulphate and activated carbon adsorption. Oxidation by chlorine removes 60% of the studied pesticides, although combining this technique with a coagulation-flocculation-decantation process is more effective. The disadvantage of this treatment is the formation of trihalomethanes. Oxidation by ozone removes 70% of the studied pesticides. Although combination with a subsequent coagulation-flocculation-decantation process does not improve the efficiency of the process, combination with an activated-carbon absorption process gives rise to 90% removal of the studied pesticides. This technique was found to be the most efficient among the techniques studied for degrading the majority of the studied pesticides.  
Keywords: Aldrin  
Keywords: Chlorine  
Keywords: Sulphates  
Keywords: Pollution Abstracts; Aqualine Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Environmental Studies  
Keywords: Absorption spectroscopy  
Keywords: Spain, Ebro R. basin  
Keywords: Agricultural Chemicals  
Keywords: Insecticides  
Keywords: Drinking Water  
Keywords: Ozone  
Keywords: Sorption  
Keywords: P 0000:AIR POLLUTION  
Keywords: Dieldrin  
Keywords: Alachlor  
Keywords: River basins  
Keywords: Herbicides  
Keywords: Chlorpyrifos  
Keywords: Chemical precipitation  
Keywords: Heptachlor  
Keywords: Oxidation  
Keywords: Aluminium  
Keywords: Aluminum  
Keywords: Pesticides  
Keywords: Methoxychlor  
Keywords: Chlorination  
Keywords: Drinking water  
Keywords: Parathion  
Date revised - 2008-05-01  
Language of summary - English  
Location - Spain, Ebro R. basin  
Pages - 97-106  
ProQuest ID - 289491021  
SubjectsTermNotLitGenreText - Pesticides; Agricultural Chemicals; Heptachlor; Drinking Water; Parathion; Oxidation; Chlorine; Alachlor; Methoxychlor; Spain, Ebro R. basin; Herbicides; Chlorination; Drinking water; Aldrin; Ozone; Chlorpyrifos; River basins; Aluminum; Insecticides; Aluminium; Absorption spectroscopy; Chemical precipitation; Dieldrin; Sorption; Sulphates  
Last updated - 2011-10-26  
Corporate institution author - Ormad, M P; Miguel, N; Claver, A; Matesanz, J M; Ovelleiro, J L  
DOI - OB-MD-0007973133; 8100626; 0045-6535 English

996. Ormad, Maria P; Miguel, Natividad; Lanao, Munia; Mosteo, Rosa; Ovelleiro, Jose L, and Ormad, Maria P. Effect of Application of Ozone and Ozone Combined With Hydrogen Peroxide and Titanium Dioxide in the Removal of Pesticides From Water. 2010 Jan; 32, (1): 25-32.   
Rec #: 44369  
Keywords: FATE  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: The aim of this research work is to study the influence of hydrogen peroxide and titanium dioxide in the ozone-based treatment to degrade 44 organic pesticides present in natural water, which are systematically detected in the Ebro River Basin (Spain). The studied pesticides are: alachlor, aldrin, ametryn, atrazine, chlorfenvinfos, chlorpyrifos, pp'-DDD, op'-DDE, op'-DDT. pp'-DDT, desethylatrazine, 3,4-dichloroaniline, 4,4'-dichlorobenzophenone, dicofol, dieldrin, dimethoate, diuron, a-endosulphan, endosulphan-sulphate, endrin, alpha -HCH, beta -HCH, gamma -HCH, delta -HCH, heptachlor, heptachlor epoxide A, heptachlor epoxide B, hexachlorobenzene, isodrin, 4-isopropylaniline, isoproturon, metholachlor, methoxychlor, molinate, parathion methyl, parathion ethyl, prometon, prometryn, propazine, simazine, terbuthylazine, terbutryn, tetradifon and trifluralin. The ozonation using 3 mg O3 L-1 produces a pesticides removal close to 23%, whereas the application of O3/H2O2 and O3/TiO2 treatments achieves average degradation yields lower than the ozonation. However, the application of O3/H2O2 /TiO2 process improves considerably the pesticides degradation and an average degradation yield of 36% is obtained.  
Keywords: Degradation  
Keywords: titanium dioxide  
Keywords: Aldrin  
Keywords: Q5 01521:Mechanical and natural changes  
Keywords: AQ 00004:Water Treatment  
Keywords: Hydrogen  
Keywords: Freshwater  
Keywords: molinate  
Keywords: Spain, Ebro R. basin  
Keywords: Yield  
Keywords: Insecticides  
Keywords: Agricultural Chemicals  
Keywords: SW 3060:Water treatment and distribution  
Keywords: Ozonation  
Keywords: Ozone  
Keywords: Titanium  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Dieldrin  
Keywords: Alachlor  
Keywords: River basins  
Keywords: Simazine  
Keywords: Herbicides  
Keywords: Chlorpyrifos  
Keywords: Heptachlor  
Keywords: Atrazine  
Keywords: Pesticides  
Keywords: hydrogen peroxide  
Keywords: Trifluralin  
Keywords: ENA 01:Air Pollution  
Keywords: Environment Abstracts; Water Resources Abstracts; Aqualine Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Pollution Abstracts  
Keywords: Parathion  
Date revised - 2010-08-01  
Language of summary - English  
Location - Spain, Ebro R. basin  
Pages - 25-32  
ProQuest ID - 754556291  
SubjectsTermNotLitGenreText - Titanium; Aldrin; Dieldrin; Pesticides; Herbicides; River basins; Hydrogen; Ozonation; Ozone; Degradation; titanium dioxide; Alachlor; Simazine; molinate; Chlorpyrifos; Insecticides; Heptachlor; Atrazine; hydrogen peroxide; Trifluralin; Parathion; Yield; Agricultural Chemicals; Spain, Ebro R. basin; Freshwater  
Last updated - 2012-10-19  
British nursing index edition - Ozone: Science & Engineering [Ozone: Sci. Eng.]. Vol. 32, no. 1, pp. 25-32. Jan 2010.  
Corporate institution author - Ormad, Maria P; Miguel, Natividad; Lanao, Munia; Mosteo, Rosa; Ovelleiro, Jose L  
DOI - 970afc68-f854-4bfc-8202csamfg201; 13333711; CS1102425; 0191-9512; 1547-6545 English

997. Osman, Ka; Al-Humaid, a M; Al-Rehiayani, S M; Al-Redhaiman, K N, and Osman, KA. Monitoring of Pesticide Residues in Vegetables Marketed in Al-Qassim Region, Saudi Arabia. 2010 Sep; 73, (6): 1433-1439.   
Rec #: 47749  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A total of 23 pesticides from different chemical groups in 160 different domestic vegetables collected from four major big supermarkets located in Al-Qassim region, Saudi Arabia, were identified by gas chromatography with mass spectrometry (GC-MS). Residues were found in 89 of the 160 samples and 53 samples were above the maximum residue levels (MRLs). The most frequently found pesticides were carbaryl followed by biphenyl and then carbofuran. Cabbage was the most positive and violated MLRs (16 and 11 samples), followed by carrot and green pepper (12 and 7 samples), cucumber (12 and 6 samples), egg-plant (12 and 5 samples), squash (11 and 7 samples), lettuce (11 and 6 samples) and tomato (11 and 4 samples). The highest concentrations were found in lettuce (ethiofencarb, 7.648), followed by tomato (tolclofos-methyl, 7.312mg/kg), cabbage (chlropyrifos, 6.207mg/kg), carrot (heptanophos, 3.267mg/kg), green pepper (carbaryl, 2.228mg/kg) and egg-plant (carbaryl, 1.917mg/kg). These findings pointed to the following recommendation: the need for a monitoring program for pesticide residues in vegetables cultivated under greenhouse conditions at the national level to protect consumers' health.  
Keywords: Saudi Arabia  
Keywords: Vegetables  
Keywords: Carbofuran  
Keywords: ENA 09:Land Use & Planning  
Keywords: Pesticide residues  
Keywords: Environmental Studies--Toxicology And Environmental Safety  
Keywords: Mass spectrometry  
Keywords: Carbaryl  
Keywords: carbofuran  
Keywords: Daucus  
Keywords: tolclofos-methyl  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Brassica  
Keywords: Mass spectroscopy  
Keywords: Greenhouses  
Keywords: Biphenyl  
Keywords: Lycopersicon esculentum  
Keywords: Gas chromatography  
Keywords: Pesticides  
Keywords: greenhouses  
Keywords: consumer protection  
Keywords: Consumers  
Keywords: X 24330:Agrochemicals  
Keywords: Environment Abstracts; Toxicology Abstracts; Pollution Abstracts  
Date revised - 2011-10-01  
Language of summary - English  
Location - Saudi Arabia  
Pages - 1433-1439  
ProQuest ID - 811163065  
SubjectsTermNotLitGenreText - Biphenyl; Vegetables; Carbofuran; Gas chromatography; Pesticide residues; Pesticides; Carbaryl; Consumers; tolclofos-methyl; Mass spectroscopy; Greenhouses; greenhouses; Mass spectrometry; consumer protection; carbofuran; Lycopersicon esculentum; Daucus; Brassica; Saudi Arabia  
Last updated - 2011-12-08  
Corporate institution author - Osman, KA; Al-Humaid, A M; Al-Rehiayani, S M; Al-Redhaiman, K N  
DOI - OB-a70eb114-762f-4952-b289csaobj202; 13667585; 0147-6513 English

998. Osman, Rozita; Saim, Norashikin; Juahir, Hafizan; Abdullah, Md Pauzi, and Osman, Rozita. Chemometric Application in Identifying Sources of Organic Contaminants in Langat River Basin. 2012 Jan; 184, (2): 1001-1014.   
Rec #: 42909  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Increasing urbanization and changes in land use in Langat river basin lead to adverse impacts on the environment compartment. One of the major challenges is in identifying sources of organic contaminants. This study presented the application of selected chemometric techniques: cluster analysis (CA), discriminant analysis (DA), and principal component analysis (PCA) to classify the pollution sources in Langat river basin based on the analysis of water and sediment samples collected from 24 stations, monitored for 14 organic contaminants from polycyclic aromatic hydrocarbons (PAHs), sterols, and pesticides groups. The CA and DA enabled to group 24 monitoring sites into three groups of pollution source (industry and urban socioeconomic, agricultural activity, and urban/domestic sewage) with five major discriminating variables: naphthalene, pyrene, benzo[a]pyrene, coprostanol, and cholesterol. PCA analysis, applied to water data sets, resulted in four latent factors explaining 79.0% of the total variance while sediment samples gave five latent factors with 77.6% explained variance. The varifactors (VFs) obtained from PCA indicated that sterols (coprostanol, cholesterol, stigmasterol, beta -sitosterol, and stigmastanol) are strongly correlated to domestic and urban sewage, PAHs (naphthalene, acenaphthene, pyrene, benzo[a]anthracene, and benzo[a]pyrene) from industrial and urban activities and chlorpyrifos correlated to samples nearby agricultural sites. The results demonstrated that chemometric techniques can be used for rapid assessment of water and sediment contaminations.  
Keywords: Water Pollution  
Keywords: Pollution monitoring  
Keywords: River Basins  
Keywords: Urbanization  
Keywords: Water Pollution Sources  
Keywords: SW 3030:Effects of pollution  
Keywords: Pyrene  
Keywords: Water analysis  
Keywords: pyrene  
Keywords: M2 551.510.42:Air Pollution (551.510.42)  
Keywords: Dopamine  
Keywords: Assessments  
Keywords: Pollution Abstracts; Environment Abstracts; Aqualine Abstracts; Water Resources Abstracts; Meteorological & Geoastrophysical Abstracts; Toxicology Abstracts  
Keywords: Sterols  
Keywords: Polycyclic aromatic hydrocarbons in river water  
Keywords: Sediment Contamination  
Keywords: Polycyclic aromatic hydrocarbons sources  
Keywords: X 24330:Agrochemicals  
Keywords: Environmental monitoring  
Keywords: Principal component analysis  
Keywords: Polycyclic aromatic hydrocarbons  
Keywords: acenaphthene  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Naphthalene  
Keywords: River basins  
Keywords: Cholesterol  
Keywords: cholesterol  
Keywords: Sediments  
Keywords: Land use  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Pollution sources  
Keywords: Chlorpyrifos  
Keywords: Socio-economic aspects  
Keywords: AQ 00007:Industrial Effluents  
Keywords: Sewage  
Keywords: Principal components analysis  
Keywords: Pesticides  
Keywords: Pesticides in river water  
Keywords: Benzo(a)pyrene  
Keywords: Organic Compounds  
Keywords: Monitoring  
Keywords: Contaminants  
Date revised - 2012-03-01  
Language of summary - English  
Pages - 1001-1014  
ProQuest ID - 926882408  
SubjectsTermNotLitGenreText - Polycyclic aromatic hydrocarbons; acenaphthene; Urbanization; Naphthalene; River basins; Pyrene; Cholesterol; Land use; Sediments; Pollution sources; Chlorpyrifos; Socio-economic aspects; Dopamine; Sewage; Sterols; Principal components analysis; Pesticides; Benzo(a)pyrene; Contaminants; Environmental monitoring; Principal component analysis; Polycyclic aromatic hydrocarbons in river water; Pesticides in river water; Polycyclic aromatic hydrocarbons sources; Pollution monitoring; pyrene; Water analysis; cholesterol; Water Pollution; River Basins; Assessments; Water Pollution Sources; Sediment Contamination; Organic Compounds; Monitoring  
Last updated - 2012-06-18  
British nursing index edition - Environmental Monitoring and Assessment [Environ. Monit. Assess.]. Vol. 184, no. 2, pp. 1001-1014. Jan 2012.  
Corporate institution author - Osman, Rozita; Saim, Norashikin; Juahir, Hafizan; Abdullah, Md Pauzi  
DOI - 30b7a157-5fbb-4c60-ba63mfgefd107; 16367097; 0167-6369; 1573-2959 English

999. Ostrea, E M; Bielawski, D M; Posecion, N C; Corrion, M; Villanueva-Uy, E; Bernardo, R C; Jin, Y; Janisse, J J; Ager, J W, and Ostrea, E M. Combined Analysis of Prenatal (Maternal Hair and Blood) and Neonatal (Infant Hair, Cord Blood and Meconium) Matrices to Detect Fetal Exposure to Environmental Pesticides. 2009 Jan; 109, (1): 116-122.   
Rec #: 45179  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Objective: The aim of this study was to determine optimum biomarkers to detect fetal exposure to environmental pesticides by the simultaneous analysis of maternal (hair and blood) and infant (cord blood, infant hair or meconium) matrices and to determine if a combination of these biomarkers will further increase the detection rate. Patients and methods: Pregnant women were prospectively recruited from an agricultural site in the Philippines with substantial use at home and in the farm of the following pesticides: propoxur, cyfluthrin, chlorpyrifos, cypermethrin, pretilachlor, bioallethrin, malathion, diazinon and transfluthrin. Maternal hair and blood were obtained at midgestation and at delivery and infant hair, cord blood and meconium were obtained after birth. All samples were analyzed by gas chromatography/mass spectrometry (GC/MS) for the above pesticides and some of their metabolites. Results: A total of 598 mother/infant dyads were included in this report. The highest rates of pesticide exposure were detected in meconium (23.2% to propoxur, 2.0% to pretilachlor, 1.7% to cypermethrin, 0.8% to cyfluthrin, 0.7% to 1,1,1-trichloro-2,2-bis, p-chlorophenylethane (DDT) and 0.3% to malathion and bioallethrin) and in maternal hair (21.6% to propoxur, 14.5% to bioallethrin, 1.3% to malathion, 0.8% to DDT, 0.3% to chlorpyrifos and 0.2% to pretilachlor). Combined analysis of maternal hair and meconium increased detection rate further to 38.5% for propoxur and to 16.7% for pyrethroids. Pesticide metabolites were rarely found in any of the analyzed matrices. Conclusions: There is significant exposure of the pregnant woman and her fetus to pesticides, particularly to the home pesticides, propoxur and pyrethroids. Analysis of meconium for pesticides was the single most sensitive measure of exposure. However, combined analysis of maternal hair and meconium significantly increased the detection rate. A major advantage of analyzing maternal hair is that prenatal pesticide exposure in the mother can be detected and intervention measures can be initiated to minimize further exposure of the fetus to pesticides. cis-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylic acid trans-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylic acid  
Keywords: Philippines  
Keywords: Farms  
Keywords: Prenatal experience  
Keywords: Mass spectrometry  
Keywords: Metabolites  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Mass spectroscopy  
Keywords: Malathion  
Keywords: Cord blood  
Keywords: Insecticides  
Keywords: Gas chromatography  
Keywords: farms  
Keywords: intervention  
Keywords: Pyrethroids  
Keywords: X 24330:Agrochemicals  
Keywords: Bioindicators  
Keywords: Cypermethrin  
Keywords: Meconium  
Keywords: Toxicology Abstracts; Pollution Abstracts  
Keywords: Hair  
Keywords: biomarkers  
Keywords: Fetuses  
Keywords: Pregnancy  
Keywords: Birth  
Keywords: Chlorpyrifos  
Keywords: cypermethrin  
Keywords: Pesticides  
Keywords: DDT  
Keywords: Neonates  
Keywords: Diazinon  
Keywords: Infants  
Date revised - 2009-01-01  
Language of summary - English  
Location - Philippines  
Pages - 116-122  
ProQuest ID - 20248939  
SubjectsTermNotLitGenreText - Farms; Prenatal experience; Cypermethrin; Meconium; Metabolites; Hair; biomarkers; Mass spectroscopy; Fetuses; Malathion; Pregnancy; Birth; Cord blood; Chlorpyrifos; Gas chromatography; DDT; Pesticides; Neonates; Pyrethroids; Diazinon; Infants; Bioindicators; Mass spectrometry; cypermethrin; Insecticides; intervention; farms; Philippines  
Last updated - 2011-12-14  
British nursing index edition - Environmental Research [Environ. Res.]. Vol. 109, no. 1, pp. 116-122. Jan 2009.  
Corporate institution author - Ostrea, E M; Bielawski, D M; Posecion, N C; Corrion, M; Villanueva-Uy, E; Bernardo, R C; Jin, Y; Janisse, J J; Ager, J W  
DOI - MD-0009070507; 8871698; 0013-9351 English

1000. Ostrea, E. M.; Reyes, A.; Villanueva-Uy, E.; Pacifico, R.; Benitez, B.; Ramos, E.; Bernardo, R. C.; Bielawski, D. M.; Delaney-Black, V.; Chiodo, L.; Janisse, J. J., and Ager, J. W. Fetal exposure to propoxur and abnormal child neurodevelopment at 2 years of age. 2012; 33, (4): 669-675.   
Rec #: 66299  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Objective: Our aim was to determine the effects of fetal exposure to propoxur and pyrethroids, on child neurodevelopment at 2 years of age. Patients and methods: Mothers were prospectively recruited during mid-pregnancy in Bulacan, Philippines where multiple pesticides including propoxur, cyfluthrin, chlorpyrifos, cypermethrin, pretilachlor, bioallethrin, malathion, diazinon and transfluthrin are used. To detect prenatal exposure to these pesticides, maternal hair and blood, infant's hair, cord blood, and meconium were analyzed for the pesticides by gas chromatography/mass spectrometry. Infants were examined at 2 years of age with 95.1% follow up rate and their neurodevelopment outcome was assessed by the Griffiths mental developmental scale (N = 754). Results: Meconium analysis was the most sensitive method to detect fetal exposure to pesticides and exposure was highest for propoxur (21.3%) and the grouped pyrethroids (2.5% - bioallethrin, transfluthrin, cyfluthrin and cypermethrin). Path analysis modeling was performed to determine the effects of fetal exposure to propoxur and pyrethroids on the child's neurodevelopment at 24 months of age while controlling for confounders. Only singletons and those with complete data for the path analysis were included (N = 696). Using a path analysis model, there was a significant negative (beta = -0.14, p < 0.001) relationship between prenatal pesticide exposure to propoxur and motor development at 2 years of age after controlling for confounders, e.g., infant gender, socioeconomic status, maternal intelligence, home stimulation (HOME), postnatal exposure to propoxur and blood lead level at 2 years of age. Conclusion: At 2 years of age, prenatal exposure to propoxur was associated with poorer motor development in children. (C) 2011 Elsevier Inc. All rights reserved.  
Keywords: Propoxur, Pesticides, Pyrethroids, Prenatal and postnatal pesticide  
ISI Document Delivery No.: 990FU

1001. Otake, T.; Yarita, T.; Aoyagi, Y.; Kuroda, Y.; Numata, M.; Iwata, H.; Mizukoshi, K.; Nakamura, M.; Watai, M.; Mitsuda, H.; Fujikawa, T., and Ota, H. Development of Green Onion and Cabbage Certified Reference Materials for Quantification of Organophosphorus and Pyrethroid Pesticides. SOIL; 2011; 59, (16): 8568-8574.   
Rec #: 2880  
Keywords: METHODS  
Call Number: NO METHODS (CPY,CYP,DZ,EFX,FNT,PMR)  
Notes: Chemical of Concern: CPY,CYP,DZ,EFX,FNT,PMR

1002. Otieno, P. O.; Owuor, P. O.; Lalah, J. O.; Pfister, G. , and Schramm, K. W. Impacts of climate-induced changes on the distribution of pesticides residues in water and sediment of Lake Naivasha, Kenya. 2013; 185, (3): 2723-2733.   
Rec #: 66329  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study reports evidence of increased chlorpyrifos contamination in sediment and water in Lake Naivasha following its intensive application in the horticultural farms in the catchment area. Analytical results show that levels of chlorpyrifos residues were influenced by climate-induced rainfall pattern with higher levels reported during period of heavy precipitation with significant decrease during low rainfall. On average, the levels ranged between 14.8 and 32.8 ng g(-1) in sediment during rainy season compared to a range of 8.5-16.6 ng g(-1) in the dry season. Additionally, the mean concentration of chlorpyrifos in water ranged between 8.61 and 22.4 mu g L(-1) during rainy season and below detection limit (bdl) -13.6 mu g L(-1) in dry season as quantified by enzyme-linked immunosorbent assay. Meanwhile, independent t test analysis indicated that there was significant difference in concentration at p a parts per thousand currency signaEuro parts per thousand 0.05 between the seasons with respect to sediment and water samples. This demonstrated that climate-induced variations had considerable influence on contamination. While diazinon and carbofuran were equally applied intensively, their levels were below the detection limit in the all the samples analyzed. ELISA results were validated by the capillary-HPLC photodiode-array detector instrument analysis, and statistical comparison showed no significant difference between them. It was evident that chlorpyrifos residues determination in water and sediment by ELISA can be a useful strategy in environmental management and monitoring program, and a complimentary analytical tool to high performance liquid chromatography. Levels of chlorpyrifos detected in sediment and water were found to exceed recommended criteria for protection of aquatic life and preservation of water quality and may be hazardous if not regularly monitored.  
Keywords: Climate, Pesticides, ELISA, Water, Sediment, Contamination  
ISI Document Delivery No.: 077NB

1003. Otieno, Peter O; Schramm, Karl-Werner; Pfister, Gerd; Lalah, Joseph O; Ojwach, Stephen O; Virani, Munir, and Otieno, Peter O. Spatial Distribution and Temporal Trend in Concentration of Carbofuran, Diazinon and Chlorpyrifos Ethyl Residues in Sediment and Water in Lake Naivasha, Kenya. 2012 Apr; 88, (4 ): 526-532.   
Rec #: 38899  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos ethyl was found to be widely distributed in water and sediment in Lake Naivasha. Higher levels were reported in sediment (11.2-30.0 ng g super(-1) dry weight (dw) in wet season than in dry season (4.7-17.4 ng g super(-1) dw). The mean concentration of chlorpyrifos ethyl in water in wet season ranged between 8.8 and 26.6 mu g L super(-1) and decreased to between below detection limit to 14.0 mu g L super(-1) in dry season. On average, higher concentrations of chlorpyrifos ethyl were observed in sediment than water samples. Statistical analysis revealed a significant difference in concentration between the seasons, and a significant interaction between seasons and mean concentrations at p less than or equal to 0.05. However, levels of diazinon and carbofuran were below the detection limit in all the samples analyzed. Notably, levels of chlorpyrifos ethyl were higher than the maximum allowable limits (0.1 mu g L super(-1)) recommended by European Union for drinking water and general water quality criterion for protection of freshwater water organisms (0.083 mu g L super(-1)).  
Keywords: Spatial distribution  
Keywords: Water sampling  
Keywords: Statistical analysis  
Keywords: Water quality  
Keywords: Wet season  
Keywords: Environmental Studies  
Keywords: spatial distribution  
Keywords: Lakes  
Keywords: Kenya  
Keywords: M2 551.5:General (551.5)  
Keywords: Seasonal variability  
Keywords: X 24330:Agrochemicals  
Keywords: Kenya, Rift Valley, Naivasha L.  
Keywords: Environment Abstracts; Pollution Abstracts; Meteorological & Geoastrophysical Abstracts; Toxicology Abstracts  
Keywords: Carbofuran  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: carbofuran  
Keywords: dry season  
Keywords: Sediments  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: European Union  
Keywords: Pesticides  
Keywords: Dry season  
Keywords: Drinking water  
Keywords: Diazinon  
Date revised - 2012-04-01  
Language of summary - English  
Location - Kenya; European Union; Kenya, Rift Valley, Naivasha L.  
Pages - 526-532  
ProQuest ID - 929622460  
SubjectsTermNotLitGenreText - Chlorpyrifos; Lakes; Spatial distribution; Carbofuran; Statistical analysis; Water quality; Drinking water; Diazinon; Sediments; Seasonal variability; Dry season; Wet season; spatial distribution; Water sampling; Pesticides; dry season; carbofuran; Kenya; European Union; Kenya, Rift Valley, Naivasha L.  
Last updated - 2012-04-19  
Corporate institution author - Otieno, Peter O; Schramm, Karl-Werner; Pfister, Gerd; Lalah, Joseph O; Ojwach, Stephen O; Virani, Munir  
DOI - OB-2f10aef8-edb1-4326-99e6mfgefd101; 16438185; 0007-4861; 1432-0800 English

1004. Otte, J. L. and Carpenter, J. S. Theories, Models, and Frameworks Related to Sleep-Wake Disturbances in the Context of Cancer.   
Rec #: 50919  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: ANS Adv Nurs Sci. 1997 Mar;19(3):14-27 (medline /9055027)  
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ABSTRACT: The purpose of this article was to review theories, models, and frameworks of sleep disturbances referenced in the cancer literature. Sleep-wake disturbances in cancer are a significant problem that negatively affects quality of life. There is no previously published review of the theories, models, or frameworks used to study sleep-wake disturbances in the context of cancer. Describing existing theories or models and their application in cancer is important to advance knowledge in this area. Two theories and 9 models were identified for review. These have been used to further understand the problem of sleep-wake disturbances as a primary or secondary symptom within the cancer literature. Searches were conducted from January 1, 1970, to July 31, 2008, to find relevant articles using 4 electronic databases: MEDLINE, CINAHL, PubMed, and PsychINFO. On the basis of the search, 73 descriptive or intervention studies were identified and reviewed. Most research was atheoretical, with no identified theory, model, or framework. In studies that did use theory or models, few were applied in more than one study. Although several commonalities across models did emerge, a more comprehensive and widely used model could help guide nursing research to facilitate effective symptom management for this prominent problem in cancer.  
MESH HEADINGS: Adaptation, Physiological/physiology  
MESH HEADINGS: Fatigue/etiology/physiopathology  
MESH HEADINGS: Hot Flashes/complications/physiopathology  
MESH HEADINGS: Humans  
MESH HEADINGS: \*Models, Biological  
MESH HEADINGS: Neoplasms/\*complications/nursing  
MESH HEADINGS: Nursing Theory  
MESH HEADINGS: Oncologic Nursing/methods  
MESH HEADINGS: Quality of Life  
MESH HEADINGS: Sleep Disorders, Circadian Rhythm/\*etiology/\*physiopathology  
MESH HEADINGS: Sleep Initiation and Maintenance Disorders/etiology/physiopathology eng

1005. Otte, J. L.; Flockhart, D.; Hayes, D.; Storniolo, A. M.; Stearns, V.; Schneider, B.; Henry, N. L.; Azzouz, F.; Nguyen, A.; Lemler, S.; Hayden, J.; Jeter, S.; Wright, L., and Carpenter, J. S. Comparison of Subjective and Objective Hot Flash Measures Over Time Among Breast Cancer Survivors Initiating Aromatase Inhibitor Therapy.   
Rec #: 50779  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Clin Oncol. 2007 Oct 20;25(30):4765-71 (medline /17947724)  
COMMENTS: Cites: Arch Intern Med. 2008 Apr 28;168(8):840-6 (medline /18443259)  
COMMENTS: Cites: Biometrics. 1992 Jun;48(2):577-85 (medline /1637980)  
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COMMENTS: Cites: Menopause. 1999 Fall;6(3):209-15 (medline /10486790)  
COMMENTS: Cites: Menopause. 2001 May-Jun;8(3):181-8 (medline /11355040)  
COMMENTS: Cites: Oncol Nurs Forum. 2002 Apr;29(3):E16-25 (medline /11979290)  
COMMENTS: Cites: Cancer Nurs. 2002 Apr;25(2):104-9 (medline /11984098)  
COMMENTS: Cites: Menopause. 2002 Sep-Oct;9(5):367-76 (medline /12218726)  
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COMMENTS: Cites: Oncol Nurs Forum. 2004 May;31(3):591-5598 (medline /15146224)  
COMMENTS: Cites: J Pain Symptom Manage. 2004 Jun;27(6):513-22 (medline /15165649)  
COMMENTS: Cites: J Clin Oncol. 2004 Nov 1;22(21):4261-71 (medline /15514369)  
COMMENTS: Cites: Obstet Gynecol. 2004 Dec;104(6):1322-6 (medline /15572497)  
COMMENTS: Cites: Am J Obstet Gynecol. 2004 Dec;191(6):1979-88 (medline /15592280)  
COMMENTS: Cites: Psychosom Med. 2005 Jan-Feb;67(1):137-46 (medline /15673636)  
COMMENTS: Cites: Clin Nurse Spec. 2005 Jan-Feb;19(1):8-10 (medline /15684886)  
COMMENTS: Cites: J Clin Oncol. 2005 Oct 1;23(28):6931-40 (medline /16157934)  
COMMENTS: Cites: J Palliat Med. 2005 Oct;8(5):924-30 (medline /16238505)  
COMMENTS: Cites: N Engl J Med. 2005 Dec 29;353(26):2747-57 (medline /16382061)  
COMMENTS: Cites: J Clin Oncol. 2006 Feb 20;24(6):910-7 (medline /16484701)  
COMMENTS: Cites: Oncologist. 2007 Jan;12(1):124-35 (medline /17227907)  
COMMENTS: Cites: Menopause. 2007 Jul-Aug;14(4):742-51 (medline /17519802)  
COMMENTS: Comment in: Menopause. 2009 Jul-Aug;16(4):621-3 (medline /19436222)  
ABSTRACT: OBJECTIVE: Hot flashes are valuable indicators of physiological condition and drug effect; however, subjective and objective measures do not always agree. No study has examined both subjective and objective hot flashes in women prescribed aromatase inhibitors. The study (1) compared subjective and objective hot flash measures, (2) examined changes in subjective and objective hot flashes over time, and (3) evaluated predictors of change in hot flashes in aromatase inhibitor-treated women.  
ABSTRACT: METHODS: Participants (n = 135) were enrolled in a randomized clinical trial comparing exemestane and letrozole for the treatment of breast cancer. Hot flashes were assessed before the start of the drug therapy and 1, 3, and 6 months later. Participants wore a sternal skin conductance monitor for 24 hours or longer at each time point. With each perceived hot flash, women pressed an event button and rated intensity and bother in a paper diary.  
ABSTRACT: RESULTS: Participants had a mean age of 60 years and were mainly white (92%). Across time points, monitor hot flashes were (1) significantly more frequent than diary and/or event button flashes (P < 0.05) and (2) moderately correlated with subjective measures (0.35 < r < 0.56). Monitor hot flashes did not significantly change over time with aromatase inhibitor therapy, whereas both diary and event button frequencies significantly varied but in dissimilar patterns (51% nonlinear). No consistent predictors of hot flashes across measures or time points were identified.  
ABSTRACT: CONCLUSIONS: Findings indicated dissimilarities between subjective and objective measures of hot flashes. Despite statistical significance, there was little clinically meaningful change in hot flashes after initiating aromatase inhibitor therapy.  
MESH HEADINGS: Androstadienes/adverse effects/therapeutic use  
MESH HEADINGS: Aromatase Inhibitors/adverse effects/\*therapeutic use  
MESH HEADINGS: Body Mass Index  
MESH HEADINGS: Breast Neoplasms/\*drug therapy/physiopathology  
MESH HEADINGS: Female  
MESH HEADINGS: Galvanic Skin Response  
MESH HEADINGS: Hot Flashes/chemically induced/\*physiopathology  
MESH HEADINGS: Humans  
MESH HEADINGS: Linear Models  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: Nitriles/adverse effects/therapeutic use  
MESH HEADINGS: Sensitivity and Specificity  
MESH HEADINGS: Triazoles/adverse effects/therapeutic use eng

1006. Otto, Tamara C; Kasten, Shane a; Kovaleva, Elena; Liu, Zhi; Buchman, George; Tolosa, Marita; Davis, David; Smith, J Richard; Balcerzak, Robert; Lenz, David E, and Cerasoli, Douglas M. Purification and Characterization of Functional Human Paraoxonase-1 Expressed in Trichoplusia Ni Larvae. 2010 Sep 6; 187, (1-3): 388-392.   
Rec #: 43849  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Human serum paraoxonase-1 (HuPON1) is difficult to either purify from plasma or functionally express in high yield from recombinant sources. Here, we describe the characterization of functional HuPON1 expressed and purified from Trichoplusia ni (T. ni) larvae infected with an orally active form of baculovirus. SDS-PAGE and anti-HuPON1 Western blot analyses yielded only three bands of approximately 41, 42, and 44 kDa. MALDI-TOF confirmed the identity of each of these bands as HuPON1 with greater than 95% confidence. These isoforms result from differential glycosylation of the enzyme as indicated by peptide mapping, mass analysis, and PNGase F deglycosylation experiments. Recombinant insect-produced HuPON1 hydrolyzed phenyl acetate, paraoxon, and the nerve agents GF, VX, and VR. The enzyme had dramatic stereoselectivity for the P+ isomers of VX and VR. T. ni larvae expressing HuPON1 were remarkably resistant to the pesticide chlorpyrifos. Together, these results demonstrate that the caterpillar of the T. ni moth can be used as an **expression system t**o produce large quantities of functional recombinant HuPON1. **Insect production of HuPON1 may provide a source for both in vitro enzymatic and crystallographic studies and in vivo stability and anti-nerve agent efficacy testing.** Published by Elsevier Ireland Ltd.  
Keywords: 2921-88-2  
Keywords: Aryldialkylphosphatase -- metabolism  
Keywords: Animals  
Keywords: Stereoisomerism  
Keywords: Larva -- genetics  
Keywords: Humans  
Keywords: Gene Expression  
Keywords: Aryldialkylphosphatase  
**Keywords: Lepidoptera -- virology**   
Keywords: Organothiophosphorus Compounds  
Keywords: Aryldialkylphosphatase -- genetics  
Keywords: S-(N,N-diethylaminoethyl) isobutyl methylphosphothiolate  
Keywords: Lepidoptera -- genetics  
Keywords: Baculoviridae -- physiology  
Keywords: Hydrolysis  
Keywords: EC 3.1.8.1  
Keywords: Chlorpyrifos  
Keywords: Pesticides -- metabolism  
Keywords: Baculoviridae -- genetics  
Keywords: 0  
Keywords: Kinetics  
Keywords: Aryldialkylphosphatase -- biosynthesis  
Keywords: Aryldialkylphosphatase -- isolation & purification  
Keywords: Pesticides  
Keywords: Larva -- virology  
Keywords: 50782-69-9  
Keywords: Organothiophosphorus Compounds -- metabolism  
Keywords: Organothiophosphorus Compounds -- chemistry  
Keywords: VX  
Keywords: Substrate Specificity  
Keywords: Chlorpyrifos -- metabolism  
Date completed - 2010-09-01  
Date created - 2010-07-30  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 388-392  
ProQuest ID - 749019773  
Last updated - 2013-01-19  
British nursing index edition - Chemico-biological interactions, September 6, 2010, 187(1-3):388-392  
Corporate institution author - Otto, Tamara C; Kasten, Shane A; Kovaleva, Elena; Liu, Zhi; Buchman, George; Tolosa, Marita; Davis, David; Smith, J Richard; Balcerzak, Robert; Lenz, David E; Cerasoli, Douglas M  
DOI - MEDL-20176005; 20176005; 1872-7786 eng

1007. Oulette, J. H.; Dittenber, D. A.; Kloes, P. M., and John, J. A. Chlorpyrifos: Two-Generation Reproduction Study in Fischer Rats. 1983.  
Rec #: 1220  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

1008. Overwijk, W. W. and Schluns, K. S. Functions of &Gamma;C Cytokines in Immune Homeostasis: Current and Potential Clinical Applications.   
Rec #: 50789  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Immunol. 2006 Jun 1;176(11):6702-8 (medline /16709829)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2006 Jun 13;103(24):9166-71 (medline /16757567)  
COMMENTS: Cites: Clin Cancer Res. 2006 Jul 15;12(14 Pt 1):4265-73 (medline /16857801)  
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COMMENTS: Cites: J Immunol. 2003 Jan 1;170(1):33-40 (medline /12496380)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2003 Apr 15;100(8):4724-9 (medline /12671073)  
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COMMENTS: Cites: Biol Blood Marrow Transplant. 2004 Mar;10(3):143-55 (medline /14993880)  
COMMENTS: Cites: J Immunol. 2004 Apr 1;172(7):4151-8 (medline /15034027)  
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COMMENTS: Cites: J Immunol. 2004 Dec 1;173(11):6537-41 (medline /15557143)  
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COMMENTS: Cites: J Clin Invest. 2005 Jun;115(6):1616-26 (medline /15931392)  
COMMENTS: Cites: J Clin Invest. 2005 Jul;115(7):1839-47 (medline /15937547)  
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COMMENTS: Cites: Nat Med. 2005 Nov;11(11):1238-43 (medline /16227988)  
COMMENTS: Cites: J Immunol. 2005 Nov 15;175(10):7046-52 (medline /16272366)  
COMMENTS: Cites: J Biol Chem. 2006 Jan 20;281(3):1612-9 (medline /16284400)  
COMMENTS: Cites: Blood. 2006 Mar 15;107(6):2409-14 (medline /16304057)  
COMMENTS: Cites: Semin Immunol. 2006 Apr;18(2):103-10 (medline /16458533)  
COMMENTS: Cites: Science. 2006 Mar 31;311(5769):1924-7 (medline /16484453)  
COMMENTS: Cites: J Immunother. 2006 May-Jun;29(3):313-9 (medline /16699374)  
ABSTRACT: Cytokines that signal through receptor complexes containing the common gamma (gammaC) chain receptor subunit are central regulators of lymphocyte homeostasis. **In this review, we discuss the four major gammaC cytokines that have proven activity in or potential for immunotherapy: IL-2, IL-7, IL-15 and IL-21.** Their shared and unique activities on specific lymphocyte populations suggest therapeutic applications such as enhancing lymphocyte reconstitution, expanding tumor and pathogen-specific lymphocytes, and optimizing vaccines. Because the responsiveness of individual lymphocyte subsets varies under different situations such as lymphopenia and active immune responses, understanding the dynamics of gammaC-containing receptor expression is important in deciding how to achieve the most desired effect. Current understanding of the biology of gammaC cytokines suggests several clinical applications, including their direct administration or use in generation of lymphocytes for adoptive transfer, increasing their endogenous production, and potentiating their activity by complex formation with specific antibodies or their specific receptor-alpha subunits. Overall, gammaC cytokines have great potential, through their targeted use alone or in combination, to be an integral part of clinical interventions with enhanced efficacy and decreased toxicity.  
MESH HEADINGS: Animals  
MESH HEADINGS: Homeostasis/\*drug effects/\*immunology  
MESH HEADINGS: Interleukin-15/metabolism/pharmacology/therapeutic use  
MESH HEADINGS: Interleukin-2/metabolism/pharmacology/therapeutic use  
MESH HEADINGS: Interleukin-7/metabolism/pharmacology/therapeutic use  
MESH HEADINGS: Interleukins/metabolism/\*pharmacology/therapeutic use  
MESH HEADINGS: Models, Biological  
MESH HEADINGS: Receptors, Interleukin/metabolism  
MESH HEADINGS: T-Lymphocytes/drug effects/immunology/metabolism eng

1009. Ozbey, A. and Uygun, U. Behaviour of some organophosphorus pesticide residues in peppermint tea during the infusion process. 2007; 104, (1): 237-241.   
Rec #: 66399  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In order to investigate dissipation behaviour of malathion, fenitrothion, dimethoate, chlorpyrifos and pirimiphos-ethyl during the infusion process, **pesticide-free dried peppermint leaves** were spiked with the pesticides. Infusions were prepared according to the usual process of infusion preparation. The effect of the infusion process on the transfer of the pesticides from the spiked peppermint leaves into brew was examined at intervals of 5, 10, 15 and 20 min. Residues were determined using a gas chromatograph equipped with a flame ionisation detector (FID). **The decrease in pesticide levels during infusion was found to be statistically significant (P < 0.05). Transfer of residues decreased significantly with infusion time.** The carryover of the residues of dimethoate, which has the highest water solubility, into the infusion was the highest. Satisfactory relationships were found between water-solubility (Ws), partition coefficient (K(ow)) and Henry's law constant (H) of the pesticides with the transfer of pesticides to brewed tea. It was observed that not only water solubility or K(ow) but also H controls the dissipation of the pesticides from water or their air-water partitioning. (c) 2006 Elsevier Ltd. All rights reserved.  
Keywords: malathion, fenitrothion, dimethoate, chlorpyrifos, pirimiphos-ethyl,  
ISI Document Delivery No.: 169ZL

1010. ---. Behaviour of some organophosphorus pesticide residues in thyme and stinging nettle tea during infusion process. 2007; 42, (3): 380-383.   
Rec #: 66409  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In order to investigate dissipation behaviour of fenitrothion, dimethoate, chlorpyrifos and pirimiphos-ethyl during infusion process, **pesticide-free dried thyme and stinging nettle leaves** were spiked with the pesticides. Infusions were prepared according to the usual process of infusion preparation. The effect of infusion process on the transfer of the pesticides from the spiked herbs leaves into brew was examined at intervals of 5, 10, 15 and 20 min. **Residues were determined using gas chromatograph equipped with a flame ionization detector. The decrease in pesticide levels during infusion was found to be statistically significant (P < 0.05).** Transfer of residues decreased considerably with infusion time. The carryover of the residues of dimethoate, which has the highest water solubility, into the infusions was the greatest. Satisfactory relationships were found between water solubility (W(S)) and partition coefficient (K(OW)) of the pesticides with the transfer of pesticides to brewed teas.  
Keywords: chlorpyrifos, dimethoate, fenitrothion, nettle, pirimiphos-ethyl, thyme  
ISI Document Delivery No.: 139FH

1011. Ozturk, L.; Izdes, S.; Kesimci, E.; Balikci, A. A., and Kanbak, O. Insecticide Contamination as a Cause of Food Related Illness.   
Rec #: 79319  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: MESH HEADINGS: Chlorpyrifos/\*poisoning  
MESH HEADINGS: Cholinesterase Inhibitors/poisoning  
MESH HEADINGS: Flour  
MESH HEADINGS: Follow-Up Studies  
MESH HEADINGS: Food Contamination  
MESH HEADINGS: Foodborne Diseases/epidemiology/\*etiology  
MESH HEADINGS: Humans  
MESH HEADINGS: Insecticides/\*poisoning eng

1012. Pait, a S; Whitall; Jeffrey, Cfg; Caldow, C; Mason, Al; Lauenstein, G G; Christensen, J D, and Pait, A S. Chemical Contamination in Southwest Puerto Rico: an Assessment of Organic Contaminants in Nearshore Sediments. 2008 Mar; 56, (3): 580-587.   
Rec #: 49709  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: Water Pollution  
Keywords: Sediment chemistry  
Keywords: Sediment pollution  
Keywords: Marine Environment  
Keywords: Contamination  
Keywords: Oceanic Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Aqualine Abstracts; Water Resources Abstracts  
Keywords: Sediments  
Keywords: Environmental Studies  
Keywords: Assessments  
Keywords: Marine pollution  
Keywords: ASW, Caribbean Sea, Greater Antilles, Puerto Rico  
Keywords: Sediment Contamination  
Keywords: Organic Compounds  
Keywords: Chemical pollution  
Keywords: Contaminants  
Date revised - 2008-06-01  
Language of summary - English  
Location - ASW, Caribbean Sea, Greater Antilles, Puerto Rico  
Pages - 580-587  
ProQuest ID - 289976444  
SubjectsTermNotLitGenreText - Sediment Contamination; Water Pollution; Assessments; Organic Compounds; Marine Environment; ASW, Caribbean Sea, Greater Antilles, Puerto Rico; Contaminants; Contamination; Sediments; Sediment pollution; Chemical pollution; Sediment chemistry; Marine pollution  
Last updated - 2011-11-02  
Corporate institution author - Pait, A S; Whitall; Jeffrey, CFG; Caldow, C; Mason, AL; Lauenstein, G G; Christensen, J D  
DOI - OB-MD-0008083964; 8185409; 0025-326X English

1013. Pait, Anthony S; Whitall, David R; Dieppa, Angel; Newton, Sarah E; Brune, Lia; Caldow, Chris; Mason, Andrew L; Apeti, Dennis a; Christensen, John D, and Pait, Anthony S. Characterization of Organic Chemical Contaminants in Sediments From Jobos Bay, Puerto Rico. 2012 Aug; 184, (8): 5065-5075.   
Rec #: 46559  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Jobos Bay, located on the southeastern coast of Puerto Rico, contains a variety of habitats including mangroves, seagrass meadows, and coral reefs. The watershed surrounding the bay includes a number of towns, agricultural areas, and the Jobos Bay National Estuarine Research Reserve (NERR). Jobos Bay and the surrounding watershed are part of a Conservation Effects Assessment Project (CEAP), involving the Jobos Bay NERR, the US Department of Agriculture, and the National Oceanic and Atmospheric Administration (NOAA) to assess the benefits of agricultural best management practices (BMPs) on the terrestrial and marine environments. As part of the Jobos Bay CEAP, NOAA collected sediment samples in May 2008 to characterize over 130 organic chemical contaminants. This paper presents the results of the organic contaminant analysis. The organic contaminants detected in the sediments included polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls, and the pesticide DDT. PAHs at one site in the inner bay near a boat yard were significantly elevated; however, all organic contaminant classes measured were below NOAA sediment quality guidelines that would have indicated that impacts were likely. The results of this work provide an important baseline assessment of the marine environment that will assist in understanding the benefits of implementing BMPs on water quality in Jobos Bay.  
Keywords: Sediment chemistry  
Keywords: Pollution monitoring  
Keywords: Marine  
Keywords: Sediment pollution  
Keywords: Resource management  
Keywords: P 0000:AIR POLLUTION  
Keywords: M3 1010:Issues in Sustainable Development  
Keywords: Best practices  
Keywords: Q5 01502:Methods and instruments  
Keywords: Freshwater  
Keywords: Watersheds  
Keywords: Water quality  
Keywords: Pollution Abstracts; Environment Abstracts; Oceanic Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Sustainability Science Abstracts  
Keywords: Sediments  
Keywords: Environmental Studies  
Keywords: ASW, Caribbean Sea, Greater Antilles, Puerto Rico  
Keywords: Marine environment  
Keywords: Coral reefs  
Keywords: Conservation  
Keywords: Aromatic hydrocarbons  
Keywords: Sea grass  
Keywords: Chemical pollution  
Keywords: River basin management  
Keywords: ENA 01:Air Pollution  
Date revised - 2012-11-01  
Language of summary - English  
Location - ASW, Caribbean Sea, Greater Antilles, Puerto Rico  
Pages - 5065-5075  
ProQuest ID - 1223039157  
SubjectsTermNotLitGenreText - Sediment chemistry; Sediment pollution; Resource management; Coral reefs; Aromatic hydrocarbons; Sea grass; Water quality; Watersheds; River basin management; Pollution monitoring; Marine environment; Best practices; Conservation; Chemical pollution; Sediments; ASW, Caribbean Sea, Greater Antilles, Puerto Rico; Marine; Freshwater  
Last updated - 2012-12-06  
Corporate institution author - Pait, Anthony S; Whitall, David R; Dieppa, Angel; Newton, Sarah E; Brune, Lia; Caldow, Chris; Mason, Andrew L; Apeti, Dennis A; Christensen, John D  
DOI - OB-5e9937d5-2332-436f-b28cmfgefd101; 16897984; CS1252162; 0167-6369; 1573-2959 English

1014. Palanikumar, L.; Kumaraguru, A. K.; Ramakritinan, C. M., and Anand, M. Genotoxic assessment of anthracene and benzo a pyrene to milkfish Chanos chanos. 2012; 94, (2): 350-363.   
Rec #: 66469  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Mutagenic and genotoxic effects of polycyclic aromatic hydrocarbons, **anthracene and benzo [a] pyrene (BaP),** in milkfish Chanos chanos were determined using **micronucleus (MN) test and comet assay (CA)**. Distinct mean frequencies of nuclear abnormalities such as MNs; binucleated micronuclei, nuclear bud, and fragmented apoptotic cells were measured. Significant increase in DNA damage with five classes of damage level was observed and expressed in terms of arbitrary unit (AU). Mean frequencies of total nuclear abnormalities were 0.5 perpendicular to 0.25 cells in control; 0.67 +/- 0.33 cells in solvent control; 70 +/- 9.60 cells in 0.176 mg L(-1) anthracene, and 91.83 +/- 6.25 cells in 0.031 mg L(-1) BaP. The greatest DNA damage of 170AU was observed in 0.176 mg L(-1) anthracene-exposed group and 182AU was observed in 0.031 mg L(-1) BaP-treated fish. This study confirmed that the CA and MN assays are useful tools in determining potential genotoxicity of water pollutants and might be appropriate as a part of monitoring program.  
Keywords: anthracene, benzo [a] pyrene, Chanos chanos, comet assay, DNA damage and  
ISI Document Delivery No.: 923CV

1015. Palma, Patricia; Alvarenga, Paula; Palma, Vera; Matos, Claudia; Fernandes, Rosa Maria; Soares, Amadeu; Barbosa, Isabel Rita, and Palma, Patricia. Evaluation of Surface Water Quality Using an Ecotoxicological Approach: a Case Study of the Alqueva Reservoir (Portugal). 2010 Mar; 17, (3): 703-716.   
Rec #: 44179  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background, aim, and scope: Freshwater reservoirs can be impacted by several hazardous substances through inputs from agricultural activity, sewage discharges, and groundwater leaching and runoff. The water quality assessment is very important for implementation of the monitoring and remediation programs to minimize the risk promoted by hazardous substances in aquatic ecosystems. Evaluation of the degree of contamination of aquatic environments must not take in account only its chemical characterization but it must be complemented with biological assays, which determine potential toxic effects and allows an integrated evaluation of its effects in populations and aquatic ecosystem communities. The application of this type of strategy has clear advantages allowing a general evaluation of the effects from all the water components, including those due to unknown substances and synergic, antagonistic, or additive effects. There are only a few studies that reported ecotoxicological acute end points, for the assessment of surface water quality, and the relationship among toxicity results and the anthropogenic pollution sources and the seasonal period. **The aim of this study was to assess the ecotoxicological characterization of the surface water from Alqueva reservoir (South of Portugal) and to evaluate the influence of anthropogenic sources of pollution and their seasonal variation in its toxicity.** The construction of Alqueva reservoir was recently finished (2002) and, to our knowledge, an ecotoxicological assessment of its surface water has not been performed. Because of that, no information is available on the possible impact of pollutants on the biota. The surface water toxicity was assessed using acute and chronic bioassays. The results are to be used for developing a monitoring program, including biological methods. Materials and methods: Water samples were collected during 2006-2007, at each of the nine sampling sites selected in Alqueva reservoir. These sampling points allow an assessment at the upstream (Sra. Ajuda, Alcarrache, Alamos-Captacao), at the middle (Alqueva-Montante, Alqueva-Mourao, Lucefecit), and at the downstream of the water line (Alqueva-Jusante; Ardila-confluencia; Moinho das Barcas). The campaigns occurred in February, March, May, July, September, and November of 2006 and February, March, and May of 2007. The rainy season comprised November, February, and March, and the dry season included May, July, and September. A total of 81 samples were collected during the study period. The physical-chemical parameters were analyzed following standard and recommended methods of analysis (APHA et al. 1998). The pesticide analyses were performed using gas chromatography according to DIN EN ISO 6468 (1996). Surface water ecotoxicity was evaluated using the following bioassays: Vibrio fischeri luminescence inhibition, Thamnocephalus platyurus mortality, and **Daphnia magna immobilization and reproduction assay**. The Spearman rank correlation coefficients were used to evaluate the associations between the water sample physicochemical properties (from each sampling station in each season) and the acute and chronic toxicological effects, with a level of significance p<0.05. Results: In the acute toxicity study, the species that was found to be the most sensitive was T. platyurus. T. platyurus detected a higher number of toxic water samples during the dry season. Concerning the luminescent inhibition of V. fischeri, the results showed that this organism detected a great number of toxic water samples in rainy seasons. The water samples, which promoted higher toxic effects towards this species, were from the north and from the middle of the reservoir. The correlation analysis showed that V. fischeri luminescent inhibition (%) was positively correlated with total phosphorus, chlorpyrifos, iron, and arsenic. T. platyurus mortality (%) was positively correlated with the water pH, 5-day biochemical oxygen demand (BOD sub(5)), chlorides, atrazine, simazine, terbuthylazine, and endosulfan sulfate contents. Although the surface waters did not promote acute toxicity to the crustacean D. magna, in the chronic exposure, a significant decrease in the number of juveniles per female was observed, mainly at the dry period. The number of juveniles per female, in the reproduction test of D. magna, was negatively correlated with pH, temperature, BOD sub(5), chloride, atrazine, simazine, terbuthylazine, and endosulfan sulfate. The water toxicity of the Alqueva water might be due principally to the intensive agriculture activities surrounding the reservoir and to the municipal wastewater discharges. Discussion: The physicochemical parameters and the pesticide concentrations indicated that the water quality was worse in the north part of the reservoir system. These results are characteristic of the majority of reservoirs, once the construction of the dam promoted, by itself, the impounding of water flow and the increase of compound residence time. The toxicity tests corroborate with the chemical characterization. Acute toxicity of Alqueva water may be a result of the effect promoted by chlorpyrifos, endosulfan sulfate, phosphorus, and iron. Chronic toxicity may be a result of the effect of herbicides, arsenic, organic matter, endosulfan sulfate in mixture. Hence, the water toxicity of the Alqueva might be due principally to the intensive agriculture activities surrounding the reservoir and to the municipal wastewater discharges. Conclusions: This study has shown that a large number of samples from different sites of the Alqueva reservoir contained potentially toxic contaminants. The sites with impaired water quality were those located at the north of the reservoir and in the surrounding areas of intensive agricultural activity. The results demonstrated that the use of a screening of acute and chronic toxicity tests with organisms from different trophic levels and with distinct sensibilities allowed the detections of several patterns of toxicity from spatial and temporal variability promoted by natural or anthropogenic sources. The chronic responses showed, especially in the dry season, that some of the species belonging to this aquatic ecosystem might be at risk. Recommendations and perspectives: The V. fischeri and T. platyurus are two species that should be used in the acute bioassays for the ecotoxicological monitoring programs of this reservoir. It is recommended that other species, such as a productive organism (algae), be included in the next study, once the water reservoir had high levels of herbicides. Ecotoxicological assessment of surface water must integrate initial screening based on acute tests followed always by chronic bioassays. The results implicitly suggest that the implementation of processes of remediation by reducing pollutant input into the reservoir and by the implementation of water treatment processes is important and necessary.  
Keywords: Agriculture  
Keywords: Portugal  
Keywords: Contamination  
Keywords: Surface water  
Keywords: Water Analysis  
Keywords: Water Sampling  
Keywords: Phosphorus  
Keywords: Chloride  
Keywords: Acute toxicity  
Keywords: Surface Water  
Keywords: Water quality  
Keywords: Daphnia magna  
Keywords: Bioassay  
Keywords: simazine  
Keywords: Assessments  
Keywords: Pollutants  
Keywords: Environmental Studies--Pollution  
Keywords: Chronic exposure  
Keywords: Chronic toxicity  
Keywords: Microbiology Abstracts C: Algology, Mycology & Protozoology; Pollution Abstracts; Environment Abstracts; Environmental Engineering Abstracts; Aqualine Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Sampling  
Keywords: Reservoirs  
Keywords: pH effects  
Keywords: Vibrio fischeri  
Keywords: Algae  
Keywords: Thamnocephalus platyurus  
Keywords: Mortality  
Keywords: Arsenic  
Keywords: AQ 00008:Effects of Pollution  
Keywords: K 03450:Ecology  
Keywords: Herbicides  
Keywords: Toxicity  
Keywords: Aquatic ecosystems  
Keywords: Sulfate  
Keywords: Endosulfan  
Keywords: Pollution sources  
Keywords: Chlorpyrifos  
Keywords: Sewage  
Keywords: Water Pollution Effects  
Keywords: Pesticides  
Keywords: Atrazine  
Keywords: Reproduction  
Keywords: Waste water  
Keywords: Iron  
Keywords: Runoff  
Keywords: Immobilization  
Date revised - 2010-02-01  
Language of summary - English  
Location - Portugal  
Pages - 703-716  
ProQuest ID - 810082781  
SubjectsTermNotLitGenreText - Agriculture; Contamination; Surface water; Phosphorus; Chloride; Acute toxicity; Water quality; simazine; Pollutants; Chronic exposure; Chronic toxicity; Sampling; pH effects; Mortality; Arsenic; Herbicides; Toxicity; Aquatic ecosystems; Sulfate; Endosulfan; Pollution sources; Chlorpyrifos; Sewage; Pesticides; Atrazine; Reproduction; Waste water; Iron; Runoff; Immobilization; Assessments; Water Analysis; Water Pollution Effects; Water Sampling; Surface Water; Reservoirs; Bioassay; Thamnocephalus platyurus; Daphnia magna; Algae; Vibrio fischeri; Portugal  
Last updated - 2011-11-03  
Corporate institution author - Palma, Patricia; Alvarenga, Paula; Palma, Vera; Matos, Claudia; Fernandes, Rosa Maria; Soares, Amadeu; Barbosa, Isabel Rita  
DOI - OB-bb562d6f-addd-4d66-8c86mfgefd108; 12591770; 0944-1344; 1614-7499 English

1016. Pan, D. Y. and Liang, X. M. The Susceptibility of Marsh Frog (Tadpole) and Spiders to Pesticides and Classification of Acute Toxicity. X.Liang, Dep. of Plant Protecting, Hunan Univ. of Agriculture, Changsha, 410128, Peop. Rep. China//: 1996; 42, (2): 154-160(CHI).   
Rec #: 1060  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

1017. Panemangalore, M. and Bebe, F. N. Short- and Long-Term Exposure to Low Levels of Pesticide and Flavonoid Mixtures Modify Endogenous Antioxidants in Tissues of Rats. Nutrition and Health Program, Kentucky State University, Frankfort, Kentucky, USA. Taylor & Francis, 11 New Fetter Lane London EC4P 4EE UK, [mailto:info@tandf.co.uk], [URL:http://www.tandf.co.uk]//: 2009; 44, (4): 357-364.   
Rec #: 2540  
Keywords: MIXTURE  
Call Number: NO MIXTURE (CPY,ES,THM)  
Notes: Chemical of Concern: CPY,ES,THM

1018. Panuwet, Parinya; Prapamontol, Tippawan; Chantara, Somporn; Barr, Dana B, and Panuwet, Parinya. Urinary Pesticide Metabolites in School Students From Northern Thailand. 2009 May; 212, (3): 288-297.   
Rec #: 44809  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We evaluated exposure to pesticides among secondary school students aged 12-13 years old in Chiang Mai Province, Thailand. Pesticide-specific urinary metabolites were used as biomarkers of exposure for a variety of pesticides, including organophosphorus insecticides, synthetic pyrethroid insecticides and selected herbicides. We employed a simple solid-phase extraction with analysis using isotope dilution high-performance liquid chromatography tandem mass spectrometry (HPLC-MS/MS). A total of 207 urine samples from Thai students were analyzed for 18 specific pesticide metabolites. We found 14 metabolites in the urine samples tested; seven of them were detected with a frequency17%. The most frequently detected metabolites were 2-[(dimethoxyphosphorothioyl) sulfanyl] succinic acid (malathion dicarboxylic acid), para-nitrophenol (PNP), 3,5,6-trichloro-2-pyridinol (TPCY; metabolite of chlorpyrifos), 2,4-dichlorophenoxyacetic acid (2,4-D), cis- and trans-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropane-1-carboxylic acids (c-DCCA and t-DCCA; metabolite of permethrin) and 3-phenoxybenzoic acid (3-PBA; metabolite of pyrethroids). The students were classified into 4 groups according to their parental occupations: farmers (N=60), merchants and traders (N=39), government and company employees (N=52), and laborers (N=56). Children of farmers had significantly higher urinary concentrations of pyrethroid insecticide metabolites than did other children (p<0.05). Similarly, children of agricultural families had significantly higher pyrethroid metabolite concentrations. Males had significantly higher values of PNP (Mann-Whitney test, p=0.009); however, no other sex-related differences were observed. Because parental occupation and agricultural activities seemed to have little influence on pesticide levels, dietary sources were the likely contributors to the metabolite levels observed.  
Keywords: High-performance liquid chromatography  
Keywords: 2,4-D  
Keywords: Toxicology Abstracts; Pollution Abstracts; Health & Safety Science Abstracts  
Keywords: Isotopes  
Keywords: Thailand  
Keywords: permethrin  
Keywords: Mass spectrometry  
Keywords: Metabolites  
Keywords: Sex differences  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Mass spectroscopy  
Keywords: Malathion  
Keywords: Insecticides  
Keywords: schools  
Keywords: H 5000:Pesticides  
Keywords: 2,4-Dichlorophenoxyacetic acid  
Keywords: Pyrethroids  
Keywords: X 24330:Agrochemicals  
Keywords: Diets  
Keywords: Bioindicators  
Keywords: Organophosphorus compounds  
Keywords: Permethrin  
Keywords: Herbicides  
Keywords: Children  
Keywords: biomarkers  
Keywords: Chlorpyrifos  
Keywords: Schools  
Keywords: Urine  
Keywords: Liquid chromatography  
Keywords: Pesticides  
Keywords: Succinic acid  
Date revised - 2009-05-01  
Language of summary - English  
Location - Thailand  
Pages - 288-297  
ProQuest ID - 20506488  
SubjectsTermNotLitGenreText - 2,4-D; High-performance liquid chromatography; Isotopes; Permethrin; Herbicides; Metabolites; Children; Sex differences; biomarkers; Mass spectroscopy; Malathion; Chlorpyrifos; Insecticides; Urine; Pesticides; Pyrethroids; Succinic acid; Bioindicators; Diets; Organophosphorus compounds; permethrin; Mass spectrometry; Schools; schools; Liquid chromatography; 2,4-Dichlorophenoxyacetic acid; Thailand  
Last updated - 2012-03-29  
British nursing index edition - International Journal of Hygiene and Environmental Health [Int. J. Hyg. Environ. Health]. Vol. 212, no. 3, pp. 288-297. May 2009.  
Corporate institution author - Panuwet, Parinya; Prapamontol, Tippawan; Chantara, Somporn; Barr, Dana B  
DOI - MD-0009524984; 9200047; 1438-4639 English

1019. Papoutsis, I.; Nikolaou, P.; Spiliopoulou, C.; Pistos, C.; Stefanidou, M., and Athanaselis, S. A Simple and Sensitive Gc/Ms Method for the Determination of Atropine During Therapy of Anticholinesterase Poisoning in Serum Samples.   
Rec #: 74349  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Atropine is used in the daily clinical practice for the treatment of poisonings caused by anticholinesterase pesticides, due to its sympathomimetic action. The investigation of the cause of the adverse effects that appear during atropine administration showed the necessity for the development and validation of a simple, rapid, sensitive, and specific method for the determination of atropine levels in serum samples. The developed method includes liquid-liquid extraction with ethyl acetate: dichloromethane (3:1, v/v) and derivatization using N,O-bis(trimethylsilyl)-trifluoracetamide (BSTFA) with 1% trimethylchlorsilane (TMCS) in acetonitrile environment. The method was found to be selective, linear, accurate, and precise according to international guidelines. The recovery was higher than 85.9%, the limit of quantification was 2.00&thinsp;ng/ml, and the calibration curve was linear within the range of 2.00-500&thinsp;ng/ml (R(2) &thinsp;&ge;&thinsp;0.992). Accuracy and precision were also calculated and were found to be less than 5.2 and 8.7%, respectively. The developed method was applied in a real case of accidental poisoning with chlorpyrifos in order to determine the atropine serum levels of the patient. The proposed method proved to be useful for the investigation of adverse effects that appear during atropine treatment of patients poisoned by anticholinesterase pesticides and it can also be used for the investigation of poisonings caused after consumption of atropine containing plants.  
MESH HEADINGS: Adult  
MESH HEADINGS: Atropine/\*blood/isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: Chlorpyrifos/poisoning  
MESH HEADINGS: Cholinesterase Inhibitors/poisoning  
MESH HEADINGS: Gas Chromatography-Mass Spectrometry/economics/methods  
MESH HEADINGS: Humans  
MESH HEADINGS: Insecticides/poisoning  
MESH HEADINGS: Liquid-Liquid Extraction/methods  
MESH HEADINGS: Male  
MESH HEADINGS: Muscarinic Antagonists/\*blood/isolation &amp  
MESH HEADINGS: purification/therapeutic use  
MESH HEADINGS: Parasympatholytics/\*blood/isolation &amp  
MESH HEADINGS: purification/therapeutic use  
MESH HEADINGS: Sensitivity and Specificity eng

1020. Pareja, L; Colazzo, M; Perez-Parada, a; Niell, S; Carrasco-Letelier, L; Besil, N; Cesio, M V; Heinzen, H, and Pareja, L. Detection of Pesticides in Active and Depopulated Beehives in Uruguay. 2011 Oct; 8, (10): 3844-3858.   
Rec #: 43099  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The influence of insecticides commonly used for agricultural purposes on beehive depopulation in Uruguay was investigated. Honeycombs, bees, honey and propolis from depopulated hives were analyzed for pesticide residues, whereas from active beehives only honey and propolis were evaluated. A total of 37 samples were analyzed, representing 14,800 beehives. In depopulated beehives only imidacloprid and fipronil were detected and in active beehives endosulfan, coumaphos, cypermethrin, ethion and chlorpyrifos were found. Coumaphos was present in the highest concentrations, around 1,000 mu g/kg, in all the propolis samples from active beehives. Regarding depopulated beehives, the mean levels of imidacloprid found in honeycomb (377 mu g/kg, Standard Deviation: 118) and propolis (60 mu g/kg, Standard Deviation: 57) are higher than those described to produce bee disorientation and fipronil levels detected in bees (150 and 170 mu g/kg) are toxic per se. The other insecticides found can affect the global fitness of the bees causing weakness and a decrease in their overall productivity. These preliminary results suggest that bees exposed to pesticides or its residues can lead them in different ways to the beehive.  
Keywords: Fitness  
Keywords: Imidacloprid  
Keywords: Beehives  
Keywords: Cypermethrin  
Keywords: Pesticide residues  
Keywords: Z 05350:Medical, Veterinary, and Agricultural Entomology  
Keywords: Uruguay  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Honeycombs  
Keywords: Public health  
Keywords: Endosulfan  
Keywords: Chlorpyrifos  
Keywords: cypermethrin  
Keywords: Standard deviation  
Keywords: Insecticides  
Keywords: Propolis  
Keywords: fipronil  
Keywords: Pesticides  
Keywords: Coumaphos  
Keywords: Entomology Abstracts; Pollution Abstracts  
Date revised - 2012-03-01  
Language of summary - English  
Location - Uruguay  
Pages - 3844-3858  
ProQuest ID - 954641955  
SubjectsTermNotLitGenreText - Fitness; Imidacloprid; Beehives; Cypermethrin; Pesticide residues; Honeycombs; Endosulfan; Public health; Chlorpyrifos; Standard deviation; Insecticides; Propolis; fipronil; Pesticides; Coumaphos; cypermethrin; Uruguay  
Last updated - 2012-06-18  
British nursing index edition - International Journal of Environmental Research and Public Health [Int. J. Environ. Res. Public Health]. Vol. 8, no. 10, pp. 3844-3858. Oct 2011.  
Corporate institution author - Pareja, L; Colazzo, M; Perez-Parada, A; Niell, S; Carrasco-Letelier, L; Besil, N; Cesio, M V; Heinzen, H  
DOI - MD-0018314494; 16435144; 1660-4601 English

1021. Park, Jae Hyeon; Lee, Jeong Eun; Shin, In Chul, and Koh, Hyun Chul. Autophagy regulates chlorpyrifos-induced apoptosis in SH-SY5Y cells. 2013 Apr 1-; 268, (1): 55-67.   
Rec #: 60  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract Chlorpyrifos/ Autophagy/ Apoptosis/ Neuroprotection/ Rapamycin/ SH-SY5Y cells

1022. Park, M-J; In, S-W; Lee, S-K; Choi, W-K; Park, Y-S; Chung, H-S, and Park, M-J. Postmortem Blood Concentrations of Organophosphorus Pesticides. 2009 Jan 30; 184, (1-3): 28-31.   
Rec #: 45109  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Cases involving acute fatalities due to ingestion of organophosphorus pestiddes (OPs), such as chlorpyrifos, diazinon, malathion and parathion, are presented. Solid-phase extraction (SPE) and gas chromatography/mass spectrometry (GC/MS) were used for the analysis of OPs in postmortem blood. After extraction with an Oasis HLB cartridge, the eluent was evaporated to dryness under a nitrogen stream at 35 degree C, reconstituted with ethanol, and then analyzed by GC/MS. Terbufos was used as an internal standard. Verification procedures, such as the limit of detection, limit of quantification, linearity of the calibration, precision and recovery were performed. Validation data were adequate for analyzing OPs in blood. Chlorpyrifos, diazinon, malathion and parathion were detected in 31 postmortem blood samples. Parathion was the most frequently detected compound among the four pesticides. The mean concentrations of chlorpyrifos, diazinon, malathion and parathion were 0.72, 1.03, 0.82 and 2.90 mg/L, respectively.  
Keywords: Pesticides (organophosphorus)  
Keywords: Data processing  
Keywords: Streams  
Keywords: Mass spectroscopy  
Keywords: Malathion  
Keywords: Chlorpyrifos  
Keywords: Gas chromatography  
Keywords: Toxicology Abstracts  
Keywords: Diazinon  
Keywords: X 24330:Agrochemicals  
Keywords: Ethanol  
Keywords: Nitrogen  
Keywords: Parathion  
Date revised - 2009-03-01  
Language of summary - English  
Pages - 28-31  
ProQuest ID - 20368998  
SubjectsTermNotLitGenreText - Parathion; Chlorpyrifos; Malathion; Diazinon; Mass spectroscopy; Nitrogen; Data processing; Ethanol; Streams; Gas chromatography; Pesticides (organophosphorus)  
Last updated - 2011-12-14  
British nursing index edition - Forensic Science International [Forensic Sci. Int.]. Vol. 184, no. 1-3, pp. 28-31. 30 Jan 2009.  
Corporate institution author - Park, M-J; Lee, S-K; Choi, W-K; Park, Y-S; Chung, H-S  
DOI - MD-0009355476; 9054942; 0379-0738 English

1023. Park, R a; Clough, J S; Wellman, M C, and Park, R A. Aquatox: Modeling Environmental Fate and Ecological Effects in Aquatic Ecosystems. 2008 Apr 24; 213, (1): 1-15.   
Rec #: 49499  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: AQUATOX combines aquatic ecosystem, chemical fate, and ecotoxicological constructs to obtain a truly integrative fate and effects model. It is a general, mechanistic ecological risk assessment model intended to be used to evaluate past, present, and future direct and indirect effects from various stressors including nutrients, organic wastes, sediments, toxic organic chemicals, flow, and temperature in aquatic ecosystems. The model has a very flexible structure and provides multiple analytical tools useful for evaluating ecological effects, including uncertainty analysis, nominal range sensitivity analysis, comparison of perturbed and control simulations, and graphing and tabulation of predicted concentrations, rates, and photosynthetic limitations. It can represent a full aquatic food web, including multiple genera and guilds of periphyton, phytoplankton, submersed aquatic vegetation, invertebrates, and fish and associated organic toxicants. It can model up to 20 organic chemicals simultaneously. (It does not model metals.) Modeled processes for organic toxicants include chemodynamics of neutral and ionized organic chemicals, bioaccumulation as a function of sorption and bioenergetics, biotransformation to daughter products, and sublethal and lethal toxicity. It has an extensive library of default biotic, chemical, and toxicological parameters and incorporates the ICE regression equations for estimating toxicity in numerous organisms. The model has been implemented for streams, small rivers, ponds, lakes, reservoirs, and estuaries. It is an integral part of the BASINS system with linkage to the watershed models HSPF and SWAT.  
Keywords: Risk assessment  
Keywords: Water reservoirs  
Keywords: Ecosystems  
Keywords: Toxicants  
Keywords: Photosynthesis  
Keywords: Bioenergetics  
Keywords: M3 1010:Issues in Sustainable Development  
Keywords: biotransformation  
Keywords: Phytoplankton  
Keywords: Basins  
Keywords: Nutrients  
Keywords: Ecological Effects  
Keywords: Watersheds  
Keywords: Streams  
Keywords: Toxicity tests  
Keywords: Ponds  
Keywords: Models  
Keywords: Lakes  
Keywords: Assessments  
Keywords: Pollution Abstracts; Sustainability Science Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Water Resources Abstracts; Ecology Abstracts  
Keywords: food webs  
Keywords: Pollution indicators  
Keywords: Reservoirs  
Keywords: Food webs  
Keywords: Temperature effects  
Keywords: Rivers  
Keywords: Ice  
Keywords: Metals  
Keywords: Sorption  
Keywords: Mathematical models  
Keywords: Computers  
Keywords: Estimating  
Keywords: Estuaries  
Keywords: Temperature  
Keywords: Wastes  
Keywords: Vegetation  
Keywords: Toxicity  
Keywords: Aquatic ecosystems  
Keywords: Sediments  
Keywords: Model Studies  
Keywords: nutrients  
Keywords: Bioaccumulation  
Keywords: Guilds  
Keywords: Water Pollution Effects  
Keywords: D 04030:Models, Methods, Remote Sensing  
Keywords: P 1000:MARINE POLLUTION  
Keywords: Periphyton  
Keywords: aquatic ecosystems  
Date revised - 2008-05-01  
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Pages - 1-15  
ProQuest ID - 289495685  
SubjectsTermNotLitGenreText - Model Studies; Toxicity; Water Pollution Effects; Ecosystems; Ecological Effects; Streams; Estimating; Temperature; Assessments; aquatic ecosystems; Rivers; Toxicants; Vegetation; Watersheds; Bioaccumulation; nutrients; Sorption; Phytoplankton; Reservoirs; Photosynthesis; food webs; Ponds; Toxicity tests; Pollution indicators; Water reservoirs; Temperature effects; Models; Aquatic ecosystems; Mathematical models; Nutrients; Guilds; Bioenergetics; Food webs; biotransformation; Lakes; Sediments; Basins; Periphyton; Wastes; Risk assessment; Metals; Estuaries; Ice  
Last updated - 2011-10-26  
Corporate institution author - Park, R A; Clough, J S; Wellman, M C  
DOI - OB-MD-0007977162; 8104655; 0304-3800 English

1024. Park, S. K.; Kong, K. A.; Cha, E. S.; Lee, Y. J.; Lee, G. T., and Lee, W. J. Occupational Exposure to Pesticides and Nerve Conduction Studies Among Korean Farmers. 2012; 67, (2): 78-83.   
Rec #: 66589  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study aimed to determine whether occupational exposure to pesticides was associated with decreased nerve conduction studies among farmers. On 2 separate occasions, the authors performed a cross-sectional study of a group of 31 male farmers who periodically applied pesticides. The study included questionnaire interviews and nerve conduction studies on the median, ulnar, posterior tibial, peroneal, and sural nerves. Although all mean values remained within laboratory normal limits, significant differences between the first and second tests were found in sensory conduction velocities on the median and sural nerves, and motor conduction velocities on the posterior tibial nerve. Lifetime days of pesticide application was negatively associated with nerve conduction velocities at most nerves after adjusting for potential confounders. These findings may reflect a link between occupational pesticide exposure and peripheral neurophysiologic abnormality that deserves further evaluation.  
Keywords: farmers, nerve conduction study, occupational exposure, pesticides  
ISI Document Delivery No.: 936LD

1025. Park, Y.; Kim, Y.; Kim, J.; Yoon, K. S.; Clark, J., and Lee, J. Imidacloprid, a Neonicotinoid Insecticide, Potentiates Adipogenesis in 3T3-L1 Adipocytes. 2013; 61, (1): 255-259.   
Rec #: 66609  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: There is emerging evidence that organochlorine and organophosphorus insecticide exposure may be linked to excessive weight gain and symptoms of diabetes. However, there is a lack of knowledge for other types of insecticides with potential influence on obesity and diabetes. Thus, the purpose of this investigation was to determine the role of imidadoprid, a neonicotinoid insecticide, in lipid metabolism by use of 3T3-L1 adipocytes. Imidacloprid treatment potentiated lipid accumulation in 3T3-L1 adipocytes and significantly increased expression of a key regulator of adipocyte differentiation and key regulators of lipogenesis. These results imply the involvement of imidacloprid in altered adipogenesis, resulting in increased fat accumulation. This finding is the first report of a potential link between neonicotinoid insecticide exposure and lipid accumulation in adipocytes. Further in vivo as well as epidemiological studies will be required before we can extrapolate these findings to a potential contribution of imidacloprid in human obesity.  
Keywords: Imidacloprid, neonicotinoid, lipid metabolism, obesity, adipocyte  
ISI Document Delivery No.: 065JB

1026. Parker, L. C.; Prestwich, E. C.; Ward, J. R.; Smythe, E.; Berry, A.; Triantafilou, M.; Triantafilou, K., and Sabroe, I. A Phosphatidylserine Species Inhibits a Range of Tlr- but Not Il-1beta-Induced Inflammatory Responses by Disruption of Membrane Microdomains.   
Rec #: 51099  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Immunol. 2003 Aug 15;171(4):1630-5 (medline /12902458)  
COMMENTS: Cites: Arterioscler Thromb Vasc Biol. 2003 Jul 1;23(7):1197-203 (medline /12775576)  
COMMENTS: Cites: J Immunol. 2003 May 15;170(10):5268-75 (medline /12734376)  
COMMENTS: Cites: Crit Rev Immunol. 2002;22(4):251-68 (medline /12678427)  
COMMENTS: Cites: Annu Rev Immunol. 2003;21:335-76 (medline /12524386)  
COMMENTS: Cites: J Biol Chem. 2002 Dec 6;277(49):47834-43 (medline /12324469)  
COMMENTS: Cites: Am J Respir Crit Care Med. 2002 Sep 1;166(5):651-6 (medline /12204860)  
COMMENTS: Cites: Trends Immunol. 2002 Jun;23(6):301-4 (medline /12072369)  
COMMENTS: Cites: J Cell Sci. 2002 Jun 15;115(Pt 12):2603-11 (medline /12045230)  
COMMENTS: Cites: Br J Pharmacol. 2002 May;136(2):312-20 (medline /12010781)  
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COMMENTS: Cites: Eur J Immunol. 2002 Feb;32(2):541-51 (medline /11828371)  
COMMENTS: Cites: J Clin Invest. 2001 Oct;108(7):957-62 (medline /11581295)  
COMMENTS: Cites: J Cell Sci. 2001 Jul;114(Pt 13):2535-45 (medline /11559761)  
COMMENTS: Cites: J Infect Dis. 2001 Sep 15;184(6):713-22 (medline /11517432)  
COMMENTS: Cites: J Immunol. 2001 Jan 15;166(2):826-31 (medline /11145656)  
COMMENTS: Cites: J Immunol. 2000 Oct 1;165(7):3541-4 (medline /11034352)  
COMMENTS: Cites: Biochem Biophys Res Commun. 2000 Feb 5;268(1):172-7 (medline /10652232)  
COMMENTS: Cites: Curr Opin Immunol. 2008 Feb;20(1):17-22 (medline /18272355)  
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COMMENTS: Cites: Am J Respir Crit Care Med. 2007 Feb 15;175(4):306-11 (medline /17138954)  
COMMENTS: Cites: Clin Exp Immunol. 2007 Feb;147(2):199-207 (medline /17223959)  
COMMENTS: Cites: J Surg Res. 2006 Nov;136(1):58-69 (medline /16979664)  
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COMMENTS: Cites: FASEB J. 2006 Oct;20(12):2153-5 (medline /16935934)  
COMMENTS: Cites: J Exp Med. 2006 Oct 2;203(10):2377-89 (medline /17000866)  
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COMMENTS: Cites: J Exp Med. 1999 Jun 7;189(11):1777-82 (medline /10359581)  
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COMMENTS: Cites: J Immunol. 1999 Jun 15;162(12):7217-23 (medline /10358168)  
COMMENTS: Cites: Cell Death Differ. 1998 Jul;5(7):551-62 (medline /10200509)  
COMMENTS: Cites: J Exp Med. 1999 Feb 15;189(4):615-25 (medline /9989976)  
COMMENTS: Cites: Science. 1998 Dec 11;282(5396):2085-8 (medline /9851930)  
COMMENTS: Cites: J Biol Chem. 1998 Sep 18;273(38):24309-13 (medline /9733716)  
COMMENTS: Cites: J Cell Biol. 1998 Jul 13;142(1):69-84 (medline /9660864)  
COMMENTS: Cites: J Immunol Methods. 1998 Apr 15;213(2):157-67 (medline /9692848)  
COMMENTS: Cites: J Biol Chem. 1998 Apr 10;273(15):8680-90 (medline /9535844)  
COMMENTS: Cites: J Clin Invest. 1998 Feb 15;101(4):890-8 (medline /9466984)  
COMMENTS: Cites: J Clin Invest. 1997 Jan 15;99(2):315-24 (medline /9006000)  
COMMENTS: Cites: J Chromatogr B Biomed Appl. 1994 Nov 4;661(1):1-5 (medline /7866537)  
COMMENTS: Cites: J Clin Invest. 1991 Dec;88(6):2039-46 (medline /1752961)  
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COMMENTS: Cites: J Exp Med. 1991 Nov 1;174(5):1209-20 (medline /1940799)  
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COMMENTS: Cites: Nature. 1990 Mar 15;344(6263):254-7 (medline /1690354)  
COMMENTS: Cites: J Clin Invest. 1990 Apr;85(4):1260-6 (medline /2318980)  
COMMENTS: Cites: J Immunol. 2004 Jun 15;172(12):7654-60 (medline /15187147)  
COMMENTS: Cites: J Biol Chem. 2004 Sep 24;279(39):40882-9 (medline /15247273)  
COMMENTS: Cites: J Leukoc Biol. 2004 Sep;76(3):514-9 (medline /15178705)  
COMMENTS: Cites: J Cell Sci. 2004 Aug 1;117(Pt 17):4007-14 (medline /15286178)  
COMMENTS: Cites: Biochem J. 2004 Jul 15;381(Pt 2):527-36 (medline /15040785)  
COMMENTS: Cites: J Immunol. 2004 Apr 15;172(8):4977-86 (medline /15067079)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2004 Apr 13;101(15):5598-603 (medline /15034168)  
COMMENTS: Cites: Science. 2004 Mar 5;303(5663):1529-31 (medline /14976261)  
COMMENTS: Cites: J Endotoxin Res. 2003;9(6):375-80 (medline /14733724)  
COMMENTS: Cites: J Exp Med. 2003 Oct 6;198(7):1043-55 (medline /14517278)  
ABSTRACT: TLRs detect conserved molecular patterns that are unique to microbes, enabling tailored responses to invading pathogens and modulating a multitude of immunopathological conditions. We investigated the ability of a naturally occurring stearoyl-arachidonoyl form of phosphatidylserine (SAPS) to inhibit the proinflammatory effects of TLR agonists in models of inflammation investigating the interaction of leukocytes with epithelial and endothelial cells. The responses to LPS of both epithelial and endothelial cells were highly amplified in the presence of PBMCs. Coincubation with SAPS markedly inhibited activation of cocultures by LPS, principally through inhibition of the TLR4 signaling pathway in PBMCs; however, this was not through downmodulation of TLR4 or coreceptor expression, nor was IL-1beta-induced cytokine release affected. SAPS also impaired Pam(3)CSK(4) (TLR2/1), Gardiquimod (TLR7/8), and Streptococcus pneumoniae-induced cytokine release, but had only modest effects on poly(I:C) (TLR3)-induced responses. Fluorescence resonance energy transfer analysis of molecular associations revealed that SAPS disrupted the association of both TLR4 and TLR2 with their respective membrane partners that are required for signaling. Thus, our data reinforce the existence and importance of cooperative networks of TLRs, tissue cells, and leukocytes in mediating innate immunity, and identify a novel disrupter of membrane microdomains, revealing the dependence of TLR signaling on localization within these domains.  
MESH HEADINGS: Cell Line  
MESH HEADINGS: Down-Regulation/drug effects  
MESH HEADINGS: Endothelial Cells/immunology  
MESH HEADINGS: Epithelial Cells/immunology  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunity, Innate/drug effects  
MESH HEADINGS: Inflammation/immunology  
MESH HEADINGS: Interleukin-1beta/\*immunology/pharmacology  
MESH HEADINGS: Leukocytes, Mononuclear/\*immunology  
MESH HEADINGS: Lipopeptides  
MESH HEADINGS: Membrane Microdomains/\*immunology  
MESH HEADINGS: \*Models, Immunological  
MESH HEADINGS: Peptides/pharmacology  
MESH HEADINGS: Phosphatidylserines/\*immunology/pharmacology  
MESH HEADINGS: Signal Transduction/drug effects/\*immunology  
MESH HEADINGS: Streptococcus pneumoniae/immunology  
MESH HEADINGS: Toll-Like Receptors/agonists/\*immunology eng

1027. Parveen, Z.; Afridi, I. A. K., and Masud, S. Z. A Multi-Residue Method for Quantitation of Organochlorine, Organophosphorus and Synthetic Pyrethroid Pesticides in Cotton Seeds. SOIL; 1994; 37, (12): 536-540.   
Rec #: 280  
Keywords: CHEM METHODS  
Call Number: NO CHEM METHODS (BFT,CPY,CYF,CYH,CYP,DCF,DM,DMT,DZ,ES,FNV,FPP,FVL,MP,MTM,PFF,PIRM,PMR)  
Notes: Chemical of Concern: AND,BFT,CPY,CYF,CYH,CYP,DCF,DDT,DLD,DM,DMT,DZ,ES,FNV,FPP,FVL,FYT,HCCH,HPT,MP,MTM,PFF,PIRM,PMR,PPCP

1028. Patch, J. R.; Han, Z.; Mccarthy, S. E.; Yan, L.; Wang, L. F.; Harty, R. N., and Broder, C. C. The Yplgvg Sequence of the Nipah Virus Matrix Protein Is Required for Budding.   
Rec #: 50999  
Keywords: VIRUS  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: BACKGROUND: Nipah virus (NiV) is a recently emerged paramyxovirus capable of causing fatal disease in a broad range of mammalian hosts, including humans. Together with Hendra virus (HeV), they comprise the genus Henipavirus in the family Paramyxoviridae. Recombinant expression systems have played a crucial role in studying the cell biology of these Biosafety Level-4 restricted viruses. Henipavirus assembly and budding occurs at the plasma membrane, although the details of this process remain poorly understood. Multivesicular body (MVB) proteins have been found to play a role in the budding of several enveloped viruses, including some paramyxoviruses, and the recruitment of MVB proteins by viral proteins possessing late budding domains (L-domains) has become an important concept in the viral budding process. Previously we developed a system for producing NiV virus-like particles (VLPs) and demonstrated that the matrix (M) protein possessed an intrinsic budding ability and played a major role in assembly. Here, we have used this system to further explore the budding process by analyzing elements within the M protein that are critical for particle release.  
ABSTRACT: RESULTS: Using rationally targeted site-directed mutagenesis we show that a NiV M sequence YPLGVG is required for M budding and that mutation or deletion of the sequence abrogates budding ability. Replacement of the native and overlapping Ebola VP40 L-domains with the NiV sequence failed to rescue VP40 budding; however, it did induce the cellular morphology of extensive filamentous projection consistent with wild-type VP40-expressing cells. Cells expressing wild-type NiV M also displayed this morphology, which was dependent on the YPLGVG sequence, and deletion of the sequence also resulted in nuclear localization of M. Dominant-negative VPS4 proteins had no effect on NiV M budding, suggesting that unlike other viruses such as Ebola, NiV M accomplishes budding independent of MVB cellular proteins.  
ABSTRACT: CONCLUSION: These data indicate that the YPLGVG motif within the NiV M protein plays an important role in M budding; however, involvement of any specific components of the cellular MVB sorting pathway in henipavirus budding remains to be demonstrated. Further investigation of henipavirus assembly and budding may yet reveal a novel mechanism(s) of viral assembly and release that could be applicable to other enveloped viruses or have therapeutic implications.  
MESH HEADINGS: Amino Acid Motifs  
MESH HEADINGS: Amino Acid Sequence  
MESH HEADINGS: Cell Line  
MESH HEADINGS: Humans  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Mutation  
MESH HEADINGS: Nipah Virus/\*chemistry/genetics/\*physiology  
MESH HEADINGS: Sequence Alignment  
MESH HEADINGS: Viral Matrix Proteins/\*chemistry/genetics/metabolism  
MESH HEADINGS: \*Virus Shedding eng

1029. Patlolla, R. R.; Desai, P. R.; Belay, K., and Singh, M. S. Translocation of Cell Penetrating Peptide Engrafted Nanoparticles Across Skin Layers.   
Rec #: 50549  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Control Release. 2004 Sep 14;99(1):53-62 (medline /15342180)  
COMMENTS: Cites: Pharm Res. 2007 Nov;24(11):1977-92 (medline /17443399)  
ABSTRACT: The objective of the current study was to evaluate the ability of cell penetrating peptides (CPP) to translocate the lipid payload into the skin layers. Fluorescent dye (DID-oil) encapsulated nano lipid crystal nanoparticles (FNLCN) were prepared using Compritol, Miglyol and DOGS-NTA-Ni lipids by hot melt homogenization technique. The FNLCN surface was coated with TAT peptide (FNLCNT) or control YKA peptide (FNLCNY) and in vitro rat skin permeation studies were performed using Franz diffusion cells. Observation of lateral skin sections obtained using cryotome with a confocal microscope demonstrated that skin permeation of FNLCNT was time dependent and after 24h, fluorescence was observed upto a depth of 120 microm which was localized in the hair follicles and epidermis. In case of FNLCN and FNLCNY formulations fluorescence was mainly observed in the hair follicles. This observation was further supported by confocal Raman spectroscopy where higher fluorescence signal intensity was observed at 80 and 120 microm depth with FNLCNT treated skin and intensity of fluorescence peaks was in the ratio of 2:1:1 and 5:3:1 for FNLCNT, FNLCN, and FNLCNY treated skin sections, respectively. Furthermore, replacement of DID-oil with celecoxib (Cxb), a model lipophilic drug showed similar results and after 24h, the CXBNT formulation increased the Cxb concentration in SC by 3 and 6 fold and in epidermis by 2 and 3 fold as compared to CXBN and CXBNY formulations respectively. Our results strongly suggest that CPP can translocate nanoparticles with their payloads into deeper skin layers.  
MESH HEADINGS: Administration, Cutaneous  
MESH HEADINGS: Animals  
MESH HEADINGS: Biocompatible Materials/chemistry/metabolism  
MESH HEADINGS: Drug Carriers/chemistry/\*metabolism  
MESH HEADINGS: Drug Delivery Systems  
MESH HEADINGS: Fluorescent Dyes/chemistry/metabolism  
MESH HEADINGS: Gene Products, tat/chemistry  
MESH HEADINGS: Humans  
MESH HEADINGS: Lysine/analogs &amp  
MESH HEADINGS: derivatives/chemistry  
MESH HEADINGS: Materials Testing  
MESH HEADINGS: Nanoparticles/\*chemistry  
MESH HEADINGS: Oleic Acids/chemistry  
MESH HEADINGS: Particle Size  
MESH HEADINGS: Peptides/chemistry/\*metabolism  
MESH HEADINGS: Permeability  
MESH HEADINGS: Rats  
MESH HEADINGS: Skin/cytology/\*metabolism  
MESH HEADINGS: Succinates/chemistry eng

1030. Pauli, B. D.; Perrault, J. A., and Money, S. L. RATL: A Database of Reptile and Amphibian Toxicology Literature. 2000: 494 p.   
Rec #: 1950  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (1Major ions,24D,24DXY,ACL,ACP,ADC,ANT,ATN,ATZ,AZ,Ag,AgN,As,BDF,BRA,BTY,CBD,CBF,CBL,CMPH,CN,CPY,CTN,CYF,CYH,CYP,CaCl2,Cr,Cr element,Cu,CuS,DCTP,DDVP,DFZ,DM,DMB,DMT,DS,DU,DZ,EFV,EP,ES,ETHN,FMP,FNT,FNV,FPP,GYP,Halides,IMC,IODN,LNR,MCB,MDT,MLN,MLO,MLT,MLX,MOM,MP,MTL,MTPN,MVP,MYC,MZB,Maneb,NAPH,NCTN,NH3,NHN,NaBr,NaNO3,Naled,OML,OMT,PAHs,PAQT,PCP,PHE,PPB,PPCP,PPN,PPX,PQT,PRT,PSM,PTP,PYPG,PYR,RTN,SAC,SCA,SFL,SFT,SMT,SRT,STCH,TBC,TBO,THM,TMP,TMT,TPR,VCZ,WFN,ZnS), NO REVIEW (1Major ions,24D,24DXY,ACL,ACP,ADC,ANT,ATN,ATZ,AZ,Ag,AgN,As,BDF,BRA,BTY,CBD,CBF,CBL,CMPH,CN,CPY,CTN,CYF,CYH,CYP,CaCl2,Cr,Cr element,Cu,CuS,DCTP,DDVP,DFZ,DM,DMB,DMT,DS,DU,DZ,EFV,EP,ES,ETHN,FMP,FNT,FNV,FPP,GYP,Halides,IMC,IODN,LNR,MCB,MDT,MLN,MLO,MLT,MLX,MOM,MP,MTL,MTPN,MVP,MYC,MZB,Maneb,NAPH,NCTN,NH3,NHN,NaBr,NaNO3,Naled,OML,OMT,PAHs,PAQT,PCP,PHE,PPB,PPCP,PPN,PPX,PQT,PRT,PSM,PTP,PYPG,PYR,RTN,SAC,SCA,SFL,SFT,SMT,SRT,STCH,TBC,TBO,THM,TMP,TMT,TPR,VCZ,WFN,ZnS)  
Notes: Chemical of Concern: 1Major ions,24D,24DXY,3CE,ACL,ACP,ACY,ADC,AMTL,AN,AND,ANT,ANZ,ATN,ATP,ATZ,AZ,Ag,AgN,Al,As,BC,BDC,BDF,BNZ,BPZ,BRA,BTY,CBD,CBF,CBL,CF,CHD,CMPH,CN,CPY,CTC,CTN,CYF,CYH,CYP,CZE,CaCl2,CdCl,CdN,CdS,CoCl,Cr,Cu,CuS,DBN,DCTP,DDT,DDVP,DEM,DFZ,DINO,DLD,DLF,DM,DMB,DMT,DS,DU,DXN,DZ,EDB,EDT,EFV,EGY,EN,EP,EPRN,ES,ETHN,ETN,FBM,FMP,FNT,FNV,FPP,FTH,GIB,GYP,HCCH,HPT,Halides,HgCl2,IFP,IMC,IODN,K2Cr2O7,K2CrO4,LNR,MBZ,MCB,MCPA,MDT,MLN,MLO,MLT,MLX,MOM,MP,MRX,MTB,MTL,MTPN,MVP,MXC,MYC,MZB,Maneb,Mg ion,NAPH,NBZ,NCTN,NH3,NHN,NHP,NRM,NaBr,NaNO3,Nabam,Naled,OML,OMT,PAHs,PAQT,PCH,PCL,PCP,PHE,PHSL,PL,PPB,PPCP,PPCP2011,PPHD,PPN,PPX,PQT,PRN,PRT,PSM,PTP,PVL,PYN,PYPG,PYR,Pa,PbAC,PbN,REM,RTN,SA,SAC,SBA,SCA,SFL,SFT,SMT,SRT,STCH,TBA,TBC,TBO,TBT,TCDD,TEG,THM,TMP,TMT,TOL,TPM,TPR,TXP,Tc,Ti,Urea,VCZ,WFN,Zineb,ZnS

1031. Payan-Renteria, R.; Garibay-Chavez, G.; Rangel-Ascencio, R.; Preciado-Martinez, V.; Munoz-Islas, L.; Beltran-Miranda, C.; Mena-Munguia, S.; Jave-Suarez, L.; Feria-Velasco, A., and De Celis, R. Effect of Chronic Pesticide Exposure in Farm Workers of a Mexico Community. 2012; 67, (1): 22-30.   
Rec #: 66699  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticides are frequently used substances worldwide, even when the use of some of them is forbidden due to the recognized adverse effect they have on the health of not only the people who apply the pecticides, but also of those that consume the contaminated products. The objectives of this study were to know the health issues of farm workers chronically exposed to pesticides, to evaluate possible damage at genetic level, as well as to explore some hepatic, renal, and hematological alterations. A transversal comparative study was performed between 2 groups, one composed of 25 farm workers engaged in pesticide spraying, and a control group of 21 workers not exposed to pesticides; both groups belonged to the Nextipac community in Jalisco, Mexico. Each member of both groups underwent a full medical history. Blood samples were taken from all farmworkers in order to obtain a complete blood count and chemistry, clinical chemistry, lipid profile, liver and kidney function tests, erythrocyte cholinesterase quantification, lipid peroxidation profile, and free DNA fragment quantification. For the information analysis, central tendency and dispersion measurements were registered. In order to know the differences between groups, a cluster multivariate method was used, as well as prevalence reasons. The most used pesticides were mainly organophosphates, triazines and organochlorine compounds. The exposed group showed acute poisoning (20% of the cases) and diverse alterations of the digestive, neurological, respiratory, circulatory, dermatological, renal, and reproductive system probably associated to pesticide exposure. More importantly, they presented free DNA fragments in plasma (90.8 vs 49.05 ng/mL) as well as a higher level of lipid peroxidation (41.85 vs. 31.91 nmol/mL) in comparison with those data from unexposed farm workers. These results suggest that there exist health hazards for those farm workers exposed to pesticides, at organic and cellular levels.  
Keywords: circulating DNA fragments, farm workers, occupational exposure,  
ISI Document Delivery No.: 911OR

1032. Payne-Sturges, D.; Cohen, J.; Castorina, R.; Axelrad, D. A., and Woodruff, T. J. Evaluating Cumulative Organophosphorus Pesticide Body Burden of Children: A National Case Study. 2009; 43, (20): 7924-7930.   
Rec #: 66709  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Biomonitoring is a valuable tool for identifying exposures to chemicals that pose potential harm to human health. However, to date there has been little published on ways to evaluate the relative public health significance of biomonitoring data for different chemicals and even less on cumulative assessment of multiple chemicals. The objectives of our study are to develop a methodology for a health risk interpretation of biomonitoring data and to apply it using NHANES 1999-2002 body burden data for organophosphorus (OP) pesticides. OP pesticides present a particularly challenging case given the nonspecificity of many metabolites monitored through NHANES. We back-calculate OP pesticide exposures from urinary metabolite data and compare cumulative dose estimates with available toxicity information for a common mechanism of action (brain cholinesterase inhibition) using data from U.S. EPA. Our results suggest that approximately 40% of children in the United States may have had insufficient margins of exposure (MOEs) for neurological impacts from cumulative exposures to OP pesticides (MOE less than 1000). Limitations include uncertainty related to assumptions about likely precursor pesticide compounds of the urinary metabolites, sources of exposure, and intraindividual and temporal variability.  
Keywords: PRESCHOOL-CHILDREN, CREATININE CONCENTRATIONS, AGRICULTURAL COMMUNITY,  
ISI Document Delivery No.: 504DR

1033. Pearson, M. A.; Lu, C. S.; Schmotzer, B. J.; Waller, L. A., and Riederer, A. M. Evaluation of physiological measures for correcting variation in urinary output: Implications for assessing environmental chemical exposure in children. 2009; 19, (3): 336-342.   
Rec #: 66719  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Urinary contaminant concentrations are commonly adjusted by creatinine to account for the variability in urinary output. This approach may not be optimal among children due to developmental growth of muscle mass and the associated increase in creatinine formation. An alternative approach is to measure the specific gravity of the urine sample, which reflects the solute concentration of the urine. We compare the appropriateness of urinary creatinine and urinary-specific gravity as factors for correcting morning and evening spot urine samples collected from 23 children (3-11 years) for a total of 41 days in four different seasons. Two linear mixed-effects models were fit using age, sex, season, and sample collection time (morning/evening) as predictors with specific gravity and creatinine as dependent variables. Specific gravity was significantly associated with the sample collection time (P < 0.001) with morning samples higher than evening samples. Creatinine was significantly associated with season (P < 0.05), sample collection time (P < 0.0001), and age (P < 0.0001). Creatinine levels were higher during the summer compared to the other seasons, higher in the morning compared to the evening, and higher with increases in children's age. Normalizing the children's spot urine samples using creatinine would introduce bias to the data analysis. Whereas using specific gravity to correct for variable urinary output would be more robust. In addition, measuring speci. c gravity is relatively easy, does not require the use of chemicals, and the results are available instantaneously. Journal of Exposure Science and Environmental Epidemiology (2009) 19, 336-342; doi: 10.1038/jes. 2008.48; published online 8 October 2008  
Keywords: children, creatinine, specific gravity, urinary biomarker  
ISI Document Delivery No.: 408TJ

1034. Pelit, F++sun Ok+ºu; Pelit, Levent; Erta+Hasan, and Nil Erta+F. Development of a gas chromatographic method for the determination of Chlorpyrifos and its metabolite Chlorpyrifos-oxon in wine matrix. 2012 Sep 1-; 904, (0): 35-41.   
Rec #: 1320  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: A reliable method has been developed for the determination of Chlorpyrifos (CP) and its metabolite Chlorpyrifos-oxon (CPO) in wine sample using pulsed splitless technique coupled with gas chromatography by using electron capture detector. In this study, a quick, easy and cheap sample preparation method (QuEChERS) based on liquid extraction with acetonitrile, followed by dispersive solid phase extraction using primary secondary amine was tested for the separation and quantification of CP and CPO in wine samples. The accuracy of the developed method was tested upon recovery studies and it was calculated as (92.3 -\_ 18.2)% for CP and (96.6 -\_ 16.1)% for CPO. LOD and LOQ values of CP were found as 0.04 and 0.15 ng/mL and 0.49 and 1.62 ng/mL for CPO respectively. By using the pulsed splitless injection mode, the sensitivity of the determination of CP and its metabolite CPO in wine samples was improved compared to splitless technique. CP content of analyzed wine sample was found as 2.05 -\_ 0.15 ng/mL with a RSD of 7.6% and CPO content was found as 4.99 -\_ 0.15 ng/mL with a RSD of 3.0% (n = 3). The expanded measurement uncertainties were calculated as 17% and 6% for CP and CPO, respectively. Chlorpyrifos oxon/ Metabolite/ Pulsed splitless/ Pesticide/ Gas chromatography/ Wine/ Uncertainty

1035. Pelit, F++sun Ok+şu; Erta+Hasan; Seyrani, I+ l, and Nil Erta+F. Assessment of DFG-S19 method for the determination of common endocrine disruptor pesticides in wine samples with an estimation of the uncertainty of the analytical results. 2013 May 1-; 138, (1): 54-61.   
Rec #: 5630  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: A gas chromatographic method for the determination of endocrine disruptor pesticides (Chlorpyrifos, Penconazole, Procymidone, Iprodione, Bromopropylate and Lambda-Cyhalothrin) in wine samples is described. A general DFG-S19 method for residual pesticide determination in all kind of food stuff was investigated to simplify and adopt for wine samples in this work. Alternative sample preparation routes were elucidated and compared according to their recovery values. Four different separation techniques were tested and the method employing florosil column after a LLE procedure was applied for wine samples with satisfactory recovery ratios (72Çô97%). The pesticides were extracted from the sample by cyclohexaneÇôethyl acetate mixture (1:1 v/v) and cleaned up by florosil column. The regression coefficients were at least 0.99 and relative standard deviations were no higher than 16%. Detection limits were in the range of 0.6Çô2.9 ng/mL and the relative expanded measurement uncertainties were calculated in the 7Çô22% range. Pesticides/ Endocrine disruptor/ Wine/ Sample preparation/ Gas chromatography

1036. Perez, Joanne Rodriguez; Loureiro, Susana; Menezes, Salome; Palma, Patricia; Fernandes, Rosa M; Barbosa, Isabel R; Soares, Amadeu Mvm, and Loureiro, Susana. Assessment of Water Quality in the Alqueva Reservoir (Portugal) Using Bioassays. 2010 Mar; 17, (3): 688-702.   
Rec #: 48039  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background, aim, and scope: Alqueva Reservoir is the biggest artificial freshwater reservoir in Europe and is an important water supply for human and agricultural consumption in the Alentejo region (Portugal). Pollution can impair environmental and human health status, and to assure water quality and ecological balance, it is crucial to frequently monitor water supplies. In this study, we used an **ecotoxicological test battery to identify the potential toxicity of water from this reservoir**. Materials and methods: Water samples from the Alqueva aquatic system were collected bimonthly in 2006 from 11 different water points within the reservoir. Several bioassays were carried out: a 72-h growth test with **Pseudokirchneriella subcapitata,** a 6-day growth test with **Chironomus riparius** larvae, and the luminescence inhibition test with Vibrio fischeri (Microtox registered ). Results and discussion: Algae growth was significantly inhibited in several sampling points and periods throughout the year, mainly due to the presence of pesticides. Although in some sampling points pesticide concentrations (single and sum) were still below the maximum permissible concentrations, water samples showed high toxicities to algae, especially during the summer months. In addition, several sampling points showed pesticide concentrations above the permissible level which can pose a significant risk to humans and the environment. Chironomids showed less sensitivity to the water samples, possibly due to the low concentrations of insecticides present. V. fischeri showed no sensitivity when exposed to all the water samples collected throughout the year of 2006. Conclusions: Standardized laboratory bioassays can be useful tools to assess water quality from aquatic systems and can valuably complement chemical analysis evaluation. The results obtained in this study demonstrated that the most sensitive species used in this test battery was the microalgae P. subcapitata. The growth of C. riparius was less affected, which is probably due to the fact that low insecticide concentrations were measured and, furthermore, since this species lives in the sediment and not in the water column and is, therefore, usually more resistant to pollutants. Recommendations and perspectives: On its own, chemical analysis is not enough to derive conclusions on the water quality and/or status, which can be valuably complemented by laboratory bioassays. Single chemical, maximum permissible values, and the sum of pesticide concentrations do not take into account possible patterns of synergism, antagonism, dose level dependencies, or even the dominance of several chemicals within a mixture. In addition, several species from different levels in trophic chains are recommended due to differences in species' sensitivities to chemical compounds that are present.  
Keywords: Portugal  
Keywords: Z 05300:General  
Keywords: Water Analysis  
Keywords: Water Sampling  
Keywords: Europe  
Keywords: Water quality  
Keywords: Water supplies  
Keywords: Water column  
Keywords: Bioassay  
Keywords: Ecology  
Keywords: Insecticides  
Keywords: Agricultural Chemicals  
Keywords: Pollutants  
Keywords: Environmental Studies--Pollution  
Keywords: Microbiology Abstracts C: Algology, Mycology & Protozoology; Pollution Abstracts; Environment Abstracts; Environmental Engineering Abstracts; Aqualine Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Entomology Abstracts  
Keywords: Sampling  
Keywords: Reservoirs  
Keywords: Luminescence  
Keywords: Vibrio fischeri  
Keywords: Pseudokirchneriella subcapitata  
Keywords: Algae  
Keywords: Testing Procedures  
Keywords: Freshwater environments  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Chironomus riparius  
Keywords: K 03450:Ecology  
Keywords: Pollution research  
Keywords: Antagonism  
Keywords: Toxicity  
Keywords: Portugal, Alentejo  
Keywords: Sediments  
Keywords: Dominance  
Keywords: Water Pollution Effects  
Keywords: Pesticides  
Date revised - 2010-02-01  
Language of summary - English  
Location - Portugal; Europe; Portugal, Alentejo  
Pages - 688-702  
ProQuest ID - 810088501  
SubjectsTermNotLitGenreText - Freshwater environments; Pollution research; Antagonism; Toxicity; Water quality; Water supplies; Sediments; Water column; Dominance; Ecology; Insecticides; Pollutants; Pesticides; Sampling; Luminescence; Algae; Testing Procedures; Agricultural Chemicals; Water Analysis; Water Pollution Effects; Water Sampling; Reservoirs; Bioassay; Chironomus riparius; Pseudokirchneriella subcapitata; Vibrio fischeri; Portugal; Europe; Portugal, Alentejo  
Last updated - 2011-11-03  
Corporate institution author - Perez, Joanne Rodriguez; Loureiro, Susana; Menezes, Salome; Palma, Patricia; Fernandes, Rosa M; Barbosa, Isabel R; Soares, Amadeu MVM  
DOI - OB-3d393ca7-114b-4f58-8563mfgefd107; 12591776; 0944-1344; 1614-7499 English

1037. Perez-Parada, Andres; Colazzo, Marcos; Besil, Natalia; Geis-Asteggiante, Lucia; Rey, Federico; Heinzen, Horacio, and Perez-Parada, Andres. Determination of Coumaphos, Chlorpyrifos and Ethion Residues in Propolis Tinctures by Matrix Solid-Phase Dispersion and Gas Chromatography Coupled to Flame Photometric and Mass Spectrometric Detection. 2011 Aug 26; 1218, (34): 5852-5857.   
Rec #: 39499  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A new analytical method has been developed and successfully evaluated in routine application for the quantitative analysis of a selected group of organophosphate pesticides (coumaphos, chlorpyrifos and ethion) which can be found at trace levels in propolis tinctures (ethanolic propolis extracts); a valuable commodity used as raw material in the food and pharmaceutical industries for which there have been few attempts for pesticide residue analysis reported in the literature. The proposed methodology is based on matrix solid phase dispersion (MSPD) using aluminum sulfate anh. a novel dispersant material and subsequent column chromatography clean-up in silica gel prior to gas chromatography (GC) with both flame photometric detector (FPD) and mass spectrometry (MS) detection used for the routine quantification and identification of the residues, respectively. The limits of detection, for coumaphos, chlorpyrifos and ethion were below 26.0 mu g/kg in FPD and 1.43 mu g/kg for MS detection. Mean recoveries were in the range of 85-123% with RSD values below 13%, which suggests that the proposed method is fit for the purpose of analyzing pesticides in propolis tinctures containing high concentration of polyphenolics. The method has been successfully applied in our laboratory for the last 2 year in the analysis of real propolis tinctures samples.  
Keywords: Chlorpyrifos  
Keywords: P 9999:GENERAL POLLUTION  
Keywords: Gas chromatography  
Keywords: Organophosphates  
Keywords: Chromatography  
Keywords: Aluminum  
Keywords: Pesticides  
Keywords: Quantitative analysis  
Keywords: raw materials  
Keywords: Mass spectrometry  
Keywords: Pollution Abstracts  
Date revised - 2011-09-01  
Language of summary - English  
Pages - 5852-5857  
ProQuest ID - 893277094  
SubjectsTermNotLitGenreText - Chlorpyrifos; Organophosphates; Gas chromatography; Chromatography; Aluminum; Quantitative analysis; Pesticides; Mass spectrometry; raw materials  
Last updated - 2012-03-29  
British nursing index edition - Journal of Chromatography A [J. Chromatogr.]. Vol. 1218, no. 34, pp. 5852-5857. 26 Aug 2011.  
Corporate institution author - Perez-Parada, Andres; Colazzo, Marcos; Besil, Natalia; Geis-Asteggiante, Lucia; Rey, Federico; Heinzen, Horacio  
DOI - df991f7a-d80a-4096-86efcsaobj201; 15613761; 0021-9673 English

1038. Persad, a S; Cooper, G S, and Persad, A S. Use of Epidemiologic Data in Integrated Risk Information System (Iris) Assessments. 2008 Nov 15; 233, (1): 137-145.   
Rec #: 49079  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In human health risk assessment, information from epidemiologic studies is typically utilized in the hazard identification step of the risk assessment paradigm. However, in the assessment of many chemicals by the Integrated Risk Information System (IRIS), epidemiologic data, both observational and experimental, have also been used in the derivation of toxicological risk estimates (i.e., reference doses [RfD], reference concentrations [RfC], oral cancer slope factors [CSF] and inhalation unit risks [IUR]). Of the 545 health assessments posted on the IRIS database as of June 2007, 44 assessments derived non-cancer or cancer risk estimates based on human data. RfD and RfC calculations were based on a spectrum of endpoints from changes in enzyme activity to specific neurological or dermal effects. There are 12 assessments with IURs based on human data, two assessments that extrapolated human inhalation data to derive CSFs and one that used human data to directly derive a CSF. Lung or respiratory cancer is the most common endpoint for cancer assessments based on human data. To date, only one chemical, benzene, has utilized human data for derivation of all three quantitative risk estimates (i.e., RfC, RfD, and dose-response modeling for cancer assessment). Through examples from the IRIS database, this paper will demonstrate how epidemiologic data have been used in IRIS assessments for both adding to the body of evidence in the hazard identification process and in the quantification of risk estimates in the dose-response component of the risk assessment paradigm.  
Keywords: Risk assessment  
Keywords: Inhalation  
Keywords: Databases  
Keywords: Cerebrospinal fluid  
Keywords: Data processing  
Keywords: Skin  
Keywords: Pharmacy And Pharmacology  
Keywords: Enzymes  
Keywords: Toxicology Abstracts  
Keywords: Benzene  
Keywords: Information systems  
Keywords: Lung cancer  
Date revised - 2008-12-01  
Language of summary - English  
Pages - 137-145  
ProQuest ID - 290234632  
SubjectsTermNotLitGenreText - Data processing; Risk assessment; Cerebrospinal fluid; Information systems; Lung cancer; Inhalation; Databases; Skin; Benzene; Enzymes  
Last updated - 2011-11-09  
Corporate institution author - Persad, A S; Cooper, G S  
DOI - OB-MD-0008935807; 8770600; 0041-008X English

1039. Pesu, M.; Laurence, A.; Kishore, N.; Zwillich, S. H.; Chan, G., and O'shea, J. J. Therapeutic Targeting of Janus Kinases.   
Rec #: 51219  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Immunol. 2000 Oct 1;165(7):3680-8 (medline /11034372)  
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COMMENTS: Cites: Nat Genet. 2001 Jan;27(1):18-20 (medline /11137992)  
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ABSTRACT: SUMMARY: Cytokines play pivotal roles in immunity and inflammation, and targeting cytokines and their receptors is an effective means of treating such disorders. Type I and II cytokine receptors associate with Janus family kinases (JAKs) to effect intracellular signaling. These structurally unique protein kinases play essential and specific roles in immune cell development and function. One JAK, JAK3, has particularly selective functions. Mutations of this kinase underlie severe combined immunodeficiency, indicative of its critical role in the development and function of lymphocytes. Because JAK3 appears not to have functions outside of hematopoietic cells, this kinase has been viewed as an excellent therapeutic target for the development of a new class of immunosuppressive drugs. In fact, several companies are developing JAK3 inhibitors, and Phase II studies are underway. Mutations of Tyk2 cause autosomal recessive hyperIgE syndrome, and in principle, Tyk2 inhibitors might also be useful as immunosuppressive drugs. JAK2 gain-of-function mutations (V617F) underlie a subset of disorders collectively referred to as myeloproliferative diseases and phase 2 trials using JAK inhibitors are underway in this setting. Thus, we are learning a great deal about the feasibility and effectiveness of targeting Janus kinases, and it appears likely that this will be a fruitful strategy in a variety of settings.  
MESH HEADINGS: Animals  
MESH HEADINGS: Autoimmune Diseases/drug therapy/enzymology/immunology  
MESH HEADINGS: Clinical Trials as Topic  
MESH HEADINGS: Graft Rejection/drug therapy/enzymology/immunology  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunosuppression  
MESH HEADINGS: Janus Kinases/\*antagonists &amp  
MESH HEADINGS: inhibitors/chemistry/genetics/\*immunology  
MESH HEADINGS: Job's Syndrome/drug therapy/enzymology/immunology  
MESH HEADINGS: Leukemia/drug therapy/enzymology/pathology  
MESH HEADINGS: Mice  
MESH HEADINGS: Mutation  
MESH HEADINGS: Protein Kinase Inhibitors/\*administration &amp  
MESH HEADINGS: dosage/adverse effects/immunology  
MESH HEADINGS: \*Signal Transduction  
MESH HEADINGS: TYK2 Kinase/antagonists &amp  
MESH HEADINGS: inhibitors/genetics/\*immunology  
MESH HEADINGS: src Homology Domains/drug effects eng

1040. Peveling, R. and Demba, S. A. Effect of Metarhizium Flavoviride, Chlorpyrifos, and Fipronil on Acanthodactylus dumerli (Milne Edwards, 1829) (Squamata: Lacertidae). 1999: 32 p.   
Rec #: 2360  
Keywords: NO SOURCE  
Notes: Chemical of Concern: CPY,FPN

1041. Phillips, B. M.; Anderson, B. S.; Hunt, J. W.; Huntley, S. A.; Tjeerdema, R. S.; Kapellas, N., and Worcester, K. Solid-Phase Sediment Toxicity Identification Evaluation in an Agricultural Stream. 2006; 25, (6): 1671-1676.   
Rec #: 1230  
Keywords: MIXTURE,SEDIMENT CONC  
Call Number: NO MIXTURE (CPY,DCPA,EFV,FNV,PMR), NO SEDIMENT CONC (CPY,DCPA,EFV,FNV,PMR)  
Notes: Chemical of Concern: CPY,DCPA,DDT,EFV,FNV,PMR

1042. Phillips, B. M.; Anderson, B. S.; Hunt, J. W.; Siegler, K.; Voorhees, J. P.; Tjeerdema, R. S., and McNeill, K. Pyrethroid and organophosphate pesticide-associated toxicity in two coastal watersheds (California, USA). 2012; 31, (7): 1595-1603.   
Rec #: 66819  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Portions of the Santa Maria River and Oso Flaco Creek watersheds in central California, USA, are listed as impaired under section 303(d) of the Clean Water Act and require development of total maximum daily load (TMDL) allocations. These listings are for general pesticide contamination, but are largely based on historic monitoring of sediment and fish tissue samples that showed contamination by organochlorine pesticides. Recent studies have shown that toxicity in these watersheds is caused by organophosphate pesticides (water and sediment) and pyrethroid pesticides (sediment). The present study was designed to provide information on the temporal and spatial variability of toxicity associated with these pesticides to better inform the TMDL process. **Ten stations were sampled in four study areas, one with urban influences, and the remaining in agriculture production areas. Water toxicity was assessed with the water flea Ceriodaphnia dubia, and sediment toxicity was assessed with the amphipod Hyalella azteca**. Stations in the lower Santa Maria River had the highest incidence of toxicity, followed by stations influenced by urban inputs. Toxicity identification evaluations and chemical analysis demonstrated that the majority of the observed water toxicity was attributed to organophosphate pesticides, particularly chlorpyrifos, and that sediment toxicity was caused by mixtures of pyrethroid pesticides. The results demonstrate that both agriculture and urban land uses are contributing toxic concentrations of these pesticides to adjacent watersheds, and regional water quality regulators are now using this information to develop management objectives. Environ. Toxicol. Chem. 2012; 31: 15951603. (C) 2012 SETAC  
Keywords: Pesticide, Toxicity identification evaluation, Total maximum daily load,  
ISI Document Delivery No.: 958ZS

1043. Phillips, P. J.; Ator, S. W., and Nystrom, E. A. Temporal changes in surface-water insecticide concentrations after the phaseout of diazinon and chlorpyrifos. 2007; 41, (12): 4246-4251.   
Rec #: 66829  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The recent (late 2001) federally mandated phaseout of diazinon and chlorpyrifos insecticide use in outdoor urban settings has resulted in a rapid decline in concentrations of these insecticides in urban streams and rivers in the northeastern and midwestern United States. Assessment of temporal insecticide trends at 20 sites showed that significant step decreases in diazinon concentrations occurred at 90% of the sites after the phaseout, with concentrations generally decreasing by over 50% in summer samples. Chlorpyrifos concentrations showed significant step decreases in at least 1 season at 3 of the 4 sites with sufficient data for analysis. The decrease in diazinon concentrations in response to the phaseout resulted in a decline in the frequency of concentrations exceeding the acute invertebrate water-quality benchmark of 0.1 mu g/L from 10% of pre-phaseout summer samples to fewer than 1% of post-phaseout summer samples. Although some studies have indicated an increase in concentrations of carbaryl in response to the organophosphorous phaseout, carbaryl concentrations only increased at 1 site after the phaseout. A full assessment of the effect of the phaseout of diazinon and chlorpyrifos on surface water will require data on other insecticides used to replace these compounds.  
Keywords: FEDERALLY-MANDATED BAN  
ISI Document Delivery No.: 177YE

1044. Phipps, G. L. and Holcombe, G. W. Dursban Purity. 1985: 1 p.   
Rec #: 1780  
Keywords: PUBL AS  
Call Number: NO PUBL AS (CPY)  
Notes: Chemical of Concern: CPY

1045. Phung, Dung Tri; Connell, Des; Miller, Greg; Chu, Cordia, and Phung, Dung Tri. Probabilistic Assessment of Chlorpyrifos Exposure to Rice Farmers in Viet Nam. 2012 Jul; 22, (4): 417-423.   
Rec #: 38719  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos is the most common organophosphate compound registered for agricultural use in Vietnam. The aim of this study was to evaluate chlorpyrifos exposure to rice farmers in Vietnam, using a probabilistic approach. Urine samples on a 24-h basis were collected from farmers before and post application of pesticide. Samples were analysed for 3,5,6-trichloro-2-pyridinol (TCP), the major urinary metabolite of chlorpyrifos, using an enzymatic pre-treatment for extraction and HPLC-MS/MS. Absorbed daily doses (ADD) of chlorpyrifos for farmers were subsequently estimated from the urinary TCP levels. The baseline and post-application exposure levels were evaluated at the 5th, 50th, and 95th percentile representing low, medium and high-exposure groups in the population. Regression analysis was applied to examine the association between exposure level and factors. The baseline exposure level, which ranged from 0.03 to 1.98 mu g/kg/day was below the chronic guidelines recommended by international and national bodies. However, the post-application exposure level, which ranged from 0.35 to 94 mu g/kg/day exceeded most of the acute guidelines at the 95th percentile level. Multivariate analysis provided strong evidence for a relationship between post-application exposure level and amount of chlorpyrifos used, as well as body coverage of personal protective equipment.  
Keywords: Organophosphates  
Keywords: Guidelines  
Keywords: Oryza sativa  
Keywords: Metabolites  
Keywords: Toxicology Abstracts; Pollution Abstracts  
Keywords: organophosphates  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Protective equipment  
Keywords: Vietnam  
Keywords: Chlorpyrifos  
Keywords: Multivariate analysis  
Keywords: Urine  
Keywords: Pesticides  
Keywords: Regression analysis  
Keywords: X 24330:Agrochemicals  
Date revised - 2012-07-01  
Language of summary - English  
Location - Vietnam  
Pages - 417-423  
ProQuest ID - 1024662988  
SubjectsTermNotLitGenreText - Chlorpyrifos; Urine; Multivariate analysis; Pesticides; Regression analysis; Metabolites; organophosphates; Organophosphates; Guidelines; Protective equipment; Oryza sativa; Vietnam  
Last updated - 2012-12-03  
British nursing index edition - Journal of Exposure Science and Environmental Epidemiology [J. Exposure Sci. Environ. Epidemiol.]. Vol. 22, no. 4, pp. 417-423. Jul 2012.  
Corporate institution author - Phung, Dung Tri; Connell, Des; Miller, Greg; Chu, Cordia  
DOI - 3d0771b6-f778-43cd-bd85mfgefd101; 16841569; 1559-0631 English

1046. Phung, Dung Tri; Connell, Des; Miller, Greg; Hodge, Mary; Patel, Renu; Cheng, Ron; Abeyewardene, Manel, and Chu, Cordia. Biological monitoring of chlorpyrifos exposure to rice farmers in Vietnam. 2012 Apr; 87, (4): 294-300.   
Rec #: 800  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Chlorpyrifos is the most common organophosphate insecticide registered for use in Vietnam and is widely used in agriculture, particularly rice farming. However, chlorpyrifos exposure to and adverse effects on farmers has not been evaluated. In this study, biological monitoring of chlorpyrifos exposure in a group of rice farmers was conducted after a typical application event using back-pack spraying. Chlorpyrifos/ Exposure/ Farmers/ Human health/ Vietnam/ Biological monitoring

1047. Pierog, Je; Mancinelli, Mj; Kane, Ke, and Pierog, JE. Continuous Pralidoxime Infusion in Organophosphate Toxicity: a Case Report. 2008 Aug.  
Rec #: 42019  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Organophosphate toxicity due to pesticide exposure is well recognized. Cholinergic symptoms result due to the inhibition of acetylcholinesterase. Treatment typically involves regeneration of the acetylcholinesterase prior to organophosphate associated aging with medication such as pralidoxime and symptomatic support with medications such as atropine. Case Report: This case describes a 51 year old landscaper who overdosed on a moderate amount (200mg/kg) of chloropyrifos in a suicide attempt. The patient initially exhibited mild symptoms of cholinergic poisoning, and was transferred to a toxicology center after only being treated with odansetron and atropine. The erythrocyte cholinesterase level on admission was 3.2 U/mL (reference range 5.7-9 U/mL). Sixteen hours after ingestion, the patient began to exhibit symptoms of severe toxicity and required initiation of a pralidoxime infusion, which was weaned after a day. Days after discontinuation, the patient again began experiencing symptoms cholinergic toxicity. The pralidoxime infusion was restarted and continued for a week. Three days after discontinuation of pralidoxime infusion, his erythrocyte cholinesterase level was 3.0U/mL. Despite the decreased level of acetylcholinesterase the patient exhibited increased muscle strength. Case Discussion: It was commonly understood that treatment with oximes for toxicity was ineffective after the enzyme is aged. This case demonstrates that pralidoxime infusion can be beneficial even weeks after ingestion. Another consideration, however, is that chlorpyrifos is very lipophilic, and may be taken into, and then released from, fat depots over a period of many days. Due to this property, a recurrence of clinical effects requiring continued acute treatment after an initial period of apparent recovery is possible. Our patient had longstanding exposure to chloropyrifos due to his landscaping work, which may have increased the total toxic exposure. Conclusion: This case demonstrates that pralidoxime infusion can be beneficial days to weeks after ingestion.  
Start Page: 608  
End Page: 608  
Keywords: Organophosphates  
Keywords: Acetylcholinesterase  
Keywords: Erythrocytes  
Keywords: Carcinoembryonic antigen  
Keywords: Aging  
Keywords: Suicide  
Keywords: Cholinesterase  
Keywords: Lipophilic  
Keywords: Toxicology Abstracts; Environment Abstracts  
Keywords: odansetron  
Keywords: Landscaping  
Keywords: X 24330:Agrochemicals  
Keywords: Drugs  
Keywords: Muscular strength  
Keywords: suicide  
Keywords: Toxicology  
Keywords: North America  
Keywords: Poisoning  
Keywords: Enzymes  
Keywords: organophosphates  
Keywords: Toxicity  
Keywords: Ingestion  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Case reports  
Keywords: oximes  
Keywords: Pesticides  
Keywords: Atropine  
Date revised - 2009-03-01  
Language of summary - English  
Location - North America  
Pages - 608  
ProQuest ID - 20367594  
SubjectsTermNotLitGenreText - North America; Toxicity; Organophosphates; Toxicology; Ingestion; Cholinesterase; Erythrocytes; Pesticides; Drugs; suicide; Acetylcholinesterase; organophosphates; Case reports; Atropine; Enzymes; Chlorpyrifos; Lipophilic; Muscular strength; Landscaping; Carcinoembryonic antigen; oximes; Suicide; odansetron; Aging; Poisoning  
Last updated - 2011-12-14  
British nursing index edition - p. 608. Clinical Toxicology [Clin. Toxicol.]. Vol. 46, no. 7.  
Corporate institution author - Pierog, JE; Mancinelli, MJ; Kane, KE  
DOI - MD-0009355263; 9054729; 1556-3650 English

1048. Pimentel, D. Ecological Effects of Pesticides on Non-Target Species. SOIL; 1971: 220 p.   
Rec #: 1790  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (AMSV,ARM,ATN,AZ,CBF,CBL,CMPH,CPY,DCF,DCTP,DMT,DS,DZ,ES,FNT,MLN,MOM,MP,MVP,NCTN,OXD,PPB,PPX,PRT,RTN,TCF,TMP,TVP,ZnCl2), NO REVIEW (AMSV,ARM,ATN,AZ,CBF,CBL,CMPH,CPY,DCF,DCTP,DMT,DS,DZ,ES,FNT,MLN,MOM,MP,MVP,NCTN,OXD,PPB,PPX,PRT,RTN,TCF,TMP,TVP,ZnCl2)  
Notes: Chemical of Concern: AMSV,AND,ARM,ATN,AZ,CBF,CBL,CHD,CMPH,CPY,CYT,DCF,DCTP,DDT,DLD,DMT,DS,DZ,EN,EPRN,ES,ETN,FNT,FNTH,HCCH,HPT,MLN,MOM,MP,MRX,MVP,MXC,NCTN,OTQ,OXD,PCB,PHSL,PPB,PPCP,PPHD,PPX,PRN,PRT,PYN,RTN,TCF,TMP,TVP,TXP,ZnCl2

1049. Pino, Nancy; Penuela, Gustavo, and Pino, Nancy. Simultaneous Degradation of the Pesticides Methyl Parathion and Chlorpyrifos by an Isolated Bacterial Consortium From a Contaminated Site. 2011 Sep; 65, (6): 827-831.   
Rec #: 39439  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The simultaneous degradation of the pesticide methyl parathion and chlorpyrifos was tested using a bacterial consortium obtained by selective enrichment from highly contaminated soils in Moravia (Medellin, Colombia). Microorganisms identified in the consortium were Acinetobacter sp, Pseudomonas putida, Bacillus sp, Pseudomonas aeruginosa, Citrobacter freundii, Stenotrophomonas sp, Flavobacterium sp, Proteus vulgaris, Pseudomonas sp, Acinetobacter sp, Klebsiella sp and Proteus sp. In culture medium enriched with each of the pesticides, the consortium was able to degrade 150 mg l super(-1 of methyl parathion and chlorpyrifos in 120 h. When a mixture of 150 mg l) super(-)1 of both pesticides was used the percentage decreased to 72% for methyl parathion and 39% for chlorpyrifos. With the addition of glucose to the culture medium, the consortium simultaneously degraded 150 mg l super(-1 of the pesticides in the mixture. 4 treatments were carried out in soil that included the addition of glucose with microorganisms, the addition of sugar cane with microorganisms, microorganisms without nutrient addition and without the addition of any item. In the treatment in which glucose was used, degradation percentages of methyl parathion and chlorpyrifos of 98% and 97% respectively were obtained in 120 h. **This treatment also achieved the highest percentage of reduction in toxicity, monitored with Vibrio fischeri.)**  
Keywords: A 01340:Antibiotics & Antimicrobials  
Keywords: Biodegradation  
Keywords: Glucose  
Keywords: Nutrients  
Keywords: Proteus vulgaris  
Keywords: Soil  
Keywords: Pseudomonas putida  
Keywords: Methyl parathion  
Keywords: Pseudomonas aeruginosa  
Keywords: Stenotrophomonas  
Keywords: Bacillus  
Keywords: Vibrio fischeri  
Keywords: Sugar  
Keywords: Biodeterioration  
Keywords: Flavobacterium  
Keywords: Citrobacter freundii  
Keywords: Toxicity  
Keywords: Soil pollution  
Keywords: Chlorpyrifos  
Keywords: Klebsiella  
Keywords: W 30950:Waste Treatment & Pollution Clean-up  
Keywords: Acinetobacter  
Keywords: Pesticides  
Keywords: Microbiology Abstracts A: Industrial & Applied Microbiology; Biotechnology and Bioengineering Abstracts  
Keywords: Microorganisms  
Keywords: Biology  
Date revised - 2012-02-01  
Language of summary - English  
Pages - 827-831  
ProQuest ID - 909770849  
SubjectsTermNotLitGenreText - Soil; Soil pollution; Chlorpyrifos; Sugar; Biodeterioration; Biodegradation; Pesticides; Glucose; Microorganisms; Nutrients; Toxicity; Methyl parathion; Proteus vulgaris; Klebsiella; Acinetobacter; Flavobacterium; Citrobacter freundii; Pseudomonas putida; Stenotrophomonas; Pseudomonas aeruginosa; Bacillus; Vibrio fischeri  
Last updated - 2012-02-23  
Corporate institution author - Pino, Nancy; Penuela, Gustavo  
DOI - OB-e7c8afe6-fa9b-4284-86c0csamfg201; 15587227; 0964-8305 English

1050. Pino Rodr+ˇguez, N. J. and Pe+\_uela Mesa, G. A. Isolation of a selected microbial consortium from a contaminated site soil capable of degrading the pesticides methyl parathion and chlorpyrifos: Abstracts of the 14th European Congress on BiotechnologyBarcelona, Spain 13Çô16 September, 2009. 2009 Sep; 25, Supplement, (0): S53.   
Rec #: 2590  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY

1051. Pinto, A. P.; Serrano, C.; Pires, T.; Mestrinho, E.; Dias, L.; Teixeira, D. M., and Caldeira, A. T. Degradation of terbuthylazine, difenoconazole and pendimethalin pesticides by selected fungi cultures. 2012; 435, 402-410.   
Rec #: 66889  
Keywords: NO EFFECT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Contamination of waters by xenobiotic compounds such as pesticides presents a serious environmental problem with substantial levels of pesticides now contaminating European water resources. The aim of this work was to evaluate the ability of the fungi Fusarium oxysporu**m, Aspergillus oryzae, Lentinula edodes, Pe**nicillium brevicompactum and Lecanicillium saksenae, for the biodegradation of the pesticides terbuthylazine, difenoconazole and pendimethalin in batch liquid cultures. These pesticides are common soil and water contaminants and terbuthylazine is considered the most persistent triazine herbicide in surface environments. P. brevicompactum and L. saksenae were achieved by enrichment, isolation and screening of fungi capable to metabolize the pesticides studied. The isolates were obtained from two pesticide-primed materials (soil and biomixture). Despite the relatively high persistence of terbuthylazine, the results obtained in this work showed that the fungi species studied have a high capability of biotransformation of this xenobiotic, comparatively the results obtained in other similar studies. The highest removal percentage of terbuthylazine from liquid medium was achieved with A. oryzae (similar to 80%), although the major biodegradation has been reached with P. brevicompactum. The higher ability of P. brevicompactum to metabolize terbuthylazine was presumably acquired through chronic exposure to contamination with the herbicide. L. saksenae could remove 99.5% of the available pendimethalin in batch liquid cultures. L. edodes proved to be a fungus with a high potential for biodegradation of pesticides, especially difenoconazole and pendimethalin. Furthermore, the metabolite desethyl-terbuthylazine was detected in L. edodes liquid culture medium, indicating terbuthylazine biodegradation by this fungus. The fungi strains investigated could prove to be valuable as active pesticide-degrading microorganisms, increasing the efficiency of biopurification systems containing wastewaters contaminated with the xenobiotics studied or compounds with similar intrinsic characteristics. (C) 2012 Elsevier B.V. All rights reserved.  
Keywords: Biodegradation, Difenoconazole, Fungi, Pendimethalin, Terbuthylazine  
ISI Document Delivery No.: 028AV

1052. Pisani, J. M. Pesticide Impact on Non-Target Wildlife in Irrigated Crops: Simulated Impact of Cholinesterase-Inhibiting Pesticides on White-Winged Doves in the Lower Rio Grande Valley of Texas. 2006: 134 p.   
Rec #: 2180  
Keywords: MODELING,REFS CHECKED  
Call Number: NO MODELING (AZ,CPY,DMT,MP,OML), NO REFS CHECKED (AZ,CPY,DMT,MP,OML)  
Notes: Chemical of Concern: AZ,CPY,DMT,MP,OML

1053. Pliotas, C.; Ward, R.; Branigan, E.; Rasmussen, A.; Hagelueken, G.; Huang, H.; Black, S. S.; Booth, I. R.; Schiemann, O., and Naismith, J. H. Conformational State of the Mscs Mechanosensitive Channel in Solution Revealed by Pulsed Electron-Electron Double Resonance (Peldor) Spectroscopy.   
Rec #: 49959  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Phys Chem B. 2011 Jan 13;115(1):176-85 (medline /21142163)  
COMMENTS: Cites: Biochem J. 2011 Mar 15;434(3):353-63 (medline /21348855)  
COMMENTS: Cites: Biophys J. 2011 Jul 20;101(2):345-52 (medline /21767486)  
COMMENTS: Cites: Trends Biochem Sci. 2011 Sep;36(9):493-500 (medline /21855348)  
COMMENTS: Cites: J Biol Chem. 2011 Nov 25;286(47):41008-17 (medline /21953468)  
COMMENTS: Cites: Structure. 2011 Nov 9;19(11):1549-61 (medline /22078555)  
COMMENTS: Cites: Annu Rev Biophys. 2012;41:157-77 (medline /22404681)  
COMMENTS: Cites: Annu Rev Microbiol. 2010;64:313-29 (medline /20825352)  
COMMENTS: Cites: J Biol Chem. 2003 Aug 22;278(34):32246-50 (medline /12767977)  
COMMENTS: Cites: Biophys J. 2004 May;86(5):2883-95 (medline /15111405)  
COMMENTS: Cites: J Magn Reson. 2005 Feb;172(2):279-95 (medline /15649755)  
COMMENTS: Cites: J Am Chem Soc. 2007 May 30;129(21):6736-45 (medline /17487970)  
COMMENTS: Cites: Q Rev Biophys. 2007 Feb;40(1):1-53 (medline /17565764)  
COMMENTS: Cites: PLoS Biol. 2007 Oct;5(10):e271 (medline /17927448)  
COMMENTS: Cites: Nat Struct Mol Biol. 2007 Dec;14(12):1141-9 (medline /18037888)  
COMMENTS: Cites: Biophys J. 2009 Jan;96(1):217-25 (medline /19134477)  
COMMENTS: Cites: Phys Chem Chem Phys. 2009 Aug 21;11(31):6580-91 (medline /19639133)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1996 Oct 15;93(21):11652-7 (medline /8876191)  
COMMENTS: Cites: Methods Enzymol. 1999;294:458-82 (medline /9916243)  
COMMENTS: Cites: EMBO J. 1999 Apr 1;18(7):1730-7 (medline /10202137)  
COMMENTS: Cites: Nature. 2002 Aug 29;418(6901):942-8 (medline /12198539)  
COMMENTS: Cites: Science. 2002 Nov 22;298(5598):1582-7 (medline /12446901)  
COMMENTS: Cites: Chemphyschem. 2002 Nov 15;3(11):927-32 (medline /12503132)  
COMMENTS: Cites: EMBO J. 2003 Jan 2;22(1):36-46 (medline /12505982)  
COMMENTS: Cites: Acta Crystallogr D Biol Crystallogr. 1994 Sep 1;50(Pt 5):760-3 (medline /15299374)  
COMMENTS: Cites: Nat Struct Mol Biol. 2005 Feb;12(2):113-9 (medline /15665866)  
COMMENTS: Cites: J Magn Reson. 2006 Jan;178(1):42-55 (medline /16188474)  
COMMENTS: Cites: Biophys J. 2008 Feb 15;94(4):1252-66 (medline /17981908)  
COMMENTS: Cites: J Mol Biol. 2008 Apr 18;378(1):55-70 (medline /18343404)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2008 May 27;105(21):7439-44 (medline /18490656)  
COMMENTS: Cites: Science. 2008 Aug 29;321(5893):1179-83 (medline /18755969)  
COMMENTS: Cites: Science. 2008 Aug 29;321(5893):1210-4 (medline /18755978)  
COMMENTS: Cites: Angew Chem Int Ed Engl. 2009;48(16):2904-6 (medline /19294709)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2009 Nov 3;106(44):18485-90 (medline /19833872)  
COMMENTS: Cites: J Am Chem Soc. 2009 Oct 28;131(42):15246-50 (medline /19919160)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2010 Mar 23;107(12):5435-40 (medline /20207950)  
COMMENTS: Cites: Nat Struct Mol Biol. 2010 Apr;17(4):451-8 (medline /20208543)  
ABSTRACT: The heptameric mechanosensitive channel of small conductance (MscS) provides a critical function in Escherichia coli where it opens in response to increased bilayer tension. Three approaches have defined different closed and open structures of the channel, resulting in mutually incompatible models of gating. We have attached spin labels to cysteine mutants on key secondary structural elements specifically chosen to discriminate between the competing models. The resulting pulsed electron-electron double resonance (PELDOR) spectra matched predicted distance distributions for the open crystal structure of MscS. The fit for the predictions by structural models of MscS derived by other techniques was not convincing. The assignment of MscS as open in detergent by PELDOR was unexpected but is supported by two crystal structures of spin-labeled MscS. PELDOR is therefore shown to be a powerful experimental tool to interrogate the conformation of transmembrane regions of integral membrane proteins.  
MESH HEADINGS: Blotting, Western  
MESH HEADINGS: Chromatography, Gel  
MESH HEADINGS: Crystallography  
MESH HEADINGS: Electron Spin Resonance Spectroscopy  
MESH HEADINGS: Escherichia coli Proteins/\*chemistry  
MESH HEADINGS: Ion Channels/\*chemistry  
MESH HEADINGS: \*Models, Molecular  
MESH HEADINGS: Mutagenesis  
MESH HEADINGS: Patch-Clamp Techniques  
MESH HEADINGS: \*Protein Conformation  
MESH HEADINGS: Sequence Analysis, DNA  
MESH HEADINGS: Spectrum Analysis/\*methods  
MESH HEADINGS: Spin Labels eng

1054. Pohanka, Miroslav; Drtinova, Lucie; Kuca, Kamil, and Pohanka, Miroslav. Acetylcholinesterase Based Assay of Eleven Organophosphorus Pesticides: Finding of Assay Limitations. 2012 Jan; 92, ( 1): 125-132.   
Rec #: 42949  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The study includes findings about limitations of acetylcholinesterase (AChE) based assay. Eleven organophosphorus pesticides: chlorpyrifos ethyl, chlorpyrifos methyl, DFP, dichlorvos, dimethoate, fenthion, paraoxon ethyl, paraoxon methyl, phosalone, pirimiphos methyl and pirimiphos ethyl were photometrically assayed using AChE as a recognition element. The study was carried out in order to find approachability of AChE based assay. In the first round, common organic solvents were tested for interfering in assay, since samples collection and extraction is a necessary part in samples processing. Isopropanol was found as the most convenient due to minimal inhibition not exceeding 5%. Though all analysed pesticides inhibit AChE in vivo, some of them are toxic after metabolisation. We found AChE based assay approachable for assay of DFP, paraoxons, and dichlorvos. These are oxoforms of organophosphorus pesticides. From thioforms of assayed pesticides, only fenthion was able significantly inhibit AChE in vitro. Electrochemical biosensor with AChE attached on platinum electrode was used for confirmation of interaction pesticide - AChE and complex stability estimation. DFP, paraoxons and dichlorvos were allowed to interact with AChE in biosensor. These pesticides were settled firmly in AChE active site as no spontaneous recovery of AChE activity was observed.  
Keywords: Biosensors  
Keywords: Chlorpyrifos  
Keywords: ENA 09:Land Use & Planning  
Keywords: Electrodes  
Keywords: Pesticides  
Keywords: Platinum  
Keywords: Solvents  
Keywords: dichlorvos  
Keywords: Assays  
Keywords: Environment Abstracts  
Keywords: dimethoate  
Date revised - 2012-04-01  
Language of summary - English  
Pages - 125-132  
ProQuest ID - 1008843650  
SubjectsTermNotLitGenreText - Biosensors; Chlorpyrifos; Electrodes; Pesticides; Platinum; Solvents; dichlorvos; Assays; dimethoate  
Last updated - 2012-05-18  
British nursing index edition - International Journal of Environmental and Analytical Chemistry [Int. J. Environ. Anal. Chem.]. Vol. 92, no. 1, pp. 125-132. Jan 2012.  
Corporate institution author - Pohanka, Miroslav; Drtinova, Lucie; Kuca, Kamil  
DOI - 04803e59-5524-4693-b0c8mfgefd108; 16536527; 0306-7319; 1029-0397 English

1055. Poissant, L; Beauvais, C; Lafrance, P; Deblois, C, and Poissant, L. Pesticides in Fluvial Wetlands Catchments Under Intensive Agricultural Activities. 2008 Oct 1; 404, (1): 182-195.   
Rec #: 45559  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A survey on pesticides (73 compounds) in the Bay St. Francois wetland and its catchment (part of the wetlands of Lake St. Pierre area [St. Lawrence River, Quebec]) was achieved in 2006. The metabolites as well as the active ingredients of pesticides (11 compounds) were detected in the wetland and its catchment. This wetland ecosystem was active in the degradation of agricultural pesticides (e.g., atrazine). The measured pesticides were individually below the criteria for aquatic species in natural water, except chlorpyrifos. Overall, the pesticides lost from agricultural field towards the streams were <1% of the quantity applied. The environmental fates of the pesticides were found to vary according to the size of the watershed. Over large catchments, half-life times were important in terms of global loss from the agricultural lands to wetlands whereas over small catchments, soil organic carbon/water distribution coefficient (Koc) was an important term for pesticides losses to water system since half-life times were not limiting factors.  
Keywords: Catchment area  
Keywords: Molecular structure  
Keywords: Organic carbon  
Keywords: ENA 12:Oceans & Estuaries  
Keywords: Radioactive Half-life  
Keywords: Metabolites  
Keywords: Watersheds  
Keywords: Streams  
Keywords: Environmental Studies  
Keywords: Soil  
Keywords: ASFA 3: Aquatic Pollution & Environmental Quality; Environment Abstracts; Pollution Abstracts; Aqualine Abstracts; Water Resources Abstracts  
Keywords: Q5 01523:Conservation, wildlife management and recreation  
Keywords: Lakes  
Keywords: Agricultural Chemicals  
Keywords: SW 3060:Water treatment and distribution  
Keywords: Wetlands  
Keywords: Agricultural runoff  
Keywords: Canada, Quebec  
Keywords: Organic Carbon  
Keywords: Catchment Areas  
Keywords: AQ 00005:Underground Services and Water Use  
Keywords: agricultural land  
Keywords: Herbicides  
Keywords: Limiting factors  
Keywords: Canada, Quebec, St. Lawrence R.  
Keywords: Chlorpyrifos  
Keywords: Natural Waters  
Keywords: P 1000:MARINE POLLUTION  
Keywords: Pesticides  
Keywords: Atrazine  
Keywords: Catchments  
Date revised - 2011-05-01  
Language of summary - English  
Location - Canada, Quebec; Canada, Quebec, St. Lawrence R.  
Pages - 182-195  
ProQuest ID - 293820222  
SubjectsTermNotLitGenreText - Molecular structure; Catchment area; Organic carbon; Pesticides; Metabolites; Wetlands; Limiting factors; Watersheds; Agricultural runoff; agricultural land; Herbicides; Streams; Soil; Chlorpyrifos; Lakes; Atrazine; Catchments; Natural Waters; Agricultural Chemicals; Organic Carbon; Catchment Areas; Radioactive Half-life; Canada, Quebec; Canada, Quebec, St. Lawrence R.  
Last updated - 2012-08-02  
Corporate institution author - Poissant, L; Beauvais, C; Lafrance, P; Deblois, C  
DOI - OB-MD-0008496972; 8515475; CS0861381; 0048-9697 English

1056. Poletika, N N; Coody, P N; Fox, G a; Sabbagh, G J; Dolder, S C; White, J, and Poletika, N N. Chlorpyrifos and Atrazine Removal From Runoff by Vegetated Filter Strips: Experiments and Predictive Modeling. 2009; 38, (3): 1042-1052.   
Rec #: 41629  
Keywords: FATE  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Runoff volume and flow concentration are hydrological factors that limit effectiveness of vegetated filter strips (VFS) in removing pesticides from surface runoff. Empirical equations that predict VFS pesticide effectiveness based solely on physical characteristics are insufficient on the event scale because they do not completely account for hydrological processes. This research investigated the effect of drainage area ratio (i.e., the ratio of field area to VFS area) and flow concentration (i.e., uniform versus concentrated flow) on pesticide removal efficiency of a VFS and used these data to provide further field verification of a recently proposed numerical/empirical modeling procedure for predicting removal efficiency under variable flow conditions. Runoff volumes were used to simulate drainage area ratios of 15:1 and 30:1. Flow concentration was investigated based on size of the VFS by applying artificial runoff to 10% of the plot width (i.e., concentrated flow) or the full plot width (i.e., uniform flow). Artificial runoff was metered into 4.6-m long VFS plots for 90 min after a simulated rainfall of 63 mm applied over 2 h. The artificial runoff contained sediment and was dosed with chlorpyrifos and atrazine. Pesticide removal efficiency of VFS for uniform flow conditions (59% infiltration; 88% sediment removal) was 85% for chlorpyrifos and 62% for atrazine. Flow concentration reduced removal efficiencies regardless of drainage area ratio (i.e., 16% infiltration, 31% sediment removal, 21% chlorpyrifos removal, and 12% atrazine removal). Without calibration, the predictive modeling based on the integrated VFSMOD and empirical hydrologic-based pesticide trapping efficiency equation predicted atrazine and chlorpyrifos removal efficiency under uniform and concentrated flow conditions. Consideration for hydrological processes, as opposed to statistical relationships based on buffer physical characteristics, is required to adequately predict VFS pesticide trapping efficiency.  
Keywords: Prediction  
Keywords: Flow  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: ENA 09:Land Use & Planning  
Keywords: buffers  
Keywords: Rainfall  
Keywords: Uniform Flow  
Keywords: SW 3030:Effects of pollution  
Keywords: Pollution Abstracts; Environment Abstracts; Water Resources Abstracts; Aqualine Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: AQ 00004:Water Treatment  
Keywords: Environmental factors  
Keywords: Efficiency  
Keywords: Hydrologic Models  
Keywords: Agricultural Chemicals  
Keywords: Drainage Area  
Keywords: Modelling  
Keywords: Sediment pollution  
Keywords: Mathematical models  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Herbicides  
Keywords: Sediments  
Keywords: Chlorpyrifos  
Keywords: Filters  
Keywords: Atrazine  
Keywords: Pesticides  
Keywords: Infiltration  
Keywords: Runoff  
Date revised - 2009-07-01  
Language of summary - English  
Pages - 1042-1052  
ProQuest ID - 20752394  
SubjectsTermNotLitGenreText - Prediction; Sediment pollution; Mathematical models; Pesticides; Herbicides; Environmental factors; Runoff; Modelling; Filters; Chlorpyrifos; Efficiency; buffers; Rainfall; Atrazine; Infiltration; Flow; Hydrologic Models; Agricultural Chemicals; Uniform Flow; Drainage Area; Sediments  
Last updated - 2012-03-29  
British nursing index edition - Journal of Environmental Quality [J. Environ. Qual.]. Vol. 38, no. 3, pp. 1042-1052. 2009.  
Corporate institution author - Poletika, N N; Coody, P N; Fox, G A; Sabbagh, G J; Dolder, S C; White, J  
DOI - MD-0010064948; 10188667; CS0945300; 0047-2425; 1537-2537 English

1057. Poletika, N. N.; Woodburn, K. B., and Henry, K. S. An Ecological Risk Assessment for Chlorpyrifos in an Agriculturally Dominated Tributary of the San Joaquin River. 2002; 22, (2): 291-308.   
Rec #: 2790  
Keywords: MODELING,REFS CHECKED  
Call Number: NO MODELING (CPY,DZ,MDT), NO REFS CHECKED (CPY,DZ,MDT)  
Notes: Chemical of Concern: CPY,DZ,MDT

1058. Poletika, Nicholas N; Teply, Mark; Dominguez, Lawrence G; Cramer, Steven P; Schocken, Mark J; Habig, Clifford; Kern, Matthew; Ochoa-Acuă±a, Hugo, and Mitchell, Gary C. A Spatially and Temporally Explicit Risk Assessment for Salmon From a Prey Base Exposed to Agricultural Insecticides. 2012 Apr; 8, (2 ): 285.   
Rec #: 46789  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This risk assessment applied a framework for determining probable co-occurrence of juvenile spring Chinook salmon (Oncorhynchus tshawytscha) with agricultural pesticides in the Willamette Basin, Oregon (Teply et al. this issue) to characterize risk to the threatened population. The assessment accounted for spatial and temporal distribution of 6 acetylcholinesterase-inhibiting insecticides in salmonid habitat within the basin and their relative contributions to mixture toxicity estimated from chemical monitoring data. **The 6 insecticides were chlorpyrifos, diazinon, malathion, carbaryl, carbofuran, and methomyl.** Seasonal distributions of the juvenile salmon prey base across the basin were determined and compared to co-occurrence with the insecticide mixture to determine the probability of prey reduction and reduced production of juvenile fish. Probability of effect on freshwater aquatic invertebrates was based on acute toxicity species sensitivity distributions (normalized to the most potent compound, chlorpyrifos) using a novel approach to apply the toxicological concept of concentration addition to species sensitivity distributions with differing slopes. The chlorpyrifos distribution was then used to determine relative sensitivity among various species tested within the important taxa making up the prey base. A prey base index was devised, incorporating diet composition and prey availability, to evaluate the indirect effects of the insecticide mixture on juvenile salmon production occurring as a result of a reduction in the prey base. Our analysis targeted fish use of backwater and off-channel habitat units, because they generally coincide with agricultural lands in lowlands and represent shallow habitat with limited water exchange. The percentage of agricultural land use within 300 m of critical habitat stream reaches was used to scale chemical measurement data from a site with high agricultural land use across the full extent of the basin to provide estimates of chemical exposure in each reach. Seasonal impacts were evaluated from mean monthly concentrations. Stressor impact on 5 key taxa was evaluated at each time step and for each reach, and the outcome was compared to a conservation threshold assigned to the prey base index. Only 13% of juveniles reared in backwater, off-channel habitat within 300 m of agricultural land. Percent reduction of carrying capacity as a consequence of reduced prey was estimated to be 5% over the entire brood year. This can be considered lost capacity that is probably compensated elsewhere via increased occupancy (emigration to other habitat units within the reach), which is not accounted for in the model. [PUBLICATION ABSTRACT]  
Keywords: Oregon  
Keywords: Environmental Studies  
Copyright - Copyright Blackwell Publishing Ltd. Apr 2012  
Language of summary - English  
Location - Oregon  
ProQuest ID - 940861460  
SubjectsTermNotLitGenreText - Oregon  
Last updated - 2012-03-26  
Place of publication - Oxford  
Corporate institution author - Poletika, Nicholas N; Teply, Mark; Dominguez, Lawrence G; Cramer, Steven P; Schocken, Mark J; Habig, Clifford; Kern, Matthew; Ochoa-AcuĂ±a, Hugo; Mitchell, Gary C  
DOI - 2618299701; 68187852; 68222; IEAM; INODIEAM0000536948 English

1059. Polidoro, Ba; Morra, Mj; Ruepert, C; Castillo, Le, and Polidoro, BA. Pesticide Sequestration in Passive Samplers (Spmds): Considerations for Deployment Time, Biofouling, and Stream Flow in a Tropical Watershed. 2009 Oct; 11, (10): 1866-1874.   
Rec #: 40989  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Semi-permeable membrane devices (SPMDs) provide an informative and cost-effective approach for monitoring contaminants in remote tropical streams. Estimation and interpretation of contaminant concentrations in streams derived from SPMDs can vary based on a number of environmental factors, including stream flow, biofouling, and deployment time. In three one-month long trials, SPMDs were concurrently deployed for 4, 15, and 28 days at three stream sites in an extensive agricultural area of southeastern Costa Rica. Water, bottom sediment, and suspended solids grab samples were also collected and several environmental variables were monitored at corresponding time intervals during each month-long study period. At all three sites, SPMD concentrations of the widely used insecticide chlorpyrifos increased with deployment time, with no relationship between SPMD biofouling and pesticide sequestration. Differences in SPMD chlorpyrifos sequestration among sites are likely due to differences in stream chlorpyrifos concentration rather than differences in SPMD sampling rates. The longer exposure period of SPMDs allowed for the detection of lower concentrations of chlorpyrifos, terbufos, and difenoconazole compared to water grab samples. In addition to the use of appropriate performance reference compounds (PRCs), other environmental variables such as stream turbidity, flow regime, stream morphology, and knowledge of pesticide application methods are important considerations for optimizing SPMD deployment and data interpretation in tropical regions.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Suspended solids  
Keywords: Pollution monitoring  
Keywords: J1P  
Keywords: J1T  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Costa Rica  
Keywords: J1G  
Keywords: EE 30:Soil Pollution: Monitoring, Control & Remediation  
Keywords: SW 3030:Effects of pollution  
Keywords: Streams  
Keywords: Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Environment Abstracts; Pollution Abstracts; Environmental Engineering Abstracts  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos  
Keywords: Tropical environments  
Keywords: Economics  
Keywords: Pesticides  
Keywords: stream flow  
Keywords: Turbidity  
Date revised - 2010-02-01  
Language of summary - English  
Location - J1G; Costa Rica  
Pages - 1866-1874  
ProQuest ID - 294034007  
SubjectsTermNotLitGenreText - J1T; J1G; Costa Rica; J1P; Pesticides; Streams; Chlorpyrifos; stream flow; Pollution monitoring; Turbidity; Suspended solids; Economics; Tropical environments  
Last updated - 2011-10-26  
Corporate institution author - Polidoro, BA; Morra, MJ; Ruepert, C; Castillo, LE  
DOI - OB-MD-0011157661; 11292055; CS1000102; 1464-0325 English

1060. Polidoro, Beth A.; Dahlquist, Ruth M.; Castillo, Luisa E.; Morra, Matthew J.; Somarriba, Eduardo, and Bosque-P+\_rez, Nilsa A. Pesticide application practices, pest knowledge, and cost-benefits of plantain production in the Bribri-Cab+\_car Indigenous Territories, Costa Rica. 2008 Sep; 108, (1): 98-106.   
Rec #: 4900  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: The use of pesticides in the cultivation of cash crops such as banana and plantain is increasing, in Costa Rica and worldwide. Agrochemical use and occupational and environmental exposures in export banana production have been documented in some parts of Central America. However, the extent of agrochemical use, agricultural pest knowledge, and economic components in plantain production are largely unknown in Costa Rica, especially in remote, high-poverty areas such as the Bribri-Cab+\_car Indigenous Territories. Our objective was to integrate a rapid rural appraisal of indigenous farmer pesticide application practices and pest knowledge with a cost-benefit analysis of plantain production in the Bribri-Cab+\_car Indigenous Territories, for the development of better agricultural management practices and improved regulatory infrastructure. Interviews conducted with 75 households in 5 indigenous communities showed that over 60% of participants grew plantain with agrochemicals. Of these plantain farmers, over 97% used the insecticide chlorpyrifos, and 84% applied nematicides, 64% herbicides, and 22% fungicides, with only 31% of participants reporting the use of some type of protective clothing during application. The banana weevil (Cosmopolites sordidus Germar) was ranked as the most important agricultural pest by 85% of participants, yet only 28% could associate the adult and larval form. A cost-benefit analysis conducted with a separate group of 26 plantain farmers identified several national markets and one export market for plantain production in the Indigenous Territories. Yearly income averaged US$6200/ha and yearly expenses averaged US$1872/ha, with an average cost-benefit ratio of 3.67 for plantain farmers. Farmers applied an average of 9.7 kg a.i./ha/yr of pesticide products and 375 kg/ha/yr of fertilizer, but those who sold their fruit to the national markets applied more nematicides, herbicides, and fertilizers than those who sold primarily to export markets, suggesting a lack of appropriate application knowledge. Results indicate that the quantity of agrochemicals applied in plantain cultivation is less than that applied in export banana, but the absence of appropriate agrochemical application practices in plantain cultivation may pose serious risks to human and environmental health. Culturally appropriate farmer education and certification programs are needed as well as the development of safe-handling practices, regulatory infrastructure, and adequate agrochemical storage, transport, and waste disposal facilities. Long-term solutions however, are dependent on the development of policies and infrastructure that support non-chemical pest management, alternatives to pesticides, and the identification of organic plantain markets. Agrochemicals/ Pest management/ Talamanca/ Occupational exposure/ Banana

1061. Pollakova, J.; Pistl, J.; Kovalkovicova, N.; Csank, T. ; Kocisova, A., and Legath, J. Use of Cultured Cells of Mammal and Insect Origin to Assess Cytotoxic Effects of the Pesticide Chlorpyrifos. 2012; 21, (4): 1001-1006.   
Rec #: 66979  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the present study **four different cell cultures, derived from rabbit kidney (RK13), rat; and murine liver (WBF344 and Hepa 1c1c7) and insect origin** (Sf21) were used to examine the effects of **chlorpyrifos**. Sf21 cells were the most sensitive to chlorpyrifos, with significant suppression of their proliferative activity ranging from 10(-1)-10(-5) M. However, significant suppression of proliferative activity also was recorded in mammalian cell cultures Hepa 1c1c7 (10(-1)-10(-3) M), WBF344 (10(-1)-10(-2) M), and RK13 (10(-1) M). A cytopathic effect and LDH leakage into the medium was observed in RK 13 (10(4)-10(-3) m) > WBF344 and Hepa 1c1c7 cells (10(-1)-10(-2) M) > Sf21 (10(-1) M) compared to solvent control. Our results indicate that chlorpyrifos exposure caused a species-dependent decrease in cell proliferation and cell membrane damage.  
Keywords: insecticide, chlorpyrifos, cell cultures, cell proliferation, LDH  
ISI Document Delivery No.: 976IJ

1062. Pope, C. The Influence of Age on Pesticide Toxicity. 2001: 873-885.   
Rec #: 1990  
Keywords: REVIEW  
Call Number: NO REVIEW (CBL,CPY,DM,ES,MP)  
Notes: EcoReference No.: 119575  
Chemical of Concern: CBL,CPY,CTC,DDT,DEET,DM,DTM,EPRN,ES,FNTH,HCCH,MP,MXC,PPCP,PRN,TBT

1063. Porat, I. and Whitman, W. B. Tryptophan Auxotrophs Were Obtained by Random Transposon Insertions in the Methanococcus Maripaludis Tryptophan Operon.   
Rec #: 50829  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Science. 2006 Oct 27;314(5799):649-52 (medline /17068264)  
COMMENTS: Cites: Mol Microbiol. 2006 Nov;62(4):1117-31 (medline /17010158)  
COMMENTS: Cites: J Bacteriol. 1987 Nov;169(11):5327-9 (medline /3667534)  
COMMENTS: Cites: J Mol Biol. 1983 Jun 5;166(4):557-80 (medline /6345791)  
COMMENTS: Cites: Science. 1996 Aug 23;273(5278):1058-73 (medline /8688087)  
COMMENTS: Cites: Genetics. 1999 Aug;152(4):1429-37 (medline /10430573)  
COMMENTS: Cites: Genetics. 1999 Aug;152(4):1439-47 (medline /10430574)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1990 Aug;87(15):5598-602 (medline /11607093)  
COMMENTS: Cites: J Bacteriol. 2002 Mar;184(5):1449-54 (medline /11844777)  
COMMENTS: Cites: Mol Microbiol. 2002 Nov;46(3):879-87 (medline /12410843)  
COMMENTS: Cites: Biochemistry. 2004 Jun 15;43(23):7618-27 (medline /15182204)  
COMMENTS: Cites: J Bacteriol. 2004 Aug;186(15):4940-50 (medline /15262931)  
COMMENTS: Cites: J Bacteriol. 2004 Oct;186(20):6956-69 (medline /15466049)  
COMMENTS: Cites: J Bacteriol. 2005 Feb;187(3):972-9 (medline /15659675)  
COMMENTS: Cites: Archaea. 2005 Dec;1(6):375-84 (medline /16243778)  
COMMENTS: Cites: Appl Environ Microbiol. 1983 Jul;46(1):220-6 (medline /16346342)  
COMMENTS: Cites: Appl Environ Microbiol. 1987 Oct;53(10):2373-8 (medline /16347458)  
COMMENTS: Cites: J Bacteriol. 1988 Jul;170(7):3072-9 (medline /3133359)  
ABSTRACT: Methanococcus maripaludis is an anaerobic, methane-producing archaeon that utilizes H(2) or formate for the reduction of CO(2) to methane. Tryptophan auxotrophs were constructed by in vitro insertions of the Tn5 transposon into the tryptophan operon, followed by transformation into M. maripaludis. This method could serve for rapid insertions into large cloned DNA regions.  
MESH HEADINGS: Autotrophic Processes  
MESH HEADINGS: \*DNA Transposable Elements  
MESH HEADINGS: Methanococcus/\*genetics/\*metabolism  
MESH HEADINGS: Mutagenesis, Insertional/\*methods  
MESH HEADINGS: \*Operon  
MESH HEADINGS: Tryptophan/\*metabolism eng

1064. Portoles, T.; Sancho, J. V.; Hernandez, F.; Newton, A., and Hancock, P. Potential of atmospheric pressure chemical ionization source in GC-QTOF MS for pesticide residue analysis. 2010; 45, (8): 926-936.   
Rec #: 66989  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The potential applications of a new atmospheric pressure source for GC-MS analysis have been investigated in this work. A list of around 100 GC-amenable pesticides, which includes organochlorine, organophosphorus and organonitrogenated compounds, has been used to evaluate their behavior in the new source. Favoring the major formation of the molecular ion in the source has been the main goal due to the wide-scope screening possibilities that this fact brings in comparison with the traditional, highly fragmented electron ionization spectra. Thus, the addition of water as modifier has been tested as a way to promote the generation of protonated molecules. Pesticides investigated have been classified into six groups according to their ionization/fragmentation behavior. Four of them are characterized by the abundant formation of the protonated molecule in the atmospheric pressure source, mostly being the base peak of the spectrum. These results show that wide-scope screening could be easily performed with this source by investigating the presence of the protonated molecule ion, MH+. The developed procedure has been applied to pesticide screening in different food samples (nectarine, orange and spinach) and it has allowed the presence of several pesticides to be confirmed such as chlorpyriphos ethyl, deltamethrin and endosulfan sulfate. The availability of a quadrupole time-of-flight instrument made it feasible to perform additional MS/MS experiments for both standards and samples to go further in the confirmation of the identity of the detected compounds. Results shown in this paper have been obtained using a prototype source which exhibits promising features that could be applied to other analytical problems apart from those illustrated in this work. Copyright (c) 2010 John Wiley & Sons, Ltd.  
Keywords: atmospheric pressure chemical ionization, GC, quadrupole time-of-flight  
ISI Document Delivery No.: 646UR

1065. Potenza, D.; Moll, O.; Nario, A.; Luzio, W.; Pino, I., and Parada, A. M. Biodegradation of Chlorpyrifos in two soils of the VI Region of Chile, using, isotopic techniques. 2009; 53, (1): 1-12.   
Rec #: 66999  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: After the application of a pesticide, only a part of it has an effect oil the target, while other part of the pesticide circulates in different environments turning into an environmental risk. In Chile, one of the pesticides widely used is chlorpyrifos (CLP), where the highest percentage is traded at the VI Region. The objective of this study was to quantify the biodegradation of CLP in two Soil Series (Fluventic Haploxerolls) from the VI Region, using a labeled chlorpyrifos with (14)Carbon ((14)C-CLP) in the molecular structure. The biodegradation of CLP was measured for a soil incubation period of 69 days for the Seric O'Higgins (S(1)), and 57 days for Serie Rancagua (S(2)). Every three days the (14)CO(2) produced was quantified, also the total (14)C-CLP bound and extractable residues in the soil were measured during the process. The results showed that 50% of the biodegradation was attained after 40 days of incubation for S(1) and 24 days in S., while at the end of the total period 59.5 % and 61.3 % of pesticide were biodegraded for S, and S, respectively. As an approach the GUS index was assessed assuming the 50 % of the CLP biodegradation as the CLP half life, representing a value of 1.38 for S(1) and 0.79 for S(2). These indexes indicate CLP as a non leachable product and a low potential risk of groundwater contamination.  
ISI Document Delivery No.: 426TD

1066. Potera, C. Newly Discovered Mechanism for Chlorpyrifos Effects on Neurodevelopment. 2012; 120, (7): A270-A271.   
Rec #: 67009  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: PESTICIDE, EXPOSURE, CHILDREN, COHORT  
ISI Document Delivery No.: 969DG

1067. Povey, Andrew C. GeneÇôenvironmental interactions and organophosphate toxicity: Highlights of the 2010 Annual Congress of The British Toxicology Society. Includes the Abstracts of the British Toxicology Society, Spring 2010. 2010 Dec 30-; 278, (3 ): 294-304.   
Rec #: 4050  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Organophosphates (OPs) are an important class of insecticides that in the UK have been widely used for treating sheep for ectoparasites as well as in other sectors of the farming industry. Health problems associated with acute OP toxicity are well defined but, ill-health induced by chronic exposures to OPs remains controversial. A substantial number of sheep farmers complain of chronic ill-health which they attribute to repeated exposure to OPs. If OPs were associated with chronic ill-health then individuals with specific defects in OP metabolism might be expected to be at greater risk of ill-health following exposure. To examine such a hypothesis, the characterisation of both OP exposure and those pathways which lead to the formation and removal of the active OP metabolites becomes important. A wide range of OPs have previously been used to treat sheep but currently the only OP licenced for treating sheep is diazinon. Immediately after treatment, farmersÇÖ urines contain detectable levels of OP metabolites but few farmers have a significant decrease in plasma cholinesterase activity. Diazinon, like chlorpyrifos, is an organothiophosphate which is metabolised, particularly by cytochrome p450s, to the corresponding active oxon form. CYP metabolism also leads to the inactivation of the parent compound and the relative balance of inactivation and activation can depend upon the specific OP and the CYP isoform. OP oxons are inactivated by serum paraoxonase (PON1) and mice lacking PON1 activity are susceptible to oxon and parent OP induced toxicity. PON1 polymorphisms at positions 192 (R form with arginine at 192 and Q with glutamine) and 55 (L form with a leucine and a M form with methionine) influence paroxonase activity. The effect of the Q192R polymorphism is substrate specific with reports indicating that diazoxon is metabolised less by the R isoform. In a study of sheep farmers within the UK, the R allele was associated with an increased risk of self-reported chronic ill-health, a result consistent with the hypothesis that this ill-health may have been caused by OPs. Studies in other populations exposed to pesticides also show associations between ill-health and PON1 Q192R polymorphisms but not consistently so. This is not surprisingly given that exposure is often poorly characterised. In vivo models also suggest that PON1 genotypes may have little influence on susceptibility at low doses of the parent OP. Hence further work is required not only to better characterise OP exposure in humans populations but also to identify those populations susceptible to OP toxicity. Organophosphate/ Sheep dip/ CYP/ Paraoxonase/ Susceptibility

1068. Povey, Andrew C and Povey, Andrew C. Gene-Environmental Interactions and Organophosphate Toxicity. 2010 Dec 30; 278, (3): 294-304.   
Rec #: 43709  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphates (OPs) are an important class of insecticides that in the UK have been widely used for treating sheep for ectoparasites as well as in other sectors of the farming industry. Health problems associated with acute OP toxicity are well defined but, ill-health induced by chronic exposures to OPs remains controversial. A substantial number of sheep farmers complain of chronic ill-health which they attribute to repeated exposure to OPs. If OPs were associated with chronic ill-health then individuals with specific defects in OP metabolism might be expected to be at greater risk of ill-health following exposure. To examine such a hypothesis, the characterisation of both OP exposure and those pathways which lead to the formation and removal of the active OP metabolites becomes important. A wide range of OPs have previously been used to treat sheep but currently the only OP licenced for treating sheep is diazinon. Immediately after treatment, farmers' urines contain detectable levels of OP metabolites but few farmers have a significant decrease in plasma cholinesterase activity. Diazinon, like chlorpyrifos, is an organothiophosphate which is metabolised, particularly by cytochrome p450s, to the corresponding active oxon form. CYP metabolism also leads to the inactivation of the parent compound and the relative balance of inactivation and activation can depend upon the specific OP and the CYP isoform. OP oxons are inactivated by serum paraoxonase (PON1) and mice lacking PON1 activity are susceptible to oxon and parent OP induced toxicity. PON1 polymorphisms at positions 192 (R form with arginine at 192 and Q with glutamine) and 55 (L form with a leucine and a M form with methionine) influence paroxonase activity. The effect of the Q192R polymorphism is substrate specific with reports indicating that diazoxon is metabolised less by the R isoform. In a study of sheep farmers within the UK, the R allele was associated with an increased risk of self-reported chronic ill-health, a result consistent with the hypothesis that this ill-health may have been caused by OPs. Studies in other populations exposed to pesticides also show associations between ill-health and PON1 Q192R polymorphisms but not consistently so. This is not surprisingly given that exposure is often poorly characterised. In vivo models also suggest that PON1 genotypes may have little influence on susceptibility at low doses of the parent OP. Hence further work is required not only to better characterise OP exposure in humans populations but also to identify those populations susceptible to OP toxicity.  
Keywords: inactivation  
Keywords: Glutamine  
Keywords: M form  
Keywords: double prime L form  
Keywords: Organophosphates  
Keywords: G 07810:Insects  
Keywords: Gene polymorphism  
Keywords: Aryldialkylphosphatase  
Keywords: Metabolites  
Keywords: R form  
Keywords: Cholinesterase  
Keywords: Methionine  
Keywords: Models  
Keywords: Insecticides  
Keywords: Chronic exposure  
Keywords: Leucine  
Keywords: sheep  
Keywords: X 24330:Agrochemicals  
Keywords: British Isles  
Keywords: Pharmacy And Pharmacology  
Keywords: Arginine  
Keywords: Genetics Abstracts; Environment Abstracts; Toxicology Abstracts  
Keywords: Population studies  
Keywords: organophosphates  
Keywords: Toxicity  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Urine  
Keywords: Pesticides  
Keywords: Cytochrome P450  
Keywords: human populations  
Keywords: Diazinon  
Keywords: ectoparasites  
Keywords: Metabolism  
Date revised - 2011-10-01  
Language of summary - English  
Location - British Isles  
Pages - 294-304  
ProQuest ID - 852202803  
SubjectsTermNotLitGenreText - Glutamine; M form; double prime L form; Arginine; Gene polymorphism; Population studies; Aryldialkylphosphatase; Metabolites; R form; Toxicity; organophosphates; Cholinesterase; Methionine; Models; Chlorpyrifos; Insecticides; Urine; Chronic exposure; Pesticides; Leucine; Cytochrome P450; Diazinon; ectoparasites; inactivation; Organophosphates; sheep; human populations; Metabolism; British Isles  
Last updated - 2011-12-12  
Corporate institution author - Povey, Andrew C  
DOI - OB-5b831a9a-c129-4c93-9b30csamfg201; 14200470; 0300-483X English

1069. Powers, C. M.; Badireddy, A. R.; Ryde, I. T.; Seidler, F. J., and Slotkin, T. A. Silver Nanoparticles Compromise Neurodevelopment in PC12 Cells: Critical Contributions of Silver Ion, Particle Size, Coating, and Composition. 2011; 119, (1): 37-44.   
Rec #: 67029  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: Silver exposures are rising because of the increased use of silver nanoparticles (AgNPs) in consumer products. The mono-valent silver ion (Ag(+)) impairs neurodevelopment in PC12 cells and zebrafish. OBJECTIVES AND METHODS: We compared the effects of AgNPs with Ag(+) in PC12 cells for neurodevelopmental end points including cell replication, oxidative stress, cell viability, and differentiation. First, we compared citrate-coated AgNPs (AgNP-Cs) with Ag(+), and then we assessed the roles of particle size, coating, and composition by comparing AgNP-C with two different sizes of polyvinylpyrrolidone-coated AgNPs (AgNP-PVPs) or silica nanoparticles. RESULTS: In undifferentiated cells, AgNP-C impaired DNA synthesis, but to a lesser extent than an equivalent nominal concentration of Ag(+), whereas AgNP-C and Ag(+) were equally effective against protein synthesis; there was little or no oxidative stress or loss of viability due to AgNP-C. In contrast, in differentiating cells, AgNP-C evoked robust oxidative stress and impaired differentiation into the acetyl-choline phenotype. Although the effects of AgNP-PVP showed similarities to those of AgNP-C, we also found significant differences in potencies and differentiation outcomes that depended both on particle size and coating. None of the effects reflected simple physical attributes of nano-particles, separate from composition or coating, as equivalent concentrations of silica nanoparticles had no detectable effects. CONCLUSIONS: AgNP exposure impairs neurodevelopment in PC12 cells. Further, AgNP effects are distinct from those of Ag(+) alone and depend on size and coating, indicating that AgNP effects are not due simply to the release of Ag(+) into the surrounding environment.  
Keywords: acetylcholine, developmental neurotoxicity, dopamine, in vitro, metal  
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1070. Powers, Christina M; Wrench, Nicola; Ryde, Ian T; Smith, Amanda M; Seidler, Frederic J, and Slotkin, Theodore a. Silver Impairs Neurodevelopment: Studies in Pc12 Cells. 2010 Jan; 118, (1): 73-9.   
Rec #: 44319  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Exposure to silver is increasing because of silver nanoparticles in consumer products. Many biological effects of silver entail actions of Ag+ (monovalent silver ions), so we used neuronotypic PC12 cells to evaluate the potential for silver to act as a developmental neurotoxicant, using chlorpyrifos (CPF), a pesticide known to evoke developmental neurotoxicity, as a positive control for comparison. In undifferentiated cells, a 1-hr exposure to 10 microM Ag+ inhibited DNA synthesis more potently than did 50 microM CPF; it also impaired protein synthesis but to a lesser extent than its effect on DNA synthesis, indicating a preferential effect on cell replication. Longer exposures led to oxidative stress, loss of viability, and reduced numbers of cells. With the onset of cell differentiation, exposure to 10 microM Ag+ evoked even greater inhibition of DNA synthesis and more oxidative stress, selectively impaired neurite formation without suppressing overall cell growth, and preferentially suppressed development into the acetylcholine phenotype in favor of the dopamine phenotype. Lowering the exposure to 1 microM Ag+ reduced the net effect on undifferentiated cells. However, in differentiating cells, the lower concentration produced an entirely different pattern, enhancing cell numbers by suppressing ongoing cell death and impairing differentiation in parallel for both neurotransmitter phenotypes. Our results show that silver has the potential to evoke developmental neurotoxicity even more potently than known neurotoxicants, such as CPF, and that the spectrum of effects is likely to be substantially different at lower exposures that do not show signs of outright toxicity.  
Keywords: Animals  
Keywords: Neurons -- drug effects  
Keywords: DNA -- biosynthesis  
Keywords: Pesticides -- toxicity  
Keywords: Environmental Studies  
Keywords: Rats  
Keywords: Acetylcholine -- metabolism  
Keywords: Cell Survival -- drug effects  
Keywords: Cell Differentiation -- drug effects  
Keywords: Metal Nanoparticles -- administration & dosage  
Keywords: Neurons -- metabolism  
Keywords: Metal Nanoparticles -- toxicity  
Keywords: Silver -- toxicity  
Keywords: Dopamine -- metabolism  
Keywords: Neurogenesis -- drug effects  
Keywords: Chlorpyrifos  
Keywords: Neurogenesis -- physiology  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Pesticides  
Keywords: Neurons -- cytology  
Keywords: DNA  
Keywords: Oxidative Stress -- drug effects  
Keywords: Silver -- administration & dosage  
Keywords: Acetylcholine  
Keywords: Silver  
Keywords: PC12 Cells  
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DOI - 1943895691; 50348511; 67001; ENHP; 20056586; INODENHP0006208111  
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Rec #: 50499  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Genetics. 2007 Jul;176(3):1491-9 (medline /17507677)  
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COMMENTS: Cites: Mol Cell. 2007 Oct 12;28(1):121-33 (medline /17936709)  
ABSTRACT: BACKGROUND: The Drosophila Male Specific Lethal (MSL) complex contains chromatin modifying enzymes and non-coding roX RNA. It paints the male X at hundreds of bands where it acetylates histone H4 at lysine 16. This epigenetic mark increases expression from the single male X chromosome approximately twofold above what gene-specific factors produce from each female X chromosome. This equalises X-linked gene expression between the sexes. Previous screens for components of dosage compensation relied on a distinctive male-specific lethal phenotype.  
ABSTRACT: RESULTS: Here, we report a new strategy relying upon an unusual male-specific mosaic eye pigmentation phenotype produced when the MSL complex acts upon autosomal roX1 transgenes. Screening the second chromosome identified at least five loci, two of which are previously described components of the MSL complex. We focused our analysis on the modifier alleles of MSL1 and MLE (for 'maleless'). The MSL1 lesions are not simple nulls, but rather alter the PEHE domain that recruits the MSL3 chromodomain and MOF ('males absent on first') histone acetyltransferase subunits to the complex. These mutants are compromised in their ability to recruit MSL3 and MOF, dosage compensate the X, and support long distance spreading from roX1 transgenes. Yet, paradoxically, they were isolated because they somehow increase MSL complex activity immediately around roX1 transgenes in combination with wild-type MSL1 subunits.  
ABSTRACT: CONCLUSIONS: We propose that these diverse phenotypes arise from perturbations in assembly of MSL subunits onto nascent roX transcripts. This strategy is a promising alternative route for identifying previously unknown components of the dosage compensation pathway and novel alleles of known MSL proteins.  
MESH HEADINGS: Animals  
MESH HEADINGS: Base Sequence  
MESH HEADINGS: Blotting, Northern  
MESH HEADINGS: Blotting, Western  
MESH HEADINGS: DNA Primers/genetics  
MESH HEADINGS: Dosage Compensation, Genetic/\*genetics  
MESH HEADINGS: Drosophila Proteins/\*metabolism  
MESH HEADINGS: Drosophila melanogaster/\*genetics  
MESH HEADINGS: Gene Expression Regulation/\*genetics  
MESH HEADINGS: Genetic Complementation Test  
MESH HEADINGS: Histone Acetyltransferases/metabolism  
MESH HEADINGS: Immunoprecipitation  
MESH HEADINGS: Male  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Mutagenesis  
MESH HEADINGS: Nuclear Proteins/\*metabolism  
MESH HEADINGS: Ocular Physiological Phenomena/genetics  
MESH HEADINGS: Pigmentation/genetics/physiology  
MESH HEADINGS: Sequence Analysis, DNA  
MESH HEADINGS: Sex Factors  
MESH HEADINGS: Transcription Factors/\*metabolism  
MESH HEADINGS: X Chromosome/\*genetics/metabolism eng

1072. Prakash, A.; Khan, S.; Aggarwal, M.; Telang, A., and Malik, J. Quercetin and catechin attenuate chlorpyrifos-induced apoptosis in murine thymocytes: Abstracts of the XII International Congress of Toxicology. 2010 Jul 17-; 196, Supplement, (0): S203.   
Rec #: 2420  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY

1073. Prakash, Atul; Khan, Saleem; Aggarwal, Manoj; Telang, Avinash G., and Malik, Jitendra Kumar. Chlorpyrifos induces apoptosis in murine thymocytes: Abstracts of the 46th Congress of the European Societies of Toxicology. 2009 Sep 13-; 189, Supplement, (0): S83.   
Rec #: 2380  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY

1074. Pratt, J. R. Aquatic Community Response to Stress: Prediction and Detection of Adverse Effects. 1990: 16-26.   
Rec #: 1240  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (CPY), NO REVIEW (CPY)  
Notes: Chemical of Concern: CPY

1075. Pratt, J. R.; Bowers, N. J., and Balczon, J. M. A Microcosm Using Naturally Derived Microbial Communities: Comparative Ecotoxicology. 5113//: 1993: 178-191.   
Rec #: 1640  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ATZ,CPY,Cu,PCP,Zn,Zn element), NO REVIEW (ATZ,CPY,Cu,PCP,Zn,Zn element)  
Notes: Chemical of Concern: ATZ,CPY,Cu,PCP,PL,TNT,Zn

1076. Prebble, M. L. Aerial Control of Forest Insects in Canada. SOIL; 2008: 339 p. (Publ As 106268,106269,106235,112462).   
Rec #: 1250  
Keywords: REFS CHECKED  
Call Number: NO REFS CHECKED (CBF,CPY,DMT,DZ,FNT,LINSD,MLN,PPX), NO SKIMMED (CBF,CPY,DMT,DZ,FNT,LINSD,MLN,PPX)  
Notes: Chemical of Concern: CBF,CPY,DDT,DMT,DZ,FNT,LINSD,MLN,PPX,Pb

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Rec #: 39379  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The paper presents a case study of the application of a "source-to-outcome" model for the evaluation of the health outcomes from dietary exposures to an insecticide, chlorpyrifos, in populations of adults (age 30) and children (age 3). The model is based on publically-available software programs that characterize the longitudinal dietary exposure and anthropometry of exposed individuals. These predictions are applied to a validated PBPK/PD model to estimate interindividual and longitudinal variation in brain and RBC AChE inhibition (key events) and chlorpyrifos concentrations in blood and TCPy in urine (biomarkers of exposure). The predicted levels of chlorpyrifos and TCPy are compared to published measurements of the biomarkers. Predictions of RBC AChE are compared to levels of inhibition associated with reported exposure-related effects in humans to determine the potential for the occurrence of adverse cholinergic effects. The predicted distributions of chlorpyrifos in blood and TCPy in urine were found to be reasonably consistent with published values, supporting the predictive value of the exposure and PBPK portions of the source-to-outcome model. Key sources of uncertainty in predictions of dietary exposures were investigated and found to have a modest impact on the model predictions. Future versions of this source-to-outcome model can be developed that consider advances in our understanding of metabolism, to extend the approach to other age groups (infants), and address intakes from other routes of exposure.  
Keywords: H 6000:Natural Disasters/Civil Defense/Emergency Management  
Keywords: Age  
Keywords: Parkinson's disease  
Keywords: Models  
Keywords: Anthropometry  
Keywords: Computer programs  
Keywords: software  
Keywords: Insecticides  
Keywords: Medical Sciences--Forensic Sciences  
Keywords: X 24330:Agrochemicals  
Keywords: Bioindicators  
Keywords: Diets  
Keywords: Brain  
Keywords: Children  
Keywords: biomarkers  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Neurodegenerative diseases  
Keywords: Blood  
Keywords: Movement disorders  
Keywords: Urine  
Keywords: Environment Abstracts; Health & Safety Science Abstracts; Toxicology Abstracts  
Keywords: Pesticides  
Keywords: Metabolism  
Keywords: Infants  
Date revised - 2012-01-01  
Language of summary - English  
Pages - 23-31  
ProQuest ID - 894630658  
SubjectsTermNotLitGenreText - Age; Parkinson's disease; Brain; Children; biomarkers; Models; Chlorpyrifos; Anthropometry; Blood; Computer programs; Neurodegenerative diseases; software; Movement disorders; Insecticides; Urine; Metabolism; Infants; Bioindicators; Diets; Pesticides  
Last updated - 2012-01-26  
Corporate institution author - Price, Paul S; Schnelle, Karl D; Cleveland, Cheryl B; Bartels, Michael J; Hinderliter, Paul M; Timchalk, Charles; Poet, Torka S  
DOI - OB-0e8647c8-5177-42dc-906bcsamfg201; 15673695; 0273-2300 English

1078. Prins, J. M.; George, K. M., and Thompson, C. M. Paraoxon-Induced Protein Expression Changes to SH-SY5Y Cells. 2010; 23, (11): 1656-1662.   
Rec #: 67129  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: SH-SY5Y neuroblastoma cells were examined to determine changes in protein expression following exposure to the organophosphate paraoxon (O,O-diethyl-p-nitrophenoxy phosphate). Exposure of SH-SY5Y cells to paraoxon (20 mu M) for 48 h showed no significant change in cell viability as established using an MTT assay. Protein expression changes from the paraoxon-treated SH-SY5Y cells were determined using a comparative, subproteome approach by fractionation into cytosolic, membrane, nuclear, and cytoskeletal fractions. The fractionated proteins were separated by 2D-PAGE, identified by MALDI-TOF mass spectrometry, and expression changes determined by densitometry. Over 400 proteins were separated from the four fractions, and 16 proteins were identified with altered expression >= 1.3-fold including heat shock protein 90 (-1.3-fold), heterogeneous nuclear ribonucleoprotein C (+2.8-fold), and H(+) transporting ATP synthase beta chain (-3.1-fold). Western blot analysis conducted on total protein isolates confirmed the expression changes in these three proteins.  
Keywords: HUMAN NEUROBLASTOMA-CELLS, ORGANOPHOSPHORUS COMPOUNDS, CHLORPYRIFOS  
ISI Document Delivery No.: 681DJ

1079. Printes, Liane Biehl; Fernandes, Marisa Narciso; Espindola, Evaldo Luiz Gaeta, and Printes, Liane Biehl. Laboratory Measurements of Biomarkers and Individual Performances in Chironomus Xanthus to Evaluate Pesticide Contamination of Sediments in a River of Southeastern Brazil. 2011 Mar; 74, (3): 424-430.   
Rec #: 47389  
Keywords: SEDIMENT CONC  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study aimed at evaluating biomarkers, individual and population responses in the native Chironomus xanthus to assess the toxicity of pesticide-contaminated sediments from the Monjolinho River (Southeast Brazil). We measured cholinesterase (ChE) and glutathione S-transferase activities (GST), as biomarkers and survival, individual growth and adult emergence, as individual performances. There was no response of the ChE activity and a tendency to decreased GST activity in contaminated sites, but this was generally not statistically significant. Therefore, there was no association of the biomarker responses with exposure to sediment containing pesticides. In contrast, ash free dry mass was significantly increased and male emergence was decreased in C. xanthus exposed to the same sediments. In conclusion, the selected biomarkers were not sensitive and specific enough to detect and anticipate effects of pesticide contamination at the levels measured in the study area. Nevertheless, individual performances alterations pointed to potential pollution problems and possible ecological consequences.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Contamination  
Keywords: Statistical analysis  
Keywords: Survival  
Keywords: Biomarkers  
Keywords: Glutathione transferase  
Keywords: Cholinesterase  
Keywords: Freshwater  
Keywords: Growth  
Keywords: Ecotoxicology  
Keywords: H 5000:Pesticides  
Keywords: Coenzymes  
Keywords: X 24330:Agrochemicals  
Keywords: Pollution  
Keywords: Bioindicators  
Keywords: Rivers  
Keywords: Sediment pollution  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Environmental Studies--Toxicology And Environmental Safety  
Keywords: Ash  
Keywords: Z 05350:Medical, Veterinary, and Agricultural Entomology  
Keywords: Toxicity  
Keywords: Entomology Abstracts; Health & Safety Science Abstracts; Environment Abstracts; Toxicology Abstracts; Water Resources Abstracts; Aqualine Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Pollution Abstracts  
Keywords: biomarkers  
Keywords: Sediments  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chironomus  
Keywords: Pesticides  
Keywords: survival  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 424-430  
ProQuest ID - 886608552  
SubjectsTermNotLitGenreText - Rivers; Sediment pollution; Growth; Ecotoxicology; Contamination; Pesticides; Coenzymes; Toxicity; Biomarkers; Statistical analysis; Survival; Glutathione transferase; Cholinesterase; biomarkers; Pollution; Sediments; Bioindicators; Ash; survival; Chironomus; Freshwater  
Last updated - 2011-12-13  
Corporate institution author - Printes, Liane Biehl; Fernandes, Marisa Narciso  
DOI - OB-7579bf19-d315-46f0-96a7csamfg201; 14514270; CS1147037; 0147-6513 English

1080. Prueitt, R. L.; Goodman, J. E.; Bailey, L. A., and Rhomberg, L. R. Hypothesis-Based Weight-of-Evidence Evaluation of the Neurodevelopmental Effects of Chlorpyrifos. 2011; 41, (10): 822-903.   
Rec #: 2210  
Keywords: REVIEW  
Call Number: NO REVIEW (CPY)  
Notes: Chemical of Concern: CPY

1081. Qian, Guoliang; Wang, Limin; Wu, Yunru; Zhang, Qi; Sun, Qin; Liu, Yang, and Liu, Fengquan. A monoclonal antibody-based sensitive enzyme-linked immunosorbent assay (ELISA) for the analysis of the organophosphorous pesticides chlorpyrifos-methyl in real samples. 2009 Nov 15-; 117, (2): 364-370.   
Rec #: 300  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Chlorpyrifos-methyl hapten, O-methyl-O-(3,5,6-trichloro-2-pyridinyl)-N-(2-carboxyethyl)-phosphoramidothionte (H1), was synthesized and conjugated with bovine serum albumin (BSA) and ovalbumin (OVA) by the active ester method. Then H1ÇôOVA conjugate was used as coating antigen, while H1ÇôBSA conjugate was used as immunogen for producing monoclonal antibody. After optimisation, a monoclonal antibody-based effective competitive indirect enzyme-linked immunsorbent assay (ELISA) was developed and applied for determination of chlorpyrifos-methyl with a novel combination of antibody/antigen, I50 of which was 75.22 ng/ml, limit detection (LD) was 0.32 ng/ml, and there was relative high cross-reactivity (CR) only with chlorpyrifos (1.4%), and CRs with other tested pesticides were all below 1% and regarded as negligible. The recoveries obtained by standard chlorpyrifos-methyl addition to real samples, including grape, Chinese cabbages, water and soil were all from 82.4% to 110.2%. Therefore, the optimised ELISA might become a convenient and satisfied analytical tool for monitoring chlorpyrifos-methyl residues in agriculture ecosystem. Chlopyrifos-methyl/ Monoclonal antibody/ ELISA

1082. Qian, Y. C.; Venkatraj, J.; Barhoumi, R.; Pal, R.; Datta, A.; Wild, J. R., and Tiffany-Castiglioni, E. Comparative non-cholinergic neurotoxic effects of paraoxon and diisopropyl fluorophosphate (DFP) on human neuroblastoma and astrocytoma cell lines. 2007; 219, (2-3): 162-171.   
Rec #: 67169  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The objective of this study was to evaluate the comparative non-cholinergic neurotoxic effects of paraoxon, which is acutely neurotoxic, and diisopropyl fluorophosphate (DFP), which induces OPIDN, in the human neuroblastoma SY5Y and the human astrocytoma cell line CCF-STTG1. SY5Y cells have been studied extensively as a model for OP-induced neurotoxicity, but CCF cells have not previously been studied. We conducted a preliminary human gene array assay of OP-treated SY5Y cells in order to assess at the gene level whether these cells can distinguish between OP compounds that do and do not cause OPIDN. Paraoxon and DFP induced dramatically different profiles of gene expression. Two genes were upregulated and 13 downregulated by at least 2-fold in paraoxon-treated cells. In contrast, one gene was upregulated by DFP and none was downregulated at the 2-fold threshold. This finding is consistent with current and previous observations that SY5Y cells can distinguish between OPs that do or do not induce OPIDN. We also examined gene array results for possible novel target proteins or metabolic pathways for OP neurotoxicity. Protein levels of glucose regulated protein 78 (GRP78) revealed that paraoxon exposure at 3 mu M for 24 It significantly reduced GRP78 levels by 30% in neuroblastoma cells, whereas DFP treatment had no effect. In comparison with SY5Y neuroblastoma cells, paraoxon and DFP (3 mu M for 24 h) each significantly increased GRP78 levels by 23-24% in CCF astrocytoma cells. As we have previously evaluated intracellular changes in Ca(2+) levels in SY5Y cells, we investigated the effects of paraoxon and DFP on cellular Ca(2+) homeostasis in CCF by studying cytosolic and mitochondrial basal calcium levels. A significant decrease in the ratio of mitochondrial to cytosolic Ca(2+) fluorescence was detected in CCF cultures treated for either 1 or 3 days with 1, 3, 10, or 30 mu M paraoxon. In contrast, treatment with DFP for 1 day had no significant effect on the ratio of mitochondrial to cytosolic Ca(2+) fluorescence; after 3 days treatment, only 30 mu M decreased the ratio. These results are consistent with the finding that paraoxon induced a greater decrease than did DFP of intracellular esterase activity in CCF cells. The changes seen in the ratio of mitochondrial to cytosolic Ca(2+) represent a good indicator of the degree of injury induced by each chemical tested. This work further develops in vitro models that distinguish between compounds that cause OPIDN and those that induce acute neurotoxicity only. The study also exposes additional OP-induced toxicities that may be obscured in vivo. (c) 2006 Elsevier Inc. All rights reserved.  
Keywords: paraoxon, diisopropyl fluorophosphate, organophosphates, neurotoxicity,  
ISI Document Delivery No.: 145VF

1083. Quandt, S. A.; Chen, H. Y.; Grzywacz, J. G.; Vallejos, Q. M.; Galvan, L., and Arcury, T. A. Cholinesterase Depression and Its Association with Pesticide Exposure across the Agricultural Season among Latino Farmworkers in North Carolina. 2010; 118, (5): 635-639.   
Rec #: 67179  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: Farmworkers can be exposed to a wide variety of pesticides. Assessing cholinesterase activity over time can be used to monitor exposure to organophosphorus and carbamate pesticides. OBJECTIVES: The goal of this study was to document patterns and variation in cholinesterase levels across the agricultural season (May-August) among field-workers, and to explore the association of cholinesterase depression with pesticide exposure across the agricultural season. METHODS: Dried blood samples collected from 231 migrant farmworkers sampled from camps in eastern North Carolina up to four times across a summer agricultural season were analyzed for cholinesterase activity, and urine samples were analyzed for metabolites of organophosphorus and carbamate pesticides. Reductions of >= 15% from an individual's highest value were identified and considered evidence of meaningful cholinesterase activity depression. RESULTS: The average cholinesterase activity levels were lowest in June, with significantly higher mean values in July and August. When adjusted for age, sex, minutes waited to shower, and days worked in the fields, the number of organophosphorus and carbamate pesticides detected in urine predicted reductions in cholinesterase activity. CONCLUSIONS: These data demonstrate that workers are experiencing pesticide exposure. Greater enforcement of existing safety regulations or strengthening of these regulations may be warranted. This study demonstrates that serial measurements of cholinesterase activity across an agricultural season can detect exposure to pesticides among field-workers.  
Keywords: cholinesterase, farmworker, pesticide  
ISI Document Delivery No.: 598OF

1084. Querejeta, G. A.; Ramos, L. M.; Flores, A. P.; Hughes, E. A.; Zalts, A., and Montserrat, J. M. Environmental Pesticide Distribution in Horticultural and Floricultural Periurban Production Units. SOIL; 2012; 87, (5): 566-572.   
Rec #: 2840  
Keywords: FATE  
Call Number: NO FATE (CPY,CTN,DM,ES)  
Notes: Chemical of Concern: CPY,CTN,DM,ES

1085. Quintero, A.; Caselles, M. J.; Ettiene, G.; de Colmenares, N. G.; Ramirez, T., and Medina, D. Monitoring of organophosphorus pesticide residues in vegetables of agricultural area in Venezuela. 2008; 81, (4): 393-396.   
Rec #: 67209  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The purpose of this study was to determine the residues of seven pesticides organophosphorus (methamidophos, diazinon, chlorpyriphos, parathion-methyl, dimethoate, malathion and tetrachlorvinphos), in some vegetables like: potato, lettuce, tomato, onion, red pepper and green onion cultivated in Jose Maria Vargas County in Taichira State, Venezuela. The research permitted to detect that 48.0% of the samples were contaminated with some of the pesticides studied. Methamidophos was founded in the vegetables in the rank of 6.3%-65.5%. The results show that 16.7% of the samples tested have residues higher than the maximum limits permitted.  
Keywords: monitoring vegetables, pesticides organophosphorus  
ISI Document Delivery No.: 348YS

1086. Quiros-Alcala, L.; Alkon, A. D.; Boyce, W. T.; Lippert, S.; Davis, N. V.; Bradman, A.; Barr, D. B., and Eskenazi, B. Maternal prenatal and child organophosphate pesticide exposures and children's autonomic function. 2011; 32, (5): 646-655.   
Rec #: 67219  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Organophosphate pesticides (OP), because of their effects on cholinergic fibers, may interfere with the functions of the autonomic nervous system (ANS). We conducted a study to assess the relation of in utero and child OP pesticide exposures and children's autonomic nervous system (ANS) dysregulation under resting and challenge conditions. We hypothesized that children with high OP levels would show parasympathetic activation and no sympathetic activation during rest and concomitant parasympathetic and sympathetic activation during challenging conditions. Methods: OP exposures were assessed by measuring urinary dialkylphosphate metabolites (DAPs, total diethyls-DEs, and total dimethyls-DMs) in maternal and children's spot urine samples. ANS regulation was examined in relation to maternal and child DAPs in 149 children at 6 months and 1 year, 97 at 3 1/2 years and 274 at 5 years. We assessed resting and reactivity (i.e., challenge minus rest) measures using heart rate (HR), respiratory sinus arrhythmia (RSA), and preejection period (PEP) during the administration of a standardized protocol. Cross-sectional (at each age) and longitudinal regression models were conducted to assess OP and ANS associations. To estimate cumulative exposure at 5 years, we used an area-under-the-concentration-time-curve (AUC) methodology. We also evaluated whether children with consistently high versus low DAP concentrations had significantly different mean ANS scores at 5 years. Results: Child DMs and DAPs were significantly negatively associated with resting RSA at 6 months and maternal DMs and child DEs were significantly positively associated with resting PEP at 1 year. No associations with resting were observed in 3 1/2- or 5-year-old children nor with reactivity at any age. There was no significant relationship between the reactivity profiles and maternal or child DAPs. Cumulative maternal total DEs were associated with low HR (-3.19 bpm decrease: 95% CI: -6.29 to -0.09, p = 0.04) only at 5 years. In addition, there were no significant differences in ANS measures for 5-year-olds with consistently high versus low DAPs. Conclusion: Although we observe some evidence of ANS dysregulation in infancy, we report no consistent associations of maternal and child OP pesticide exposure, as measured by urinary DAPs, on children's ANS (HR, RSA, and PEP) regulation during resting and challenging conditions up to age 5 years. (C) 2011 Elsevier Inc. All rights reserved.  
Keywords: Autonomic nervous system (ANS), Respiratory sinus arrhythmia (RSA),  
ISI Document Delivery No.: 843KX

1087. Quiros-Alcala, Lesliam; Bradman, Asa; Smith, Kimberly; Weerasekera, Gayanga; Odetokun, Martins; Barr, Dana Boyd; Nishioka, Marcia; Castorina, Rosemary; Hubbard, Alan E; Nicas, Mark; Hammond, S Katharine; Mckone, Thomas E; Eskenazi, Brenda, and Quiros-Alcala, Lesliam. Organophosphorous Pesticide Breakdown Products in House Dust and Children's Urine. 2012 Nov; 22, (6): 559-568.   
Rec #: 42449  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Human exposure to preformed dialkylphosphates (DAPs) in food or the environment may affect the reliability of DAP urinary metabolites as biomarkers of organophosphate (OP) pesticide exposure. We conducted a study to investigate the presence of DAPs in indoor residential environments and their association with children's urinary DAP levels. We collected dust samples from homes in farmworker and urban communities (40 homes total, n=79 samples) and up to two urine samples from resident children ages 3-6 years. We measured six DAPs in all samples and eight DAP-devolving OP pesticides in a subset of dust samples (n=54). DAPs were detected in dust with diethylphosphate (DEP) being the most frequently detected ( greater than or equal to 60%); detection frequencies for other DAPs were less than or equal to 50%. DEP dust concentrations did not significantly differ between communities, nor were concentrations significantly correlated with concentrations of chlorpyrifos and diazinon, the most frequently detected diethyl-OP pesticides (Spearman rho =-0.41 to 0.38, P>0.05). Detection of DEP, chlorpyrifos, or diazinon, was not associated with DEP and/or DEP+diethylthiophosphate detection in urine (Kappa coefficients=-0.33 to 0.16). Finally, estimated non-dietary ingestion intake from DEP in dust was found to be less than or equal to 5% of the dose calculated from DEP levels in urine, suggesting that ingestion of dust is not a significant source of DAPs in urine if they are excreted unchanged.  
Keywords: Bioindicators  
Keywords: Age  
Keywords: Organophosphates  
Keywords: Food  
Keywords: Metabolites  
Keywords: organophosphates  
Keywords: Ingestion  
Keywords: Children  
Keywords: biomarkers  
Keywords: Dust  
Keywords: Chlorpyrifos  
Keywords: Toxicology Abstracts; Health & Safety Science Abstracts  
Keywords: House dust  
Keywords: Urine  
Keywords: H 5000:Pesticides  
Keywords: Pesticides  
Keywords: X 24330:Agrochemicals  
Keywords: Diazinon  
Date revised - 2012-12-01  
Language of summary - English  
Pages - 559-568  
ProQuest ID - 1257736235  
SubjectsTermNotLitGenreText - Chlorpyrifos; Age; House dust; Urine; Food; Pesticides; Metabolites; organophosphates; Children; biomarkers; Diazinon; Dust; Bioindicators; Organophosphates; Ingestion  
Last updated - 2013-01-11  
British nursing index edition - Journal of Exposure Science and Environmental Epidemiology [J. Exposure Sci. Environ. Epidemiol.]. Vol. 22, no. 6, pp. 559-568. Nov 2012.  
Corporate institution author - Quiros-Alcala, Lesliam; Bradman, Asa; Smith, Kimberly; Weerasekera, Gayanga; Odetokun, Martins; Barr, Dana Boyd; Nishioka, Marcia; Castorina, Rosemary; Hubbard, Alan E; Nicas, Mark; Hammond, S Katharine; McKone, Thomas E; Eskenazi, Brenda  
DOI - 987b291e-2d0a-4cdf-b11dmfgefd101; 17410885; 1559-0631 English

1088. Quiros Alcala, Lesliam and Eskenazi, Brenda Nicas Mark. Children's Residential Exposures to Flame Retardants, Pesticides and Pesticide Degradation Products, and the Relationship of Pesticides With Autonomic Nervous System Functioning. 2010.  
Rec #: 51709  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Protecting children's environmental health is a significant public health challenge given children's unique exposure pathways and special vulnerabilities to environmental contaminants compared to adults. This dissertation focused on topics surrounding children's environmental health research with an emphasis on exposure assessment and application in an epidemiologic investigation. The environmental contaminants that this work focused on included pesticides and polybrominated diphenyl ether (PBDE) flame retardants. Chapter 1 provides a general introduction to children's environmental health and highlights the background and significance and specific aims for each study/chapter. Chapter 2 focuses on children's residential exposures via house dust to pesticides and PBDEs in low-income homes. House dust was used to assess indoor residential exposures to these environmental contaminants given that for young children this medium serves as a reservoir for contaminants tracked-in or used indoors and a source of non-dietary ingestion. In this study, concentrations for 24 pesticides, one pesticide synergist, and three PBDE congeners (major constituents of the pentaBDE flame retardant commercial mixture commonly used on furniture) were measured in house dust samples from farmworker and urban homes in California. Pesticides frequently detected in most homes included: organophosphates (chlorpyrifos and diazinon) which were voluntarily phased-out for residential uses prior to this study by the urging of the United States Environmental Protection Agency (EPA); pyrethroids such as permethrins, allethrins, cypermethrins; and the synergist piperonyl butoxide. Interestingly, chlorthal-dimethyl was detected solely in farmworker homes, suggesting contamination due to regional agricultural use. In chapter 3 the presence in the environment of dialkylphosphates (DAPs), non-specific urinary OP pesticide metabolites, and their relation to children's urinary DAP metabolites was investigated. Although DAPs were found to be present in the environment, as assessed in house dust, this medium may not play a significant contribution to the DAPs observed in children's urine. The non-dietary ingestion exposure route for environmental DAPs was estimated to be â‰¤5% of the dose calculated from DAP levels in children's urine. The distribution of concentrations of diethyl and dimethyl DAPs in dust differed from those observed in children's urine, a finding suggesting that DAPs behave differently in the environment and in the body. However, if humans excrete DAPs unchanged then it is possible for urinary DAPs to reflect exposure to both OP pesticides and DAPs present in one's environment and/or food. Results from this study indicate other sources and pathways, such as DAPs in food, may impact urinary DAP levels more significantly than DAPs in dust. More research is needed on the pharmacokinetics and toxicodynamics of preformed DAPs and other specific OP metabolites to determine the extent of their contribution to urinary biomarkers in humans. In chapter 4 the effects of early life exposures to OP pesticides, as assessed by urinary DAP metabolites, on children's autonomic dysregulation (concomitant sympathetic activation and parasympathetic withdrawal) were assessed at several time points (i.e., when children were 6 months and 1, 31â„2 and 5 years of age). This is the first study to use ANS response measures as outcomes to investigate the association between OP pesticide exposures in children and ANS regulation. The study population was part of the Center for Children's Environmental Health Research longitudinal birth cohort study (CHAMACOS). Children in this cohort live in the Salinas Valley, an agricultural region in California with intense OP pesticide use and were predominantly from Mexico or Mexican-American. Children's autonomic nervous system (ANS) function was assessed using resting and reactivity measures of respiratory sinus arrhythmia (RSA), pre-ejection period (PEP), and heart rate (HR), while OP pesticide exposures were assessed in utero and postnatally by using urinary DAPs. Although the results suggest that OP pesticides at the exposure levels observed are not associated with children's ANS dysregulation, the study focused on a relatively demographically and ethnically homogeneous study population; thus, the results may not be generalizable to other populations. (Abstract shortened by UMI.)  
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ISSN/ISBN: 9781124141626  
Keywords: Autonomic nervous system  
Keywords: Dialkylphosphates  
Keywords: Psychology  
Keywords: Flame retardants  
Keywords: 0383:Toxicology  
Keywords: 0354:Occupational health  
Keywords: Biomarkers  
Keywords: Children  
Keywords: 0768:Environmental science  
Keywords: 0383:Surgery  
Keywords: 0470:Environmental Health  
Keywords: Pesticides  
Keywords: Health and environmental sciences  
Keywords: 0349:Psychobiology  
Keywords: Farmworkers  
Keywords: Residential exposures  
Keywords: Degradation products  
9781124141626  
Psychology  
0349: Psychobiology  
Biomarkers  
0383: Surgery  
0354: Occupational health  
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0768: Environmental science  
2010  
Health and environmental sciences  
749203507  
Farmworkers  
Residential exposures  
Autonomic nervous system  
Dialkylphosphates  
Flame retardants  
0383: Toxicology  
66569  
Children  
n/a  
English  
54157841  
0470: Environmental Health  
Pesticides  
2127254621  
Degradation products  
2012-07-05 English

1089. QuirăłS-Alcalăˇ, Lesliam; Bradman, Asa; Nishioka, Marcia; Harnly, Martha E; Hubbard, Alan; Mckone, Thomas E; Ferber, Jeannette, and Eskenazi, Brenda. Pesticides in House Dust From Urban and Farmworker Households in California: an Observational Measurement Study. 2011; 10, (1): 19.   
Rec #: 43619  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Abstract Background: Studies report that residential use of pesticides in low-income homes is common because of poor housing conditions and pest infestations; however, exposure data on contemporary-use pesticides in low-income households is limited. We conducted a study in low-income homes from urban and agricultural communities to: characterize and compare house dust levels of agricultural and residential-use pesticides; evaluate the correlation of pesticide concentrations in samples collected several days apart; examine whether concentrations of pesticides phased-out for residential uses, but still used in agriculture (i.e., chlorpyrifos and diazinon) have declined in homes in the agricultural community; and estimate resident children's pesticide exposures via inadvertent dust ingestion. Methods: In 2006, we collected up to two dust samples 5-8 days apart from each of 13 urban homes in Oakland, California and 15 farmworker homes in Salinas, California, an agricultural community (54 samples total). We measured 22 insecticides including organophosphates (chlorpyrifos, diazinon, diazinon-oxon, malathion, methidathion, methyl parathion, phorate, and tetrachlorvinphos) and pyrethroids (allethrin-two isomers, bifenthrin, cypermethrin-four isomers, deltamethrin, esfenvalerate, imiprothrin, permethrin-two isomers, prallethrin, and sumithrin), one phthalate herbicide (chlorthal-dimethyl), one dicarboximide fungicide (iprodione), and one pesticide synergist (piperonyl butoxide). Results: More than half of the households reported applying pesticides indoors. Analytes frequently detected in both locations included chlorpyrifos, diazinon, permethrin, allethrin, cypermethrin, and piperonyl butoxide; no differences in concentrations or loadings were observed between locations for these analytes. Chlorthal-dimethyl was detected solely in farmworker homes, suggesting contamination due to regional agricultural use. Concentrations in samples collected 5-8 days apart in the same home were strongly correlated for the majority of the frequently detected analytes (Spearman Ď = 0.70-1.00, p < 0.01). Additionally, diazinon and chlorpyrifos concentrations in Salinas farmworker homes were 40-80% lower than concentrations reported in samples from Salinas farmworker homes studied between 2000-2002, suggesting a temporal reduction after their residential phase-out. Finally, estimated non-dietary pesticide intake for resident children did not exceed current U.S. Environmental Protection Agency's (U.S. EPA) recommended chronic reference doses (RfDs). Conclusion: Low-income children are potentially exposed to a mixture of pesticides as a result of poorer housing quality. Historical or current pesticide use indoors is likely to contribute to ongoing exposures. Agricultural pesticide use may also contribute to additional exposures to some pesticides in rural areas. Although children's non-dietary intake did not exceed U.S. EPA RfDs for select pesticides, this does not ensure that children are free of any health risks as RfDs have their own limitations, and the children may be exposed indoors via other pathways. The frequent pesticide use reported and high detection of several home-use pesticides in house dust suggests that families would benefit from integrated pest management strategies to control pests and minimize current and future exposures.  
Keywords: Agriculture  
Keywords: Pesticides -- analysis  
Keywords: Dust -- analysis  
Keywords: Housing  
Keywords: Humans  
Keywords: Environmental Exposure -- analysis  
Keywords: Child  
Keywords: Environmental Pollutants -- analysis  
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Keywords: Environmental Pollutants  
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Keywords: Socioeconomic Factors  
Keywords: Chlorpyrifos -- analysis  
Keywords: California  
Keywords: Pesticides  
Keywords: Adult  
Keywords: Mexican Americans  
Keywords: Time Factors  
Keywords: Diazinon  
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DOI - 2504416041; 65401881; 58366; ENVH; 21410986; BMDDENVH201101011476069X1019  
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Rec #: 67259  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Development of high-throughput assays for chemical screening and hazard identification is a pressing priority worldwide. One approach uses in vitro, cell-based assays which recapitulate biological events observed in vivo. Neurite outgrowth is one such critical cellular process underlying nervous system development that can be quantified using automated microscopy and image analysis (high content analysis). The present study characterized and compared the PC-12 cell line (NS-1) and primary cultures of cerebellar granular cells (CGC), as models for assessing chemical effects on neurite outgrowth. High content analysis of neurite outgrowth was performed using the Cellomics ArrayScan V(Ti) automated epifluorescent imaging system to acquire and analyze images of beta-tubulin immunostained cells in 96-well plates. Cell viability was assessed using the CellTiter-Glo (R) assay. Culture of NS-1 or CGC in nerve growth factor or serum respectively, rapidly induced neurite outgrowth that increased over four days in vitro. Seven compounds previously shown to affect neurite outgrowth in vitro were tested in both models for changes in total neurite length and cell viability. In NS-1 cells, four chemicals (PKC inhibitor Bis-I, MEK inhibitor U0126, trans-Retinoic acid, methylmercury) inhibited neurite outgrowth, while lead, amphetamine and valproic acid had no effect. In CGC, five chemicals inhibited neurite outgrowth (**Bis-I, U0126, lead, methylmercury, and amphetamine**), while trans-Retinoic acid decreased cell viability but not neurite outgrowth. **Valproic acid** was without effect. The sensitivity of the two models was chemical specific: NS-1 cells were more sensitive to Bis-I, **methylmercury and trans-Retinoic acid**, while CGC were more sensitive to **U0126, lead, and amphetamine.** For every chemical (except trans-Retinoic acid), neurite outgrowth was equal to or more sensitive than cell viability. In comparison, out of seven chemicals without prior evidence for effects on neurite outgrowth, only one decreased neurite outgrowth (diphenhydramine in CGC). These findings demonstrate that the effects of chemicals on neurite outgrowth may be cell type specific. Published by Elsevier Inc.  
Keywords: Neurite growth, Chemical screening, High content analysis, Neuronal cell  
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Rec #: 1260  
Keywords: NO CONC,QSAR  
Call Number: NO CONC (ADC,AMSV,AMYOH,ATN,CBF,CHT,CPY,CYP,DCA,DDVP,DM,DMT,DZ,ETHN,FNT,FNV,FPP,MCRE,MLO,MOL,NCTN,PCP,PMR,PPNOL,PPX,RSM,SMT,STCH,TCF,nBUT), NO QSAR (ADC,AMSV,AMYOH,ATN,CBF,CHT,CPY,CYP,DCA,DDVP,DM,DMT,DZ,ETHN,FNT,FNV,FPP,MCRE,MLO,MOL,NCTN,PCP,PMR,PPNOL,PPX,RSM,SMT,STCH,TCF,nBUT)  
Notes: Chemical of Concern: 24DC,2BE,3CE,ADC,AMSV,AMYOH,AN,ATN,BNZ,C6OH,CBF,CHT,CPY,CTC,CYP,DCA,DDVP,DM,DMT,DZ,EGY,EPRN,ETHN,FNT,FNV,FPP,HPT,MCRE,MLO,MOL,NCTN,PCP,PL,PMR,PPNOL,PPX,PRN,RSM,SMT,STCH,TCF,TEPP,nBUT

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Rec #: 50589  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
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COMMENTS: Cites: J Cell Biol. 2007 Jun 18;177(6):957-67 (medline /17576795)  
COMMENTS: Cites: Science. 1990 Aug 31;249(4972):1046-9 (medline /2144363)  
ABSTRACT: BACKGROUND: Gene activation is thought to occur through a series of temporally defined regulatory steps. However, this process has not been completely evaluated in single living mammalian cells.  
ABSTRACT: METHODOLOGY/PRINCIPAL FINDINGS: To investigate the timing and coordination of gene activation events, we tracked the recruitment of GCN5 (histone acetyltransferase), RNA polymerase II, Brd2 and Brd4 (acetyl-lysine binding proteins), in relation to a VP16-transcriptional activator, to a transcription site that can be visualized in single living cells. All accumulated rapidly with the VP16 activator as did the transcribed RNA. RNA was also detected at significantly more transcription sites in cells expressing the VP16-activator compared to a p53-activator. After alpha-amanitin pre-treatment, the VP16-activator, GCN5, and Brd2 are still recruited to the transcription site but the chromatin does not decondense.  
ABSTRACT: CONCLUSIONS/SIGNIFICANCE: This study demonstrates that a strong activator can rapidly overcome the condensed chromatin structure of an inactive transcription site and supercede the expected requirement for regulatory events to proceed in a temporally defined order. Additionally, activator strength determines the number of cells in which transcription is induced as well as the extent of chromatin decondensation. As chromatin decondensation is significantly reduced after alpha-amanitin pre-treatment, despite the recruitment of transcriptional activation factors, this provides further evidence that transcription drives large-scale chromatin decondensation.  
MESH HEADINGS: Alpha-Amanitin/pharmacology  
MESH HEADINGS: Binding Sites  
MESH HEADINGS: Cell Line, Tumor  
MESH HEADINGS: \*Chromatin Assembly and Disassembly  
MESH HEADINGS: \*Cytological Techniques  
MESH HEADINGS: Etoposide/metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Nuclear Proteins/metabolism  
MESH HEADINGS: Protein Transport  
MESH HEADINGS: Protein-Serine-Threonine Kinases/metabolism  
MESH HEADINGS: RNA Polymerase II/metabolism  
MESH HEADINGS: Time Factors  
MESH HEADINGS: Transcription Factors/metabolism  
MESH HEADINGS: Transcriptional Activation/\*genetics  
MESH HEADINGS: p300-CBP Transcription Factors/metabolism eng

1093. Raffaele, K. C.; Rowland, J.; May, B.; Makris, S. L.; Schumacher, K., and Scarano, L. J. The use of developmental neurotoxicity data in pesticide risk assessments. 2010; 32, (5): 563-572.   
Rec #: 67269  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Following the passage of the Food Quality Protection Act, which mandated an increased focus on evaluating the potential toxicity of pesticides to children, the number of guideline developmental neurotoxicity (DNT) studies (OPPTS 870.6300) submitted to the U.S. Environmental Protection Agency (EPA) Office of Pesticide Programs (OPP) was greatly increased. To evaluate the impact of available DNT studies on individual chemical risk assessments, the ways in which data from these studies are being used in pesticide risk assessment were investigated. In addition, the neurobehavioral and neuropathological parameters affected at the lowest observed adverse effect level (LOAEL) for each study were evaluated to ascertain whether some types of endpoints were consistently more sensitive than others. As of December 2008, final OPP reviews of DNT studies for 72 pesticide chemicals were available; elimination of studies with major deficiencies resulted in a total of 69 that were included in this analysis. Of those studies, 15 had been used to determine the point of departure for one or more risk assessment scenarios, and an additional 13 were determined to have the potential for use as a point of departure for future risk assessments (selection is dependent upon review of the entire database available at the time of reassessment). Analysis of parameters affected at the study LOAELs indicated that no single parameter was consistently more sensitive than another. Early assessment time points (e.g., postnatal day (PND) 11/21) tended to be more sensitive than later time points (e.g., PND 60). These results demonstrate that data generated using the current guideline DNT study protocol are useful in providing points of departure for risk assessments. The results of these studies also affirm the importance of evaluating a spectrum of behavioral and neuropathological endpoints, in both young and adult animals, to improve the detection of the potential for a chemical to cause developmental neurotoxicity. Published by Elsevier Inc.  
Keywords: Developmental neurotoxicity testing, DNT, Risk assessment, Pesticides  
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1094. Rafiq, K.; Nakano, D.; Ihara, G.; Hitomi, H.; Fujisawa, Y.; Ohashi, N.; Kobori, H.; Nagai, Y.; Kiyomoto, H.; Kohno, M., and Nishiyama, A. Effects of Mineralocorticoid Receptor Blockade on Glucocorticoid-Induced Renal Injury in Adrenalectomized Rats.   
Rec #: 50319  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: OBJECTIVES: Aldosterone is well recognized as the selective physiological ligand for mineralocorticoid receptor in epithelia. However, in-vitro studies have demonstrated that the affinity of aldosterone and glucocorticoids for mineralocorticoid receptor is similar. We hypothesized that glucocorticoids are involved in the development of renal injury through an mineralocorticoid receptor-dependent mechanism.  
ABSTRACT: METHODS AND RESULTS: Uninephrectomized (UNX) rats were treated with 1% NaCl and divided into three groups: vehicle, bilateral adrenalectomy (ADX) + hydrocortisone (HYDRO; 5 mg/kg/day, s.c.), ADX + HYDRO + eplerenone (0.125% in chow). HYDRO-treated UNX-ADX rats showed increased blood pressure and urinary albumin-to-creatinine ratio with an increase in the expression of the mineralocorticoid receptor target genes, serum and glucocorticoid-regulated kinases-1 and Na+/H+ exchanger isoform-1, in renal tissues. HYDRO treatment induced morphological changes in the kidney, including glomerulosclerosis and podocyte injury. Treatment with eplerenone markedly decreased the gene expression and reduced the albuminuria and renal morphological changes. In contrast, **dexamethasone (0.2 mg/kg per day, s.c.) + UNX + ADX induced hypertension and albuminuria in different groups of rats.** Eplerenone failed to ameliorate these changes.  
ABSTRACT: CONCLUSIONS: Our findings indicate that chronic glucocorticoid excess could activate mineralocorticoid receptor and, in turn, induce the development of renal injury.  
MESH HEADINGS: Adrenalectomy  
MESH HEADINGS: Animals  
MESH HEADINGS: Base Sequence  
MESH HEADINGS: DNA Primers/genetics  
MESH HEADINGS: Dexamethasone/toxicity  
MESH HEADINGS: Gene Expression/drug effects  
MESH HEADINGS: Glucocorticoids/\*toxicity  
MESH HEADINGS: Hydrocortisone/\*toxicity  
MESH HEADINGS: Hypertension/etiology/genetics/physiopathology  
MESH HEADINGS: Kidney/\*drug effects/injuries/pathology/physiopathology  
MESH HEADINGS: Male  
MESH HEADINGS: \*Mineralocorticoid Receptor Antagonists/pharmacology  
MESH HEADINGS: RNA, Messenger/genetics/metabolism  
MESH HEADINGS: Rats  
MESH HEADINGS: Rats, Inbred WKY  
MESH HEADINGS: Receptors, Mineralocorticoid/genetics  
MESH HEADINGS: Spironolactone/analogs &amp  
MESH HEADINGS: derivatives/pharmacology eng

1095. Ragas, Ad Mj; Oldenkamp, R; Preeker, N L; Wernicke, J ; Schlink, U, and Ragas, Ad MJ. Cumulative Risk Assessment of Chemical Exposures in Urban Environments. 2011 Jul; 37, (5): 872-881.   
Rec #: 43259  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We performed a cumulative risk assessment for people living in a hypothetical urban environment, called Urbania. The main aims of the study were to demonstrate how a cumulative risk assessment for a middle-sized European city can be performed and to identify the bottlenecks in terms of data availability and knowledge gaps. The assessment focused on five air pollutants (i.e., PM10, benzene, toluene, nonane and naphthalene) and six food pesticides (i.e., acetamiprid, carbendazim, chlorpyrifos, diazinon, imidacloprid and permethrin). Exposure predictions showed that PM10, benzene and naphthalene exposure frequently exceeded the standards, and that the indoor environment contributed more than the outdoor environment. Effect predictions showed that mixture and interaction effects were generally limited. However, model calculations indicated potential synergistic effects between naphthalene and benzene and between chlorpyrifos, diazinon and toluene. PM10 dominated the health impact expressed in Disability Adjusted Life Years (DALYs). We conclude that measures to reduce the health impact of environmental pollution should focus on the improvement of indoor air quality and the reduction of PM10 emissions. Cumulative risk assessment can be improved by (1) the development of person-oriented exposure models that can simulate the cumulative exposure history of individuals, (2) a better mechanistic understanding of the effects of cumulative stressors, and (3) the development of instruments to prioritize stressors for inclusion in cumulative risk assessments.  
Keywords: Risk assessment  
Keywords: P 0000:AIR POLLUTION  
Keywords: Toluene  
Keywords: Naphthalene  
Keywords: Benzene  
Keywords: Risk Abstracts; Pollution Abstracts; Environment Abstracts  
Keywords: Chlorpyrifos  
Keywords: Air pollution  
Keywords: Pesticides  
Keywords: Emissions  
Keywords: Diazinon  
Keywords: R2 23010:General: Models, forecasting  
Keywords: ENA 01:Air Pollution  
Date revised - 2011-08-01  
Language of summary - English  
Pages - 872-881  
ProQuest ID - 885050556  
SubjectsTermNotLitGenreText - Air pollution; Chlorpyrifos; Risk assessment; Toluene; Pesticides; Emissions; Naphthalene; Diazinon; Benzene  
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Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
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COMMENTS: Cites: Biochem Biophys Res Commun. 2002 Apr 12;292(4):931-6 (medline /11944904)  
COMMENTS: Cites: J Biol Chem. 2002 Aug 30;277(35):32046-53 (medline /12058030)  
COMMENTS: Cites: Nature. 2002 Jul 18;418(6895):291 (medline /12124613)  
COMMENTS: Cites: Peptides. 2002 Jul;23(7):1265-70 (medline /12128083)  
COMMENTS: Cites: Biochemistry. 2002 Aug 13;41(32):10209-17 (medline /12162735)  
COMMENTS: Cites: Neurochem Int. 2002 Nov;41(5):345-52 (medline /12176077)  
COMMENTS: Cites: J Biol Chem. 2002 Oct 25;277(43):40173-6 (medline /12198111)  
COMMENTS: Cites: J Biol Chem. 2002 Nov 8;277(45):43243-6 (medline /12215440)  
COMMENTS: Cites: J Mol Biol. 2002 Oct 4;322(5):1089-102 (medline /12367530)  
COMMENTS: Cites: J Mol Biol. 2003 Jan 3;325(1):135-48 (medline /12473457)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2003 Jan 7;100(1):330-5 (medline /12506200)  
COMMENTS: Cites: Annu Rev Neurosci. 2003;26:267-98 (medline /12704221)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2003 May 27;100(11):6370-5 (medline /12750461)  
COMMENTS: Cites: Am J Physiol Cell Physiol. 2003 Oct;285(4):C873-80 (medline /12814914)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2003 Sep 2;100(18):10417-22 (medline /12925731)  
COMMENTS: Cites: Int J Biol Macromol. 2003 Sep;32(3-5):173-7 (medline /12957314)  
COMMENTS: Cites: J Mol Neurosci. 2003;20(3):305-13 (medline /14501013)  
COMMENTS: Cites: Biochemistry. 2003 Nov 11;42(44):12749-60 (medline /14596589)  
COMMENTS: Cites: Biochemistry. 2003 Dec 9;42(48):14092-8 (medline /14640676)  
COMMENTS: Cites: Neurobiol Dis. 2003 Dec;14(3):567-78 (medline /14678772)  
COMMENTS: Cites: Exp Eye Res. 2004 Feb;78(2):243-56 (medline /14729357)  
COMMENTS: Cites: J Mol Biol. 2004 May 14;338(5):943-57 (medline /15111058)  
COMMENTS: Cites: Neurobiol Aging. 2004 May-Jun;25(5):569-80 (medline /15172732)  
COMMENTS: Cites: Acc Chem Res. 2004 Jun;37(6):357-64 (medline /15196045)  
ABSTRACT: Several neurodegenerative diseases, including Alzheimer's, Parkinson's, Huntington's and prion diseases, are characterized pathognomonically by the presence of intra- and/or extracellular lesions containing proteinaceous aggregates, and by extensive neuronal loss in selective brain regions. Related non-neuropathic systemic diseases, e.g., light-chain and senile systemic amyloidoses, and other organ-specific diseases, such as dialysis-related amyloidosis and type-2 diabetes mellitus, also are characterized by deposition of aberrantly folded, insoluble proteins. It is debated whether the hallmark pathologic lesions are causative. Substantial evidence suggests that these aggregates are the end state of aberrant protein folding whereas the actual culprits likely are transient, pre-fibrillar assemblies preceding the aggregates. In the context of neurodegenerative amyloidoses, the proteinaceous aggregates may eventuate as potentially neuroprotective sinks for the neurotoxic, oligomeric protein assemblies. The pre-fibrillar, oligomeric assemblies are believed to initiate the pathogenic mechanisms that lead to synaptic dysfunction, neuronal loss, and disease-specific regional brain atrophy. The amyloid beta-protein (Abeta), which is believed to cause Alzheimer's disease (AD), is considered an archetypal amyloidogenic protein. Intense studies have led to nominal, functional, and structural descriptions of oligomeric Abeta assemblies. However, the dynamic and metastable nature of Abeta oligomers renders their study difficult. Different results generated using different methodologies under different experimental settings further complicate this complex area of research and identification of the exact pathogenic assemblies in vivo seems daunting. Here we review structural, functional, and biological experiments used to produce and study pre-fibrillar Abeta assemblies, and highlight similar studies of proteins involved in related diseases. We discuss challenges that contemporary researchers are facing and future research prospects in this demanding yet highly important field.  
MESH HEADINGS: Alzheimer Disease/\*pathology  
MESH HEADINGS: Amyloid beta-Peptides/\*chemistry/\*ultrastructure  
MESH HEADINGS: Animals  
MESH HEADINGS: Humans  
MESH HEADINGS: Peptide Fragments/\*chemistry/ultrastructure  
MESH HEADINGS: \*Protein Conformation  
MESH HEADINGS: Protein Folding  
MESH HEADINGS: Structure-Activity Relationship eng

1097. Rahman, M F; Mahboob, M; Grover, P, and Rahman, M F. In Vitro Acetylcholinesterase Inhibition and Cytotoxic Effect of Some Organophosphorus Pesticides in Human Erythrocytes and Hepg2 Cells. 2008 Jun; 15, (1): 49-55.   
Rec #: 45909  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In vitro effects of some novel organophosphates like RPR-II, RPR-V, chlorpyrifos, dimethoate and monocrotophos (MCP) were studied in human erythrocytes with special reference to acetylcholinesterase (AChE) and mitochondrial function (MTT assay) in HepG2 cell lines. The purpose of the present study was to quantify "in vitro" effect by means of the 50 percent inhibition (IC sub(50) using acetylthiocholine iodide as substrate in human RBC in the presence of different concentrations of pesticides. Our study indicated dose dependent AChE inhibition by all the OP compounds tested. The IC sub(50) observed for RPR-II, RPR-V and chlorpyrifos was greater than 10 mM, whereas dimethoate and MCP showed 1.60 and 2.38 mM respectively showing dimethoate 1.48 times more potent than MCP. The kinetic constant (Vmax and Km) showed the trend of decreasing with all the compounds assayed indicating non-competative inhibition. Similarly, the cell viability (MTT) also decreased by all the tested five OP compounds. RPR-II and RPR-V were found to be least toxic and IC sub(50) observed was greater than 10 mM, whereas IC sub(50) observed for chlorpyrifos, dimethoate and MCP were 0.835, 0.850 and 0.576 mM respectively. These results indicated dose dependent cytotoxic effect by all these OP compounds on HepG2 cell lines and relatively MCP was most potent in comparison to other compounds tested. From the present study, it can be concluded that the in vitro AChE and MTT assays are sensitive assays and can be used as biochemical marker for the exposure of organophosphates.  
Keywords: Pesticides (organophosphorus)  
Keywords: Biochemical markers  
Keywords: Acetylcholinesterase  
Keywords: Environmental Studies--Toxicology And Environmental Safety  
Keywords: Erythrocytes  
Keywords: monocrotophos  
Keywords: Mitochondria  
Keywords: organophosphates  
Keywords: Chlorpyrifos  
Keywords: Cytotoxicity  
Keywords: Kinetics  
Keywords: Dimethoate  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Date revised - 2008-11-01  
Language of summary - English  
Pages - 49-55  
ProQuest ID - 290259603  
SubjectsTermNotLitGenreText - Dimethoate; Chlorpyrifos; Acetylcholinesterase; Erythrocytes; organophosphates; Cytotoxicity; Mitochondria; Kinetics; Biochemical markers; monocrotophos; Pesticides (organophosphorus)  
Last updated - 2011-10-26  
Corporate institution author - Rahman, M F; Mahboob, M; Grover, P  
DOI - OB-MD-0008492379; 8508039; 0971-6580 English

1098. Raina, R.; Hall, P., and Sun, L. N. Occurrence and Relationship of Organophosphorus Insecticides and Their Degradation Products in the Atmosphere in Western Canada Agricultural Regions. 2010; 44, (22): 8541-8546.   
Rec #: 67299  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This paper presents the atmospheric occurrence and seasonal variations of the most frequently detected organophosphorus insecticides (OPs) and their OP oxon degradation products at Brats Lake, Saskatchewan in the Canadian Prairies (April 2003 to March 2004, January-December, 2005) and at Abbotsford in the Lower Frazer Valley (LFV) of British Columbia from May 2004 to December, 2005. During 2005 there were 10 OPs, 8 OP oxons, and 6 other OP degradation products measured. The most frequently detected OPs were chlorpyrifos, malathion, and diazinon. At Bratt's Lake the highest atmospheric concentrations were observed for chlorpyrifos, with maximum concentrations observed during July and August in 2003 showing much higher concentrations than those from 2005. This was related to its usage for grasshopper control in the province. At Abbotsford, diazinon and malathion were observed in much higher atmospheric concentrations than chlorpyrifos. Concentrations reached maximum in spring for diazinon and summer for malathion. This study is the first reported study of seasonal variations of OP oxons with their parent OP. Chlorpyrifos axon concentrations during July were generally low, indicating strong local source contributions. The chlorpyrifos oxon/chlorpyrifos ratio and diazinon oxon/diazinon ratio showed a strong seasonal variation with increasing ratio from spring to summer which was attributed to increasing sunlight hours. Malathion oxon/mathion at both sites was similar and relatively constant throughout the year. The oxon/thion ratio represents a good indicator of age of source or contributions from local versus regional atmospheric sources.  
Keywords: CURRENT-USE PESTICIDES, GAS-CHROMATOGRAPHY, MASS-SPECTROMETRY, AIR  
ISI Document Delivery No.: 680QA

1099. Raina, Renata; Hall, Patricia, and Raina, Renata. Field Evaluation of Solid Sorbents for Ambient Air Sampling of Pesticides. 2010; 3, 57-66.   
Rec #: 44259  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Seven solid sorbents including Amberlite registered XAD-2 and XAD-4, Tenax-TA registered , Anasorb-747, Chromosorb 102, 108, and 750 were evaluated for the collection of the gas phase fraction of pesticides under field conditions at an agricultural site, Bratt's Lake, SK, located in the Canadian prairies. The polyurethane foam (PUF)/sorbent cartridge consists of two PUF layers which sandwich the solid sorbent and each layer was analyzed separately to determine which portion of the PUF/solid sorbent retained the pesticides and the extent of breakthrough. The pesticides that had high detection frequency throughout the study and ambient air concentrations well above MDL were triallate, trifluralin, ethalfluralin, and chlorpyrifos. All sorbents had improved collection efficiency as compared to a standard 7.6 cm PUF and the improvement varied with each pesticide. The most effective sorbents for trapping gas phase fraction of pesticides were XAD-2, XAD-4, Tenax-TA, and Chromosorb 108. The only sorbent not recommended for use is Chromosorb 750. For selected sampling periods when ambient concentrations were above detection limits a number of other organochlorine and organophosphorus pesticides also showed more efficient collection with PUF/solid sorbent cartridges as compared to PUF cartridge. Shorter sample collection periods of 4-days improved detection frequency of pesticides.  
Keywords: Soil  
Keywords: Chlorpyrifos  
Keywords: Prairies  
Keywords: Lakes  
Keywords: Sorbents  
Keywords: Organochlorine compounds  
Keywords: P 0000:AIR POLLUTION  
Keywords: Pollution Abstracts; Environment Abstracts; Aqualine Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Pesticides  
Keywords: Air sampling  
Keywords: Trifluralin  
Keywords: ENA 01:Air Pollution  
Date revised - 2012-10-01  
Language of summary - English  
Pages - 57-66  
ProQuest ID - 1093467038  
SubjectsTermNotLitGenreText - Soil; Chlorpyrifos; Prairies; Lakes; Sorbents; Organochlorine compounds; Pesticides; Air sampling; Trifluralin  
Last updated - 2012-11-20  
British nursing index edition - Air, Soil and Water Research. Vol. 3, pp. 57-66. 2010.  
Corporate institution author - Raina, Renata; Hall, Patricia  
DOI - 39ce2dce-51eb-44b8-b02fmfgefd101; 17174673; 1178-6221 English

1100. Rajasekaran, D.; Subbaraghavalu, G., and Jayapandian, P. Guillain-Barre Syndrome Due to Organophosphate Compound Poison.   
Rec #: 77829  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Acute manifestations of Organophosphate Compound (OPC) poison are due to effect cholinergic excess. Others are intermediate syndrome [IMS], organophosphate induced delayed neuropathy [OPIND] and chronic organophosphate induced neuropsychiatric disorder [COPIND]. All these manifestation have specific period of occurrence and duration. There are very sparse reports of toxic demylination due to OPC poisoning. We report a case of Guillain-Barre Syndrome (GBS) due to toxic demyelination following OPC poison.  
MESH HEADINGS: Adult  
MESH HEADINGS: Atropine/therapeutic use  
MESH HEADINGS: Chlorpyrifos/\*poisoning  
MESH HEADINGS: Cholinesterase Inhibitors/therapeutic use  
MESH HEADINGS: Cholinesterase Reactivators/therapeutic use  
MESH HEADINGS: Gastric Lavage  
MESH HEADINGS: Guillain-Barre Syndrome/\*chemically induced/drug therapy/therapy  
MESH HEADINGS: Humans  
MESH HEADINGS: Insecticides/\*poisoning  
MESH HEADINGS: Male  
MESH HEADINGS: Methylprednisolone/therapeutic use  
MESH HEADINGS: Neuroprotective Agents/therapeutic use  
MESH HEADINGS: Parasympatholytics/therapeutic use  
MESH HEADINGS: Plasmapheresis  
MESH HEADINGS: Pralidoxime Compounds/therapeutic use eng

1101. Raju, M. B.; Rao, C. N.; Kumar, G. V. R.; Rao, B. T.; Krishna, P. M.; Sreenivasulu, V.; Prasad, K., and Venkateswarlu, P. METHOD FOR THE DETERMINATION OF ORGANOPHOSPHORUS PESTICIDE RESIDUES IN OKRA (ABLEMOSCHUS ESCULENTUS) BY LIQUID CHROMATOGRAPHY-TANDEM MASS SPECTROMETRY. 2012; 35, (1-4): 375-384.   
Rec #: 67329  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A method basing on liquid chromatography-mass spectrometry (LC-MS/MS) was developed for sensitive determination of Organophosphorus pesticides namely Monochrotophos, Quinalphos and Chlorpyrifos in okra in Andhra Pradesh (South India). The method involves extraction of 10 g of homogenized okra samples (2 g of Sodium chloride + 8 g of Magnesium sulfate) with 10 mL of acetonitrile later cleaned up by dispersive solid phase extraction with the combination of primary secondary amine (PSA), graphitized carbon black (GCB), C18, and anhydrous magnesium sulfate. Final analysis was performed by liquid chromatography-dear() spray ionization-tandem mass spectrometry operated in the multiple reaction monitoring (MRM) mode, acquiring two specific precursor-production transitions per target compound. The average recoveries measured at 10 mu g/kg were in the range 81-106% for all of the compounds tested with relative standard deviations below 14%. The methodology has been proven to be highly efficient and robust and thus the method is highly suitable for monitoring the Maximum Residue Limits (MRL) compliance of the pesticides.  
Keywords: LC-MS/MS, matrix effect, okra, pesticide residues, QuEChERS method,  
ISI Document Delivery No.: 901LG

1102. Ramani, Vimal. Effect of pesticides on phosphate solubilization by Bacillus sphaericus and Pseudomonas cepacia. 2011 Mar; 99, (3): 232-236.   
Rec #: 3560  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Intensive screening of phosphate solubilizing bacteria with genetic potential for increased tolerance to high salt, high pH and high temperature could enhance production of food and forage in semi-arid regions. Emphasizing particularly on this hypothesis 165 phosphate solubilizing bacteria was isolated. Among these, two cultures Bacillus sphaericus and Pseudomonas cepacia were selected on the basis of salt tolerance property and PS activity with different forms of phosphates. In the present investigation both these culture were assessed for the effect of six different pesticides, to confirm its successful realistic application as microbial inoculants in actual farm conditions. Both cultures showed better phosphate solubilizing activity with phosphate containing pesticides. Among these two isolates P. cepacia was a better performer in terms of phosphate solubilizing activity with different pesticides. It may be due to its well documented extra ordinary, versatile metabolic activity. The present study may prove them to be potential candidates to be used as microbial inoculants. Phosphate solubilization/ Pesticides/ Microbial inoculants/ Phosphate solubilizing bacteria/ Bacillus sphaericus/ Pseudomonas cepacia

1103. Ramon-Azcon, J.; Sanchez-Baeza, F.; Sanvicens, N., and Marco, M. P. Development of an Enzyme-Linked Immunosorbent Assay for Determination of the Miticide Bromopropylate. 2009; 57, (2): 375-384.   
Rec #: 67349  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This paper reports for the first time the development of an immunoassay for the analysis of the miticide bromopropylate (BP). The chemical structure of the immunizing haptens was designed to maximize the recognition of the bis-bromophenyl group of BP. Thus, the assay uses polyclonal antibodies raised against 2,2-bis(4-bromophenyl)-N-2-hydroxyacetamide-butanoic acid (hapten 2) conjugated to keyhole **limpet hemocyanin from horseshoe. crab.** A heterologous indirect competitive enzyme-linked immunosorbent assay (ELISA) has been developed that can detect BP down to 0.14 mu g L(-1). The assay has been proven to tolerate a wide range of ionic strengths and pH values. Studies on the selectivity of this immunoassay have demonstrated a high recognition of related pesticides that contain a bis-halophenyl group in their structure. Other pesticides do not interfere in the analysis of BP using this immunochemical technique. Preliminary experiments have shown that BP can be directly analyzed in white wine samples down to 0.16 mu g L(-1) without the necessity of a cleanup procedure prior to the ELISA.  
Keywords: Pesticide, miticide, bromopropylate, antibody, hapten, immunoassay  
ISI Document Delivery No.: 397LU

1104. Randhawa, M. A.; Anjum, F. M.; Ahmed, A., and Randhawa, M. S. Field incurred chlorpyrifos and 3,5,6-trichloro-2-pyridinol residues in fresh and processed vegetables. 2007; 103, (3): 1016-1023.   
Rec #: 67359  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effect of washing, peeling and cooking on residue levels of chlorpyrifos and 3,5,6-trichloro-2-pyridinol (TCP) in winter (spinach, cauliflower, potato) and summer vegetables (eggplant, tomato, okra) was determined. Analysis was carried out by capillary gas chromatography (DB-5MS capillary column) with mass selective detection. The samples were collected from trials conducted under controlled conditions as well as from the farmer's field. In supervised field trials, the highest chlorpyrifos residue was found at raw stage in spinach (1.87 mg kg(-1)) followed by okra (1.41 mg kg(-1)) and eggplant (1.25 mg kg(-1)). The lowest residue of chlorpyrifos was recorded in cauliflower (0.036 mg kg(-1)). The chlorpyrifos residue reduced from 15 to 33% after washing, 65-85% post-peeling and cooking further lowered it from 12% to 48% in all the tested vegetables; while an increase in TCP concentration was observed during heat treatment. Out of 267 vegetable samples collected from the farmer's field, 225 samples contained detectable residues representing 84% rate of contamination. About 6% of samples contained chlorpyrifos residues above maximum residue limits (MRLs). However, vegetable processing reduced the chlorpyrifos residue below the MRL. (c) 2006 Elsevier Ltd. All rights reserved.  
Keywords: chlorpyrifos, TCP, vegetables, household processing, supervised field  
ISI Document Delivery No.: 153DI

1105. Rao, J. V. and Kavitha, P. In vitro Effects of Chlorpyrifos on the Acetylcholinesterase Activity of Euryhaline Fish, Oreochromis mossambicus. 2010; 65, (3-4): 303-306.   
Rec #: 67369  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The in vitro effect of a widely used organophosphorus insecticide, chlorpyrifos (CPP), on the acetylcholinesterase (AChE) activity was studied in vitro. The kinetic constants K(m) and V(max) and the bimolecular constant k(i) were determined in vitro. The in vitro AChE study indicated that CPP is neurotoxic and that it alters the apparent K(m) values widely in a concentration-dependent manner, resulting in a competitive type of inhibition. Based on the k(i) values, the sensitivity of AChE in brain is greater than that in gill tissue, at 7.3.10(-5) M and 11.92.10(-5) M, respectively. The study points to the importance of kinetic studies and the results suggest that in biomonitoring programmes brain AChE activity can be a good diagnostic tool for CPP toxicity.  
Keywords: Acetylcholinesterase, Chlorpyrifos, Oreochromis mossambicus  
ISI Document Delivery No.: 606QJ

1106. Rapaka, R. R.; Ricks, D. M.; Alcorn, J. F.; Chen, K.; Khader, S. A.; Zheng, M.; Plevy, S.; Bengt‚N, E., and Kolls, J. K. Conserved Natural Igm Antibodies Mediate Innate and Adaptive Immunity Against the Opportunistic Fungus Pneumocystis Murina.   
Rec #: 50399  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Host defense against opportunistic fungi requires coordination between innate and adaptive immunity for resolution of infection. Antibodies generated in mice vaccinated with the fungus Pneumocystis prevent growth of Pneumocystis organisms within the lungs, but the mechanisms whereby antibodies enhance antifungal host defense are poorly defined. Nearly all species of fungi contain the conserved carbohydrates &beta;-glucan and chitin within their cell walls, which may be targets of innate and adaptive immunity. **In this study, we show that natural IgM antibodies targeting these fungal cell wall carbohydrates are conserved across many species, including fish and mammals.** Natural antibodies bind fungal organisms and enhance host defense against Pneumocystis in early stages of infection. IgM antibodies influence recognition of fungal antigen by dendritic cells, increasing their migration to draining pulmonary lymph nodes. IgM antibodies are required for adaptive T helper type 2 (Th2) and Th17 cell differentiation and guide B cell isotype class-switch recombination during host defense against Pneumocystis. These experiments suggest a novel role for the IgM isotype in shaping the earliest steps in recognition and clearance of this fungus. We outline a mechanism whereby serum IgM, containing ancient specificities against conserved fungal antigens, bridges innate and adaptive immunity against fungal organisms.  
MESH HEADINGS: Adaptive Immunity/\*immunology  
MESH HEADINGS: Animals  
MESH HEADINGS: Antibodies, Bacterial/blood/immunology/metabolism  
MESH HEADINGS: Cell Wall/immunology/metabolism  
MESH HEADINGS: Immune Sera/adverse effects/immunology  
MESH HEADINGS: Immunity, Innate/\*immunology  
MESH HEADINGS: Immunoglobulin Heavy Chains/classification/genetics/immunology  
MESH HEADINGS: Immunoglobulin M/blood/genetics/\*immunology  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred BALB C  
MESH HEADINGS: Mice, Inbred C57BL  
MESH HEADINGS: Mice, Knockout  
MESH HEADINGS: Mice, SCID  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Phylogeny  
MESH HEADINGS: Pneumocystis/growth &amp  
MESH HEADINGS: development/\*immunology  
MESH HEADINGS: Pneumocystis carinii/growth &amp  
MESH HEADINGS: development/immunology  
MESH HEADINGS: Pneumonia, Pneumocystis/\*immunology/microbiology/prevention &amp  
MESH HEADINGS: control  
MESH HEADINGS: Protein Binding/immunology  
MESH HEADINGS: Species Specificity  
MESH HEADINGS: Th17 Cells/immunology  
MESH HEADINGS: Th2 Cells/immunology  
MESH HEADINGS: beta-Glucans/immunology/metabolism eng

1107. Raposo, R; Barroso, M; Fonseca, S; Costa, S; Queiroz, J a; Gallardo, E; Dias, M, and Raposo, R. Determination of Eight Selected Organophosphorus Insecticides in Postmortem Blood Samples Using Solid-Phase Extraction and Gas Chromatography/Mass Spectrometry. 2010 Nov 15; 24, (21): 3187-3194.   
Rec #: 43769  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A simple, rapid and sensitive method is described for the determination of omethoate, dimethoate, diazinon, chlorpyrifos, parathion-ethyl, chlorfenvinphos, quinalphos and azinphos-ethyl in postmortem whole blood samples. The analytes and internal standard (ethion) were isolated from the matrix by solid-phase extraction, and were analysed by gas chromatography/mass spectrometry in the selected ion monitoring mode. The method has shown to be selective after analysis of postmortem samples of 40 different origins. Calibration curves were established between 0.05 (0.1 for omethoate) and 25 mu g/mL, and the values obtained for intra- and interday precision and accuracy were within the criteria usually accepted for bioanalytical method validation. Lower limits of quantitation were 50 ng/mL for all compounds, except for omethoate (100 ng/mL); the limits of identification of the method were 25 ng/mL for all analytes, except for omethoate, for which 50 ng/mL was obtained. Absolute recovery was determined at three concentration levels, and ranged from 31 to 108%. The proposed method is simple and fast, and can be routinely applied in the determination of these compounds in postmortem whole blood samples within the scope of forensic toxicology. In addition, mass spectrometry has demonstrated to be a powerful and indispensable tool for the unequivocal identification of the analytes, since the acceptance criteria were accomplished even at very low levels, thus allowing obtaining forensically valid and sound results.  
Keywords: Chlorpyrifos  
Keywords: Organophosphorus compounds  
Keywords: Gas chromatography  
Keywords: Pesticides  
Keywords: Mass spectrometry  
Keywords: quinalphos  
Keywords: Environment Abstracts  
Keywords: Diazinon  
Keywords: dimethoate  
Keywords: Toxicology  
Keywords: ENA 02:Toxicology & Environmental Safety  
Date revised - 2012-01-01  
Language of summary - English  
Pages - 3187-3194  
ProQuest ID - 901682509  
SubjectsTermNotLitGenreText - Chlorpyrifos; Organophosphorus compounds; Gas chromatography; Pesticides; Mass spectrometry; quinalphos; Diazinon; dimethoate; Toxicology  
Last updated - 2012-03-29  
British nursing index edition - Rapid Communications in Mass Spectrometry [Rapid Commun. Mass Spectrom.]. Vol. 24, no. 21, pp. 3187-3194. 15 Nov 2010.  
Corporate institution author - Raposo, R; Barroso, M; Fonseca, S; Costa, S; Queiroz, J A; Gallardo, E; Dias, M  
DOI - fef76905-6dc2-4eb7-97fbcsaobj201; 15267468; 1097-0231 English

1108. Rasoul, G. M. A.; Abou Salem, M. E.; Mechael, A. A.; Hendy, O. M.; Rohlman, D. S., and Ismail, A. A. Effects of occupational pesticide exposure on children applying pesticides. 2008; 29, (5): 833-838.   
Rec #: 67389  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Nearly 40% of the Egyptian workforce is employed in agriculture. The cotton industry relies on children and adolescents, who work seasonally, to apply pesticides to the cotton crops. Although previous research has examined adult pesticide exposures in this workforce in Egypt, no research has examined the health effects in adolescents. This study attempts to systematically replicate findings examining the impact of organophosphate pesticide (OP) exposure in adults on Arabic speaking children working as applicators. The aim of this study was to examine the impact of pesticide exposure on children and adolescents spraying cotton fields. Male children currently applying pesticides between the ages of 9 and 15 (Younger, n = 30) and 16 and 19 (Older, n = 20) were recruited for the study. They completed a neurobehavioral test battery: personality inventory; work, health, and exposure questionnaires; and medical and neurological screening exams. Blood samples were collected to measure acetylcholinesterase. Children not working in agriculture, matched on age and education, served as controls. Both Younger and Older applicator groups, performed significantly worse than the controls on the majority of neurobehavioral tests controlling for age and years of education. The applicators reported significantly more neurological symptoms than the controls and had lower acetylcholinesterase activity. A dose-effect relationship demonstrated that increased years of exposure to organophosphate pesticides is associated with cognitive deficits. This is one of the several studies demonstrating that functional cognitive effects are positively correlated with increased years of exposure to OP pesticides, though primarily in adult populations, building confidence in the association. Since children around the world are exposed to OP pesticides, these studies suggest that the need to evaluate this potential problem is urgent. (C) 2008 Elsevier Inc. All rights reserved.  
Keywords: Neurobehavioral tests, Adolescents, Pesticides, AChE, Seasonal  
ISI Document Delivery No.: 366XE

1109. Rastogi, S K; Tripathi, S; Ravishanker, D, and Rastogi, S K. A Study of Neurologic Symptoms on Exposure to Organophosphate Pesticides in the Children of Agricultural Workers. 2010 Aug; 14, (2): 54-57.   
Rec #: 43969  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticides are used extensively throughout the world in agriculture and in pest control as well as for community health purposes. Organophosphate (OP) pesticide self-poisoning is an important clinical problem in rural regions of the developing world that kills an estimated 200,000 people every year. Unintentional poisoning kills far fewer people but is an apparent problem in places where highly toxic OP pesticides are available. Neurologic dysfunction is the best documented health effect of pesticide exposure. High-level exposure has both acute and long-term neurologic signs and symptoms, and adverse effects have been reported in most type of pesticides, including organophosphate (OP), carbamate, organochlorine, and pyrethroid insecticides, herbicides, fungicides, and fumigants. Acute OP pesticide exposure can involve in wide range of both central and peripheral neurologic symptoms. Increased neurologic symptom prevalence may provide early evidence of neurologic dysfunctions, before clinically measurable signs are evident. In this study, we analyzed the cross-sectional data on neurologic signs and symptoms from 225 rural children, both males (n = 132) and females (n = 93) who were occupationally and paraoccupationally exposed to methyl OPs (dichlorvos, fenthion, malathion, methyl parathion) and ethyl OPs (chlorpyrifos, diazinon, ethyl parathion) as they belonged to agricultural families handling, mixing, and spraying the OP pesticides. The children completed a specially designed questionnaire (Q16) on neurologic symptoms associated with pesticide exposure with their parental help. A suitable reference group consisting of rural children (n = 50) never involved in pesticide handling (neither outdoor nor indoor) belonging to similar socioeconomic strata included in the study to compare the prevalence of various neurologic symptoms between the two groups. Among all the neurologic self-reported symptoms, headache, watering in eyes, and burning sensation in eye/face were the most important clinical manifestations attributed to OP pesticide exposure. These symptoms could probably be the consequence of chronic effects of most pesticides on the central nervous system. The muscarinic symptoms reported the maximum prevalence of salivation (18.22%), whereas lacrimation was observed in 17.33% cases, followed by diarrhea in 9.33% cases. The nicotinic clinical manifestations of acute OP poisoning revealed excessive sweating in 13.78% cases and tremors in 9.3% cases followed by mydriasis in 8.4% exposed children. The characteristic cholinergic symptoms, such as insomnia, headache, muscle cramps, weakness, and anorexia were also reported by both male and female exposed children. The high frequency of neurologic symptoms observed in the study may be due to parasympathetic hyperactivity due to the accumulated ACh resulting from AChE inhibition.  
Keywords: Agriculture  
Keywords: Central nervous system  
Keywords: Fumigants  
Keywords: Organophosphates  
Keywords: Malathion  
Keywords: Headache  
Keywords: Methyl parathion  
Keywords: tremor  
Keywords: Occupational exposure  
Keywords: Pesticides (organophosphorus)  
Keywords: Inventories  
Keywords: Diarrhea  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: Muscles  
Keywords: Poisoning  
Keywords: H 1000:Occupational Safety and Health  
Keywords: organophosphates  
Keywords: Children  
Keywords: Chlorpyrifos  
Keywords: anorexia  
Keywords: Fungicides  
Keywords: Pesticides  
Keywords: Diazinon  
Keywords: CSA Neurosciences Abstracts; Health & Safety Science Abstracts  
Keywords: Rural areas  
Keywords: Parathion  
Keywords: Hyperactivity  
Date revised - 2011-12-01  
Language of summary - English  
Pages - 54-57  
ProQuest ID - 911166655  
SubjectsTermNotLitGenreText - Agriculture; Central nervous system; Pesticides (organophosphorus); Inventories; Diarrhea; Fumigants; Poisoning; Muscles; organophosphates; Children; Malathion; anorexia; Pesticides; Headache; Methyl parathion; tremor; Diazinon; Occupational exposure; Hyperactivity; Chlorpyrifos; Organophosphates; Fungicides; Parathion; Rural areas  
Last updated - 2012-04-06  
British nursing index edition - Indian Journal of Occupational & Environmental Medicine [Indian J. Occup. Environ. Med.]. Vol. 14, no. 2, pp. 54-57. May-Aug 2010.  
Corporate institution author - Rastogi, S K; Tripathi, S; Ravishanker, D  
DOI - MD-0017879074; 16084116; 0973-2284 English

1110. Rauch, S. A.; Braun, J. M.; Barr, D. B.; Calafat, A. M.; Khoury, J.; Montesano, M. A.; Yolton, K., and Lanphear, B. P. Associations of Prenatal Exposure to Organophosphate Pesticide Metabolites with Gestational Age and Birth Weight. 2012; 120, (7): 1055-1060.   
Rec #: 67399  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: Prenatal exposure to organophosphate (OP) insecticides, a widely used class of pesticides, may be associated with decreased gestational age and lower birth weight. Single nucleotide polymorphisms in paroxanase (PON1) enzyme genotypes may modify the relationships between OP exposure and perinatal outcomes. OBJECTIVE: We examined the relationship of prenatal OP insecticide exposure, measured using urinary dialkyl phosphate (DAP) metabolite concentrations, With gestational age and birth weight. METHODS: We measured the concentrations of six nonspecific DAP metabolites of OP insecticides in two maternal spot urine samples collected in a prospective birth cohort. We performed multi-variable regression to examine associations between the sum of six DAP concentrations (Sigma DAP) with gestational age and birth weight. We also examined whether these associations differed according to infant PON1(192) and PON1(-108) genotypes. RESULTS: Among 306 mother-infant dyads, a 10-fold increase in Sigma DAP concentrations was associated with a decrease in covariate-adjusted gestational age [-0.5 weeks; 95% confidence interval (Cl): -0.8, 0.1] and birth weight (-151 gt CI: -287, -16); the decrements in birth weight were attenuated after adjusting for gestational age. The relationship between Sigma DAP concentrations and gestational age was stronger for white (-0.7 weeks; CI: -1.1, -0.3) than for black (-0.1 weeks; 95% CI: -0.9, 0.6) newborns. In contrast, there was a greater decrease in birth weight with increasing urinary Sigma DAP concentrations for black (-188 g; CI: -395, 19) than for white (-118 g; CI: -296, 60) newborns. Decrements in birth weight and gestational age associated with Sigma DAP concentrations were greatest among infants with PON1(192QR) and PON(-108CT) genotypes. CONCLUSIONS: Prenatal urinary Sigma DAP concentrations were associated with shortened gestation and reduced birth weight in this cohort, but the effects differed by race/ethnicity and PON1(192/108) genotypes.  
Keywords: birth weight, DAPs, fetal growth, gestational age, OPs, organophosphate,  
ISI Document Delivery No.: 969DG

1111. Rauh, V. A.; Whyatt, R. W.; Perera, F. P.; Andrews, H. F.; Garfinkel, R., and Tang, D. L. Prenatal chlorpyrifos and early neurodevelopment: How good is the science? In reply. 2007; 120, (1): 243-244.   
Rec #: 67429  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ISI Document Delivery No.: 185OC

1112. Rauh, Virginia; Arunajadai, Srikesh; Horton, Megan; Perera, Frederica; Hoepner, Lori; Barr, Dana B, and Whyatt, Robin. Seven-Year Neurodevelopmental Scores and Prenatal Exposure to Chlorpyrifos, a Common Agricultural Pesticide. 2011 Aug; 119, (8): 1196-201.   
Rec #: 39549  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In a longitudinal birth cohort study of inner-city mothers and children (Columbia Center for Children's Environmental Health), we have previously reported that prenatal exposure to chlorpyrifos (CPF) was associated with neurodevelopmental problems at 3 years of age. **The goal of the study was to estimate the relationship between prenatal CPF exposure and neurodevelopment among cohort children at 7 years of age.**  In a sample of 265 children, participants in a prospective study of air pollution, we measured prenatal CPF exposure using umbilical cord blood plasma (picograms/gram plasma) and 7-year neurodevelopment using the Wechsler Intelligence Scale for Children, 4th edition (WISC-IV). Linear regression models were used to estimate associations, with covariate selection based on two alternate approaches. On average, for each standard deviation increase in CPF exposure (4.61 pg/g), Full-Scale intelligence quotient (IQ) declined by 1.4% and Working Memory declined by 2.8%. Final covariates included maternal educational level, maternal IQ, and quality of the home environment. We found no significant interactions between CPF and any covariates, including the other chemical exposures measured during the prenatal period (environmental tobacco smoke and polycyclic aromatic hydrocarbons). We report evidence of deficits in Working Memory Index and Full-Scale IQ as a function of prenatal CPF exposure at 7 years of age. These findings are important in light of continued widespread use of CPF in agricultural settings and possible longer-term educational implications of early cognitive deficits.  
Keywords: Young Adult  
Keywords: Intelligence -- drug effects  
Keywords: Memory -- drug effects  
Keywords: Humans  
Keywords: Child  
Keywords: Pesticides -- toxicity  
Keywords: Pregnancy  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Pesticides  
Keywords: Adult  
Keywords: Adolescent  
Keywords: Male  
Keywords: Female  
Keywords: Prenatal Exposure Delayed Effects  
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Place of publication - Research Triangle Park  
Corporate institution author - Rauh, Virginia; Arunajadai, Srikesh; Horton, Megan; Perera, Frederica; Hoepner, Lori; Barr, Dana B; Whyatt, Robin  
DOI - 2444114951; 64007581; 67001; ENHP; 21507777; INODENHP0007385678  
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Rec #: 46719  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Prenatal exposure to chlorpyrifos (CPF), an organophosphate insecticide, is associated with neurobehavioral deficits in humans and animal models. We investigated associations between CPF exposure and brain morphology using magnetic resonance imaging in 40 children, 5.9-11.2 y, selected from a nonclinical, representative community-based cohort. Twenty high-exposure children (upper tertile of CPF concentrations in umbilical cord blood) were compared with 20 low-exposure children on cortical surface features; all participants had minimal prenatal exposure to environmental tobacco smoke and polycyclic aromatic hydrocarbons. High CPF exposure was associated with enlargement of superior temporal, posterior middle temporal, and inferior postcentral gyri bilaterally, and enlarged superior frontal gyrus, gyrus rectus, cuneus, and precuneus along the mesial wall of the right hemisphere. Group differences were derived from exposure effects on underlying white matter. A significant exposure Ã— IQ interaction was derived from CPF disruption of normal IQ associations with surface measures in low-exposure children. In preliminary analyses, high-exposure children did not show expected sex differences in the right inferior parietal lobule and superior marginal gyrus, and displayed reversal of sex differences in the right mesial superior frontal gyrus, consistent with disruption by CPF of normal behavioral sexual dimorphisms reported in animal models. High-exposure children also showed frontal and parietal cortical thinning, and an inverse dose-response relationship between CPF and cortical thickness. This study reports significant associations of prenatal exposure to a widely used environmental neurotoxicant, at standard use levels, with structural changes in the developing human brain.  
Keywords: 2921-88-2  
Keywords: Magnetic Resonance Imaging  
Keywords: Fetal Blood -- chemistry  
Keywords: Organophosphates  
Keywords: Humans  
Keywords: Child  
Keywords: Nervous System Malformations -- chemically induced  
Keywords: Pesticides -- toxicity  
Keywords: Pregnancy  
Keywords: Chlorpyrifos  
Keywords: Brain -- abnormalities  
Keywords: New York City  
Keywords: 0  
Keywords: Prospective Studies  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Cognition -- drug effects  
Keywords: Brain -- pathology  
Keywords: Organophosphates -- toxicity  
Keywords: Pesticides  
Keywords: Cohort Studies  
Keywords: Adult  
Keywords: Female  
Keywords: Prenatal Exposure Delayed Effects  
Keywords: Intelligence Tests  
Date completed - 2012-07-27  
Date created - 2012-05-16  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 7871-7876  
ProQuest ID - 1014110419  
SuppNotes - Comment In: Proc Natl Acad Sci U S A. 2012 Aug 14;109(33):E2195; author reply E2196[22797900]  
Last updated - 2013-01-19  
British nursing index edition - Proceedings of the National Academy of Sciences of the United States of America, May 15, 2012, 109(20):7871-7876  
Corporate institution author - Rauh, Virginia A; Perera, Frederica P; Horton, Megan K; Whyatt, Robin M; Bansal, Ravi; Hao, Xuejun; Liu, Jun; Barr, Dana Boyd; Slotkin, Theodore A; Peterson, Bradley S  
DOI - MEDL-22547821; 22547821; PMC3356641; 1091-6490 eng

1114. Ravelo-Perez, Lidia M; Hernandez-Borges, Javier; Rodriguez-Delgado, Miguel Angel, and Ravelo-Perez, Lidia M. Multi-Walled Carbon Nanotubes as Efficient Solid-Phase Extraction Materials of Organophosphorus Pesticides From Apple, Grape, Orange and Pineapple Fruit Juices. 2008 Nov; 1212, (1-2): 33-42.   
Rec #: 49089  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Multi-walled carbon nanotubes (MWCNTs) have been used for the first time as solid-phase extraction (SPE) sorbents for the extraction of eight organophosphorus pesticides (i.e. ethoprophos, diazinon, chlorpyriphos- methyl, fenitrothion, malathion, chlorpyriphos, fenamiphos and buprofezin) from different commercial fruit juices (i.e. apple, grape, orange and pineapple). The developed method, which involves SPE and direct gas chromatography with nitrogen phosphorus detection analysis, is very fast, simple and cheap: only 1:1 dilution with Milli-Q water and pH adjustment to 6.0 of 10 mL of juice is necessary prior to a quick MWCNTs-SPE procedure that used only 40 mg of stationary phase (MWCNTs of 10-15 nm o.d., 2-6 nm i.d. and 0.1-10 mu m length). Mean recovery values were above 73% for all the pesticides and fruit juices (between 77 and 101% for apple juice, 75 and 103% for grape juice, 73 and 103% for orange juice and 73 and 93% for pineapple juice) with a relative standard deviation (RSD) lower than 8.5% in all cases. Matrix matched calibration was carried out for each sample matrix since statistical differences between the calibration curves constructed is pure solvent and in the reconstructed juice extracts were found. Limits of detection ranged between 1.85 and 7.32 mu g/L (which also represents LODs between 1.85 and 7.34 mu g/kg) well below the European Union maximum residue limits for the raw fruits. The proposed method, which is demonstrated to be quick, cheap, accurate and highly selective, was also applied to the analysis of this group of pesticides in several commercial juices in which none of the selected pesticides were found.  
Keywords: Citrus  
Keywords: Fruits  
Keywords: Pesticides (organophosphorus)  
Keywords: Statistics  
Keywords: Phosphorus  
Keywords: Solvents  
Keywords: X 24320:Food Additives & Contaminants  
Keywords: Fenitrothion  
Keywords: Malathion  
Keywords: fenamiphos  
Keywords: stationary phase  
Keywords: Fruit juices  
Keywords: Carbon  
Keywords: Standard deviation  
Keywords: Gas chromatography  
Keywords: Malus  
Keywords: nanotubes  
Keywords: Vitaceae  
Keywords: pH effects  
Keywords: Diazinon  
Keywords: Pollution Abstracts; Toxicology Abstracts  
Keywords: Nitrogen  
Date revised - 2009-01-01  
Language of summary - English  
Pages - 33-42  
ProQuest ID - 19569049  
SubjectsTermNotLitGenreText - Malus; Vitaceae; Citrus; Fruit juices; Carbon; nanotubes; Pesticides (organophosphorus); Statistics; Standard deviation; Nitrogen; Fruits; Solvents; Malathion; stationary phase; pH effects; Fenitrothion; fenamiphos; Phosphorus; Gas chromatography; Diazinon  
Last updated - 2011-12-14  
British nursing index edition - Journal of Chromatography A [J. Chromatogr.]. Vol. 1212, no. 1-2, pp. 33-42. Nov 2008.  
Corporate institution author - Ravelo-Perez, Lidia M; Hernandez-Borges, Javier; Rodriguez-Delgado, Miguel Angel  
DOI - MD-0009026469; 8840245; 0021-9673 English

1115. Reddy, G. P. V. and Prasad, V. D. The Problem of Insecticide Resistance in Gram Caterpillar, Heliothis armigera, and Tobacco Caterpillar, Spodoptera litura, in India - Assessment and Future Strategies. 1991; 32, (3): 365-366.   
Rec #: 290  
Keywords: NO CONC,NO DURATION  
Call Number: NO CONC (ACP,CBL,CPY,CYP,DM,ES,FNV), NO DURATION (ACP,CBL,CPY,CYP,DM,ES,FNV)  
Notes: Chemical of Concern: ACP,CBL,CPY,CYP,DDT,DM,ES,FNV

1116. Reder, A.; H”Per, D.; Gerth, U., and Hecker, M. Contributions of Individual &Sigma;B-Dependent General Stress Genes to Oxidative Stress Resistance of Bacillus Subtilis.   
Rec #: 73429  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: The general stress regulon of Bacillus subtilis comprises approximately 200 genes and is under the control of the alternative sigma factor &sigma;(B). The activation of &sigma;(B) occurs in response to multiple physical stress stimuli as well as energy starvation conditions. The expression of the general stress proteins provides growing and stationary nonsporulating vegetative cells with nonspecific and broad stress resistance. A previous comprehensive phenotype screening analysis of 94 general stress gene mutants in response to severe growth-inhibiting stress stimuli, including ethanol, NaCl, heat, and cold, indicated that secondary oxidative stress may be a common component of severe physical stress. Here we tested the individual contributions of the same set of 94 mutants to the development of resistance against exposure to the superoxide-generating agent paraquat and hydrogen peroxide (H(2)O(2)). In fact, 62 mutants displayed significantly decreased survival rates in response to paraquat and/or H(2)O(2) stress compared to the wild type at a confidence level of an &alpha; value of &le; 0.01. Thus, we were able to assign 47 general stress genes to survival against superoxide, 6 genes to protection from H(2)O(2) stress, and 9 genes to the survival against both. Furthermore, we show that a considerable overlap exists between the phenotype clusters previously assumed to be involved in oxidative stress management and the actual group of oxidative-stress-sensitive mutants. Our data provide information that many general stress proteins with still unknown functions are implicated in oxidative stress resistance and further support the notion that different severe physical stress stimuli elicit a common secondary oxidative stress.  
MESH HEADINGS: Bacillus subtilis/\*physiology  
MESH HEADINGS: Bacterial Proteins/genetics/\*metabolism  
MESH HEADINGS: Gene Expression Profiling  
MESH HEADINGS: Gene Expression Regulation, Bacterial/\*physiology  
MESH HEADINGS: Genomics  
MESH HEADINGS: Hydrogen Peroxide  
MESH HEADINGS: Microbial Viability/drug effects  
MESH HEADINGS: Oxidants/pharmacology  
MESH HEADINGS: Oxidative Stress/\*physiology  
MESH HEADINGS: Paraquat/pharmacology eng

1117. Redman, R. S.; Kim, Y. O.; Woodward, C. J.; Greer, C.; Espino, L.; Doty, S. L., and Rodriguez, R. J. Increased Fitness of Rice Plants to Abiotic Stress Via Habitat Adapted Symbiosis: a Strategy for Mitigating Impacts of Climate Change.   
Rec #: 50149  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Mol Evol. 1999 May;48(5):597-604 (medline /10198125)  
COMMENTS: Cites: FEMS Microbiol Lett. 1999 Dec 15;181(2):297-302 (medline /10585552)  
COMMENTS: Cites: Ann Bot. 2002 Aug;90(2):259-67 (medline /12197524)  
COMMENTS: Cites: Science. 2002 Nov 22;298(5598):1581 (medline /12446900)  
COMMENTS: Cites: Plant Physiol. 1951 Jan;26(1):192-5 (medline /16654351)  
COMMENTS: Cites: J Mol Evol. 2004 Apr;58(4):424-41 (medline /15114421)  
COMMENTS: Cites: New Phytol. 2005 Apr;166(1):49-60 (medline /15760350)  
COMMENTS: Cites: Science. 2007 Jan 26;315(5811):513-5 (medline /17255511)  
COMMENTS: Cites: Evol Dev. 2003 Jan-Feb;5(1):25-33 (medline /12492406)  
ABSTRACT: Climate change and catastrophic events have contributed to rice shortages in several regions due to decreased water availability and soil salinization. Although not adapted to salt or drought stress, two commercial rice varieties achieved tolerance to these stresses by colonizing them with Class 2 fungal endophytes isolated from plants growing across moisture and salinity gradients.Plant growth and development, water usage, ROS sensitivity and osmolytes were measured with and without stress under controlled conditions.The endophytes conferred salt, drought and cold tolerance to growth chamber and greenhouse grown plants. Endophytes reduced water consumption by 20-30% and increased growth rate, reproductive yield, and biomass of greenhouse grown plants. In the absence of stress, there was no apparent cost of the endophytes to plants, however, endophyte colonization decreased from 100% at planting to 65% compared to greenhouse plants grown under continual stress (maintained 100% colonization).These findings indicate that rice plants can exhibit enhanced stress tolerance via symbiosis with Class 2 endophytes, and suggest that symbiotic technology may be useful in mitigating impacts of climate change on other crops and expanding agricultural production onto marginal lands.  
MESH HEADINGS: Adaptation, Physiological/drug effects/\*physiology  
MESH HEADINGS: Biomass  
MESH HEADINGS: Climate Change  
MESH HEADINGS: Cold Temperature  
MESH HEADINGS: Droughts  
MESH HEADINGS: \*Ecosystem  
MESH HEADINGS: Fungi/physiology  
MESH HEADINGS: Fusarium/physiology  
MESH HEADINGS: Host-Pathogen Interactions  
MESH HEADINGS: Oryza sativa/metabolism/microbiology/\*physiology  
MESH HEADINGS: Reactive Nitrogen Species/metabolism  
MESH HEADINGS: Salinity  
MESH HEADINGS: Seedling/metabolism/microbiology/physiology  
MESH HEADINGS: Sodium Chloride/pharmacology  
MESH HEADINGS: Symbiosis/drug effects/\*physiology  
MESH HEADINGS: Water/pharmacology eng

1118. Reish, D. J. and Kauwling, T. J. Marine and Estuarine Pollution. 8109//: 1978; 50, (6): 1424-1468.   
Rec #: 1900  
Keywords: REVIEW  
Call Number: NO REVIEW (CPY)  
Notes: EcoReference No.: 53537  
Chemical of Concern: CPY

1119. Reiss, R.; Neal, B.; Lamb, J. C., and Juberg, D. R. Acetylcholinesterase Inhibition Dose-Response Modeling for Chlorpyrifos and Chlorpyrifos-Oxon. Exponent, 1800 Diagonal Road, Suite 500, Alexandria, VA 22314, USA. rreiss@exponent.com//: 2012; 63, (1): 124-131.   
Rec #: 2890  
Keywords: NO DURATION  
Call Number: NO DURATION (CPY,CPYO)  
Notes: Chemical of Concern: CPY,CPYO

1120. Ren, H.; Yu, D.; Ge, B.; Cook, B.; Xu, Z., and Zhang, S. High-Level Production, Solubilization and Purification of Synthetic Human Gpcr Chemokine Receptors Ccr5, Ccr3, Cxcr4 and Cx3cr1.   
Rec #: 50949  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Nucleic Acids Res. 2002 May 15;30(10):e43 (medline /12000848)  
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COMMENTS: Cites: J Struct Funct Genomics. 2005;6(2-3):159-63 (medline /16211513)  
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COMMENTS: Cites: Nat Rev Mol Cell Biol. 2002 Sep;3(9):639-50 (medline /12209124)  
COMMENTS: Cites: FEBS Lett. 2002 Jun 5;520(1-3):97-101 (medline /12044878)  
COMMENTS: Cites: Science. 2002 May 31;296(5573):1636-9 (medline /12040175)  
ABSTRACT: Chemokine receptors belong to a class of integral membrane G-protein coupled receptors (GPCRs) and are responsible for transmitting signals from the extracellular environment. However, the structural changes in the receptor, connecting ligand binding to G-protein activation, remain elusive for most GPCRs due to the difficulty to produce them for structural and functional studies. We here report high-level production in E.coli of 4 human GPCRs, namely chemokine receptors (hCRs) CCR5, CCR3, CXCR4 and CX3CR1 that are directly involved in HIV-1 infection, asthma and cancer metastasis. The synthetic genes of CCR5, CCR3, CXCR4 and CX3CR1 were synthesized using a two-step assembly/amplification PCR method and inserted into two different kinds of expression systems. After systematic screening of growth conditions and host strains, TB medium was selected for expression of pEXP-hCRs. The low copy number pBAD-DEST49 plasmid, with a moderately strong promoter tightly regulated by L-arabinose, proved helpful for reducing toxicity of expressed membrane proteins. The synthetic Trx-hCR fusion genes in the pBAD-DEST49 vector were expressed at high levels in the Top10 strain. After a systematic screen of 96 detergents, the zwitterionic detergents of the Fos-choline series (FC9-FC16) emerged as the most effective for isolation of the hCRs. The FC14 was selected both for solubilization from bacterial lysates and for stabilization of the Trx-hCRs during purification. Thus, the FC-14 solubilized Trx-hCRs could be purified using size exclusion chromatography as monomers and dimers with the correct apparent MW and their alpha-helical content determined by circular dichroism. The identity of two of the expressed hCRs (CCR3 and CCR5) was confirmed using immunoblots using specific monoclonal antibodies. After optimization of expression systems and detergent-mediated purification procedures, we achieved large-scale, high-level production of 4 human GPCR chemokine receptor in a two-step purification, yielding milligram quantities of CCR5, CCR3, CXCR4 and CX3CR1 for biochemical, biophysical and structural analysis.  
MESH HEADINGS: Cloning, Molecular/\*methods  
MESH HEADINGS: Escherichia coli/genetics  
MESH HEADINGS: Humans  
MESH HEADINGS: Nucleic Acid Amplification Techniques  
MESH HEADINGS: Polymerase Chain Reaction  
MESH HEADINGS: Receptors, CCR3/biosynthesis/genetics/isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: Receptors, CCR5/biosynthesis/genetics/isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: Receptors, CXCR4/biosynthesis/genetics/isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: Receptors, Chemokine/\*biosynthesis/genetics/isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: \*Receptors, G-Protein-Coupled eng

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Rec #: 67519  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY  
Abstract: ISI Document Delivery No.: 206RM

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Rec #: 50889  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Eur J Nucl Med Mol Imaging. 2008 Dec;35(12):2267-74 (medline /18622612)  
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COMMENTS: Cites: Invest Radiol. 2003 Aug;38(8):473-81 (medline /12874513)  
COMMENTS: Cites: N Engl J Med. 2003 Jul 10;349(2):125-38 (medline /12853585)  
COMMENTS: Cites: Transplantation. 2003 Mar 15;75(5):689-97 (medline /12640311)  
COMMENTS: Cites: Radiology. 2002 May;223(2):446-51 (medline /11997551)  
COMMENTS: Cites: J Clin Oncol. 2002 Jan 15;20(2):379-87 (medline /11786564)  
COMMENTS: Cites: J Am Soc Nephrol. 2001 Dec;12(12):2753-8 (medline /11729245)  
COMMENTS: Cites: BJU Int. 2001 Mar;87(4):295-306 (medline /11251519)  
COMMENTS: Cites: Eur J Nucl Med. 2000 Jul;27(7):871-9 (medline /10952501)  
COMMENTS: Cites: Transplantation. 2000 Oct 15;70(7):1098-100 (medline /11045649)  
COMMENTS: Cites: Pflugers Arch. 2008 Sep;456(6):1075-84 (medline /18335234)  
ABSTRACT: BACKGROUND: At present, renal grafts are the most common solid organ transplants world-wide. Given the importance of renal transplantation and the limitation of available donor kidneys, detailed analysis of factors that affect transplant survival are important. Despite the introduction of new and effective immunosuppressive drugs, acute cellular graft rejection (AR) is still a major risk for graft survival. Nowadays, AR can only be definitively by renal biopsy. However, biopsies carry a risk of renal transplant injury and loss. Most important, they can not be performed in patients taking anticoagulant drugs.  
ABSTRACT: METHODOLOGY/PRINCIPAL FINDINGS: We present a non-invasive, entirely image-based method to assess AR in an allogeneic rat renal transplantation model using small animal positron emission tomography (PET) and (18)F-fluorodeoxyglucose (FDG). 3 h after i.v. injection of 30 MBq FDG into adult uni-nephrectomized, allogeneically transplanted rats, tissue radioactivity of renal parenchyma was assessed in vivo by a small animal PET-scanner (post operative day (POD) 1,2,4, and 7) and post mortem dissection. The mean radioactivity (cps/mm(3) tissue) as well as the percent injected dose (%ID) was compared between graft and native reference kidney. Results were confirmed by histological and autoradiographic analysis. Healthy rats, rats with acute CSA nephrotoxicity, with acute tubular necrosis, and syngeneically transplanted rats served as controls. FDG-uptake was significantly elevated only in allogeneic grafts from POD 1 on when compared to the native kidney (%ID graft POD 1: 0.54+/-0.06; POD 2: 0.58+/-0.12; POD 4: 0.81+/-0.06; POD 7: 0.77+/-0.1; CTR: 0.22+/-0.01, n = 3-28). Renal FDG-uptake in vivo correlated with the results obtained by micro-autoradiography and the degree of inflammatory infiltrates observed in histology.  
ABSTRACT: CONCLUSIONS/SIGNIFICANCE: We propose that graft FDG-PET imaging is a new option to non-invasively, specifically, early detect, and follow-up acute renal rejection. This method is potentially useful to improve post-transplant rejection monitoring.  
MESH HEADINGS: Animals  
MESH HEADINGS: Fluorodeoxyglucose F18/diagnostic use  
MESH HEADINGS: Graft Rejection/pathology/\*radionuclide imaging  
MESH HEADINGS: Kidney/immunology/pathology/\*radionuclide imaging  
MESH HEADINGS: Kidney Transplantation/pathology/\*radionuclide imaging  
MESH HEADINGS: Male  
MESH HEADINGS: Positron-Emission Tomography/\*methods  
MESH HEADINGS: Rats  
MESH HEADINGS: Rats, Inbred Lew  
MESH HEADINGS: Rats, Inbred Strains  
MESH HEADINGS: Transplantation, Homologous eng

1123. Reyes, Maritza; Collange, Beatrice; Rault, Magali; Casanelli, Stefano, and Sauphanor, Beno+ t. Combined detoxification mechanisms and target mutation fail to confer a high level of resistance to organophosphates in Cydia pomonella (L.) (Lepidoptera: Tortricidae). 2011 Jan; 99, (1): 25-32.   
Rec #: 4380  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Despite the frequent and widespread applications of organophosphates against **Cydia pomonella** this species has developed low levels of resistance to this chemical group. Investigations concerning the mechanisms involved in resistance are scarce, and usually consider only one of the potential mechanisms. With the aim of a better understanding the resistance mechanisms and their possible interaction, **four of these mechanisms were investigated simultaneously in one sensitive (Sv) and two resistant strains (Raz and Rdfb) of this insect.** Resistant strains displayed an increased mixed function oxidase activity, whereas carboxylesterase activity varied upon the substrate used. The three strains had similar +\_-naphtyl acetate activity, and the hydrolysis of +\_-naphthyl acetate and p-nitrophenyl valerate was higher in the Sv strain. The p-nitrophenyl acetate activity was highest in the resistant strains and was strongly inhibited by azinphos and DEF. The Raz strain has a modified acetylcholinesterase (AChE), which resulted in a 0.7-, 3.2- and 21.2-fold decrease in the susceptibility to chlorpyriphos-ethyl-oxon, azinphos-methyl-oxon, and paraoxon-methyl, respectively. These combined resistance mechanisms only conferred to Raz a 0.6-, 7.9- and 3.1-fold resistance to the related insecticides. Organophosphates resistance in C. pomonella results from a combination of mechanisms including modified affinities to carboxylesterase substrates, and increased metabolisation of the insecticide. The apparent antagonism between increased functionalisation and reduced sensitivity of the AChE target is discussed. Carboxylesterases/ p-NPA/ Electrophoresis/ Organophosphates/ AChE

1124. Rhaleb, N. E.; Pokharel, S.; Sharma, U., and Carretero, O. A. Renal Protective Effects of N-Acetyl-Ser-Asp-Lys-Pro in Deoxycorticosterone Acetate-Salt Hypertensive Mice.   
Rec #: 50359  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY   
Abstract: ABSTRACT: BACKGROUND: Hypertension-induced renal injury is characterized by inflammation, fibrosis and proteinuria. Previous studies have demonstrated that N-acetyl-Ser-Asp-Lys-Pro (Ac-SDKP) inhibits renal damage following diabetes mellitus and antiglomerular basement membrane nephritis. However, its effects on low-renin hypertensive nephropathy are not known. Thus, we hypothesized that Ac-SDKP has renal protective effects on deoxycorticosterone acetate (DOCA)-salt hypertensive mice, decreasing inflammatory cell infiltration, matrix deposition and albuminuria.  
ABSTRACT: METHOD: We uninephrectomized 16-week-old C57BL/6J mice and treated them with either placebo, DCOA (10 mg/10 g body weight subcutaneous) and 1% sodium chloride with 0.2% potassium chloride in drinking water (DOCA-salt) or DOCA-salt with Ac-SDKP (800 &mu;g/kg per day) for 12 weeks. We measured blood pressure, urine albumin, glomerular matrix, renal collagen content, monocyte/macrophage infiltration and glomerular nephrin expression.  
ABSTRACT: RESULTS: Treatment with DOCA-salt significantly increased blood pressure (P < 0.01), which remained unaltered by Ac-SDKP. Ac-SDKP decreased DOCA-salt-induced renal collagen deposition, glomerular matrix expansion and monocyte/macrophage infiltration. Moreover, DOCA-salt-induced increase in albuminuria was normalized by Ac-SDKP (controls, 10.8 &plusmn; 1.7; DOCA-salt, 41 &plusmn; 5; DOCA-salt + Ac-SDKP, 13 &plusmn; 3 &mu;g/10 g body weight per 24 h; P < 0.001, DOCA-salt vs. DOCA-salt + Ac-SDKP). Loss of nephrin reportedly causes excess urinary protein excretion; therefore, we determined whether Ac-SDKP inhibits proteinuria by restoring nephrin expression in the glomerulus of hypertensive mice. DOCA-salt significantly downregulated glomerular nephrin expression (controls, 37 &plusmn; 8; DOCA-salt, 10 &plusmn; 1.5% of glomerular area; P < 0.01), which was partially reversed by Ac-SDKP (23 &plusmn; 4.0% of glomerular area; P = 0.065, DOCA-salt vs. DOCA-salt + Ac-SDKP).  
ABSTRACT: CONCLUSION: We concluded that Ac-SDKP prevents hypertension-induced inflammatory cell infiltration, collagen deposition, nephrin downregulation and albuminuria, which could lead to renoprotection in hypertensive mice.  
MESH HEADINGS: Albuminuria/etiology/prevention &amp  
MESH HEADINGS: control  
MESH HEADINGS: Angiotensin-Converting Enzyme Inhibitors/pharmacology  
MESH HEADINGS: Animals  
MESH HEADINGS: Blood Pressure/drug effects  
MESH HEADINGS: Collagen/metabolism  
MESH HEADINGS: Desoxycorticosterone/\*toxicity  
MESH HEADINGS: Hypertension, Renal/\*etiology/pathology/physiopathology/\*prevention &amp  
MESH HEADINGS: control  
MESH HEADINGS: Kidney/\*drug effects/pathology/physiopathology  
MESH HEADINGS: Macrophages/drug effects/pathology  
MESH HEADINGS: Male  
MESH HEADINGS: Membrane Proteins/metabolism  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred C57BL  
MESH HEADINGS: Oligopeptides/\*pharmacology  
MESH HEADINGS: Sodium Chloride, Dietary/toxicity eng

1125. Rhouati, Amina; Istamboulie, Georges; Cortina-Puig, Montserrat; Marty, Jean-Louis, and Noguer, Thierry. Selective spectrophotometric detection of insecticides using cholinesterases, phosphotriesterase and chemometric analysis. 2010 Mar 5-; 46, (3Çô4 ): 212-216.   
Rec #: 2830  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Enzyme spectrophotometric assays based on acetylcholinesterase (AChE) inhibition were used in combination with Artificial Neural Network (ANN) chemometric analysis for the resolution of pesticides mixtures of chlorpyriphos, dichlorvos and carbofuran. Electric eel (EE) AChE and the recombinant B394-AChE from Drosophila melanogaster were selected due to their different sensitivities to insecticides. These enzymes were used in association with phosphotriesterase (PTE), an enzyme allowing to discriminate between organophosphate and carbamate insecticides. The combined response of three enzymes systems composed of EE-AChE, EE-AChE + PTE, and B394-AChE + PTE was modelled by means of ANN. Specifically, an ANN was constructed where the structure providing the best modelling was a single hidden layer containing four neurons. To prove the concept, a study to resolve pesticide mixtures was done with spectrophotometric measurements. Finally the developed system was successfully applied to the determination of carbofuran, CPO and dichlorvos pesticides in real water samples. Acetylcholinesterase/ Phosphotriesterase/ Chlorpyriphos/ Dichlorvos/ Carbofuran/ Artificial Neural Networks

1126. Riazuddin, Riazuddin; Khan, Muhammad Farhanullah; Iqbal, Sajid; Abbas, Muhammad, and Riazuddin, Riazuddin. Determination of Multi-Residue Insecticides of Organochlorine, Organophosphorus, and Pyrethroids in Wheat. 2011 Sep; 87, (3): 303-306.   
Rec #: 43169  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The undesirable effects of green revolution include residues of extensively used pesticides in various food commodities. Several studies showed that pesticides could cause health problems. Keeping in view the problem of pesticide residues in various food commodities, the present study was conducted on domestic stored wheat as well as on imported wheat for the qualitative and quantitative analysis of organochlorine, organophosphorus and pyrethroids. Among the imported wheat, 22.5% samples were found contaminated by organophosphorus (chlorpyrifos 0.073-0.230 mu g/g, malathion 0.0419-0.1003 mu g/g) and pyrethroids (cypermethrin 0.1404-0.2005 mu g/g, permethrin 0.0140-0.0480 mu g/g) while in domestic wheat 6.7% samples were found contaminated by pyrethroids (deltamethrin 0.0650-1.2903 mu g/g) only. Method used for extraction and analysis of insecticides was validated both by recovery studies and inter laboratory comparison proficiency test. The method recovery results show that the average recovery of the fortified wheat samples was in the range of 73.77%-100.17% with the RSD in the range of 2.21-9.27 whereas, the Z-scores of the inter laboratory comparison proficiency test's result was less than 2.  
Keywords: wheat  
Keywords: Organochlorine compounds  
Keywords: Cypermethrin  
Keywords: Pesticide residues  
Keywords: Food  
Keywords: Quantitative analysis  
Keywords: permethrin  
Keywords: Permethrin  
Keywords: Environment Abstracts; Pollution Abstracts; Toxicology Abstracts  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Deltamethrin  
Keywords: Malathion  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Triticum aestivum  
Keywords: Insecticides  
Keywords: Pesticides  
Keywords: Pyrethroids  
Keywords: X 24330:Agrochemicals  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 303-306  
ProQuest ID - 899142963  
SubjectsTermNotLitGenreText - Chlorpyrifos; Organochlorine compounds; Insecticides; Cypermethrin; Pesticide residues; Food; Pesticides; Permethrin; Pyrethroids; Malathion; Deltamethrin; wheat; Quantitative analysis; permethrin; Triticum aestivum  
Last updated - 2012-03-29  
British nursing index edition - Bulletin of Environmental Contamination and Toxicology [Bull. Environ. Contam. Toxicol.]. Vol. 87, no. 3, pp. 303-306. Sep 2011.  
Corporate institution author - Riazuddin, Riazuddin; Khan, Muhammad Farhanullah; Iqbal, Sajid; Abbas, Muhammad  
DOI - f8305756-87fd-40a0-9faamfgefd108; 15511105; 0007-4861; 1432-0800 English

1127. Rice, Pamela J; Horgan, Brian P; Rittenhouse, Jennifer L, and Rice, Pamela J. Evaluation of Core Cultivation Practices to Reduce Ecological Risk of Pesticides in Runoff From Agrostis Palustris. 2010; 29, (6): 1215-1223.   
Rec #: 44099  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticides associated with the turfgrass industry have been detected in storm runoff and surface waters of urban watersheds, invoking concern of their potential environmental effects and a desire to reduce their transport to nontarget locations. **Quantities of chlorpyrifos, dicamba, dimethylamine salt of 2,4-dichlorophenoxyacetic acid (2,4-D), flutolanil, and mecoprop-p (MCPP) transported in runoff from bentgrass (Agrostis palustris) fairway turf managed with solid tine (ST) or hollow tine (HT) core cultivation were compared to determine which cultivation practice is more efficient at mitigating environmental risk.** **Plots receiving HT core cultivation showed a 10 and 55% reduction in runoff volume and a 15 to 57% reduction in pesticide transport with runoff at 63 d and 2 d following core cultivation. *Estimated* environmental concentrations of the pesticides in a surface water receiving runoff from turf managed with ST core cultivation exceeded the median lethal concentration (LC50) or median effective concentration (EC50) of *nine aquatic organisms evaluated*.** Replacing ST core cultivation with HT core cultivation reduced surface water concentrations of the pesticides to levels below the LC50 and EC50 for most these aquatic organisms, lessening risk associated with pesticides in runoff from the fairway turf. Results of the present research provide quantitative information that will allow for informed decisions on cultural practices that can maximize pesticide retention at the site of application, improving pest control in turf while minimizing environmental contamination and adverse effects associated with the off-site transport of pesticides.  
Keywords: 2,4-D  
Keywords: Aquatic organisms  
Keywords: D 04070:Pollution  
Keywords: Contamination  
Keywords: Storm Runoff  
Keywords: Surface water  
Keywords: Surface Water  
Keywords: Watersheds  
Keywords: Toxicity tests  
Keywords: Environmental factors  
Keywords: Risks  
Keywords: Agricultural Chemicals  
Keywords: Cores  
Keywords: Environmental effects  
Keywords: 2,4-Dichlorophenoxyacetic acid  
Keywords: cultivation  
Keywords: R2 23050:Environment  
Keywords: Agrostis palustris  
Keywords: X 24330:Agrochemicals  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: Ecology Abstracts; Risk Abstracts; Environment Abstracts; Toxicology Abstracts; Aqualine Abstracts; Water Resources Abstracts; ASFA 1: Biological Sciences & Living Resources  
Keywords: Flutolanil  
Keywords: turf  
Keywords: Pest control  
Keywords: Turf  
Keywords: Q1 01485:Species interactions: pests and control  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Risk  
Keywords: Salts  
Keywords: Turf Grasses  
Keywords: Lethal limits  
Keywords: Water management  
Keywords: Pesticides  
Keywords: Mortality causes  
Keywords: Side effects  
Keywords: culture  
Keywords: Runoff  
Keywords: Cultivation  
Date revised - 2011-03-01  
Language of summary - English  
Pages - 1215-1223  
ProQuest ID - 858424318  
SubjectsTermNotLitGenreText - Lethal limits; Water management; Pesticides; Pest control; Environmental factors; Toxicity tests; Risks; Mortality causes; Runoff; 2,4-D; Aquatic organisms; Contamination; Surface water; Flutolanil; Turf; Watersheds; Chlorpyrifos; Salts; Environmental effects; Side effects; 2,4-Dichlorophenoxyacetic acid; turf; cultivation; culture; Risk; Turf Grasses; Agricultural Chemicals; Storm Runoff; Cores; Surface Water; Cultivation; Agrostis palustris  
Last updated - 2012-03-29  
British nursing index edition - Environmental Toxicology and Chemistry [Environ. Toxicol. Chem.]. Vol. 29, no. 6, pp. 1215-1223. 1 Jun 2010.  
Corporate institution author - Rice, Pamela J; Horgan, Brian P; Rittenhouse, Jennifer L  
DOI - cd69ed10-21f8-4856-8337csamfg201; 14430212; CS1146821; 1552-8618 English

1128. ---. Pesticide Transport With Runoff From Creeping Bentgrass Turf: Relationship of Pesticide Properties to Mass Transport. 2010 Jun 1; 29, (6): 1209-1214.   
Rec #: 40539  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The off-site transport of pesticides with runoff is both an agronomic and environmental concern, resulting from reduced control of target pests in the area of application and contamination of surrounding ecosystems. Experiments were designed to measure the quantity of pesticides in runoff from creeping bentgrass (Agrostis palustris) turf managed as golf course fairway to gain a better understanding of factors that influence chemical availability and mass transport. Less than 1 to 23% of applied chloropyrifos, flutolanil, mecoprop-p (MCPP), dimethylamine salt of 2,4-dichlorophenoxyacetic acid (2,4-D), or dicamba was measured in edge-of-plot runoff when commercially available pesticide formulations were applied at label rates 23 +/- 9 h prior to simulated precipitation (62 +/- 13 mm). Time differential between hollow tine core cultivation and runoff did not significantly influence runoff volumes or the percentage of applied chemicals transported in the runoff. With the exception of chlorpyrifos, all chemicals of interest were detected in the initial runoff samples and throughout the runoff events. Chemographs of the five pesticides followed trends in agreement with mobility classifications associated with their soil organic carbon partition coefficient (K sub(OC).) Data collected from the present study provides information on the transport of chemicals with runoff from turf, which can be used in model simulations to predict nonpoint source pollution potentials and estimate ecological risks.  
Keywords: 2,4-D  
Keywords: Contamination  
Keywords: Mobility  
Keywords: P 5000:LAND POLLUTION  
Keywords: Organic carbon  
Keywords: Pollution dispersion  
Keywords: mass transport  
Keywords: Mass transport  
Keywords: environmental perception  
Keywords: Models  
Keywords: Soil  
Keywords: Carbon  
Keywords: Classification  
Keywords: 2,4-Dichlorophenoxyacetic acid  
Keywords: Pests  
Keywords: R2 23050:Environment  
Keywords: Agrostis palustris  
Keywords: X 24330:Agrochemicals  
Keywords: Pollution  
Keywords: Nonpoint sources  
Keywords: Data processing  
Keywords: Flutolanil  
Keywords: Geochemistry  
Keywords: turf  
Keywords: Simulation  
Keywords: Soils (organic)  
Keywords: Precipitation  
Keywords: Turf  
Keywords: Q1 01485:Species interactions: pests and control  
Keywords: Water pollution  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Salts  
Keywords: Pesticides  
Keywords: classification  
Keywords: Risk Abstracts; Environment Abstracts; Toxicology Abstracts; Pollution Abstracts; ASFA 1: Biological Sciences & Living Resources  
Keywords: Runoff  
Date revised - 2011-03-01  
Language of summary - English  
Pages - 1209-1214  
ProQuest ID - 858424684  
SubjectsTermNotLitGenreText - Classification; Organic carbon; Geochemistry; Pollution dispersion; Pesticides; Simulation; Mass transport; Water pollution; Runoff; 2,4-D; Nonpoint sources; Data processing; Contamination; Mobility; Flutolanil; Soils (organic); Precipitation; Turf; Models; Chlorpyrifos; Salts; Carbon; Pests; Pollution; Soil; classification; 2,4-Dichlorophenoxyacetic acid; turf; mass transport; environmental perception; Agrostis palustris  
Last updated - 2012-03-29  
British nursing index edition - Environmental Toxicology and Chemistry [Environ. Toxicol. Chem.]. Vol. 29, no. 6, pp. 1209-1214. 1 Jun 2010.  
Corporate institution author - Rice, Pamela J; Horgan, Brian P; Rittenhouse, Jennifer L  
DOI - c219342a-e9f1-4dec-b0f0csamfg201; 14430213; CS1146822; 1552-8618 English

1129. Richter, R. J.; Jarvik, G. P., and Furlong, C. E. Paraoxonase 1 Status as a Risk Factor for Disease or Exposure.   
Rec #: 77349  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Pharmacogenetics. 1999 Dec;9(6):745-53 (medline /10634137)  
COMMENTS: Cites: Pharmacogenetics. 2000 Dec;10(9):767-79 (medline /11191881)  
COMMENTS: Cites: J Clin Invest. 2008 Sep;118(9):3123-31 (medline /18704198)  
COMMENTS: Cites: Clin Chem Lab Med. 2006;44(9):1052-9 (medline /16958594)  
COMMENTS: Cites: Pharmacogenet Genomics. 2006 Mar;16(3):183-90 (medline /16495777)  
COMMENTS: Cites: FEMS Microbiol Lett. 2005 Dec 1;253(1):29-37 (medline /16260097)  
COMMENTS: Cites: Pharmacogenet Genomics. 2005 Aug;15(8):589-98 (medline /16007003)  
COMMENTS: Cites: Biochem Pharmacol. 2005 Feb 15;69(4):541-50 (medline /15670573)  
COMMENTS: Cites: Nature. 1998 Jul 16;394(6690):284-7 (medline /9685159)  
COMMENTS: Cites: Nat Genet. 1996 Nov;14(3):334-6 (medline /8896566)  
COMMENTS: Cites: Toxicol Lett. 1995 Apr;76(3):219-26 (medline /7539166)  
COMMENTS: Cites: J Toxicol Environ Health. 1993 Oct-Nov;40(2-3):337-46 (medline /7693961)  
COMMENTS: Cites: Toxicol Appl Pharmacol. 1990 Mar 15;103(1):66-76 (medline /1690462)  
COMMENTS: Cites: Am J Hum Genet. 1983 Nov;35(6):1126-38 (medline /6316781)  
COMMENTS: Cites: Clin Sci (Lond). 2004 Nov;107(5):435-47 (medline /15265000)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2004 Mar 9;101(10):3587-90 (medline /14970327)  
COMMENTS: Cites: Arterioscler Thromb Vasc Biol. 2003 Aug 1;23(8):1317-8 (medline /12909569)  
COMMENTS: Cites: Biochem J. 2003 Jun 1;372(Pt 2):643-9 (medline /12639220)  
COMMENTS: Cites: Pharmacogenetics. 2003 May;13(5):291-5 (medline /12724622)  
COMMENTS: Cites: Arterioscler Thromb Vasc Biol. 2001 Sep;21(9):1451-7 (medline /11557671)  
COMMENTS: Cites: Circ Cardiovasc Genet. 2008 Dec;1(2):147-52 (medline /20031556)  
ABSTRACT: Human paraoxonase 1 (PON1) has broad substrate specificity and has been shown to protect against exposure to some organophosphorus (OP) insecticides due to its ability to hydrolyze toxic metabolites of some organophosphorothioate insecticides. PON1 status has been shown to be important in protecting against vascular disease, presumably due to the not-as-yet fully characterized role of the three PON proteins in modulating oxidative stress. More recently, all three PONs (1, 2, and 3) have been shown to inactivate the quorum sensing factor N-(3-oxododecanoyl)-L: -homoserine lactone (3OC12-HSL) of Pseudomonas. Expression of human PON1 in Drosophila demonstrated the importance of PON1 in resistance to Pseudomonas infection. Many studies have examined only DNA single nucleotide polymorphisms as possible risk factors for disease or exposures. For all of the known functions of PON1, the level of PON1 enzyme is important and, in some cases, also the Q192R polymorphism. A simple high throughput two-substrate assay/analysis, plotting rates of diazoxon hydrolysis vs. paraoxon hydrolysis, provided both PON1 levels and functional Q192R phenotype/genotype. We have developed a new two-substrate assay/analysis protocol that provides PON1 status without use of toxic OP substrates. Factors were determined for inter-converting rates of hydrolysis of different substrates.  
MESH HEADINGS: Animals  
MESH HEADINGS: Aryldialkylphosphatase/\*biosynthesis  
MESH HEADINGS: Biological Markers/metabolism  
MESH HEADINGS: Carotid Artery Diseases/diagnosis  
MESH HEADINGS: Chlorpyrifos/chemistry  
MESH HEADINGS: Drosophila melanogaster/metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Hydrolysis  
MESH HEADINGS: Insecticides/\*toxicity  
MESH HEADINGS: Lactones/chemistry  
MESH HEADINGS: Organophosphorus Compounds/chemistry/toxicity  
MESH HEADINGS: Oxidative Stress  
MESH HEADINGS: Paraoxon/chemistry  
MESH HEADINGS: Polymorphism, Single Nucleotide  
MESH HEADINGS: Pseudomonas/metabolism  
MESH HEADINGS: Quorum Sensing  
MESH HEADINGS: Risk  
MESH HEADINGS: Risk Factors eng

1130. Richter, Rebecca J; Jarvik, Gail P, and Furlong, Clement E. Paraoxonase 1 (Pon1) Status and Substrate Hydrolysis. 2009 Feb 15; 235, (1): 1-9.   
Rec #: 45019  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Paraoxonase 1 (PON1) hydrolyzes a number of organophosphorus (OP) compounds including insecticides and nerve agents. The in vivo efficacy of PON1 to protect against a specific OP exposure depends on the catalytic efficiency of hydrolysis. The Q192R polymorphism affects the catalytic efficiency of hydrolysis of some substrates and not others. While PON1(R192) hydrolyzes paraoxon approximately 9-times as efficiently as PON1(Q192), the efficiency is insufficient to provide in vivo protection against paraoxon/parathion exposure. The two PON1(192) alloforms have nearly equivalent but higher catalytic efficiencies for hydrolyzing diazoxon (DZO) and provide equivalent in vivo protection against DZO exposures. On the other hand, PON1(R192) is significantly more efficient in hydrolyzing chlorpyrifos oxon (CPO) than PON1(Q192) and provides better protection against CPO exposure. Thus, for some exposures it is only the level of plasma PON1 that is important, whereas for others it is both plasma level and the PON1(192) alloform(s) present in plasma that are important. In no case is the plasma level of PON1 unimportant, provided that the catalytic efficiency is sufficient to protect against the exposure. Two-substrate enzyme assay/analysis protocols that reveal both PON1 plasma levels and PON1(192) phenotype (QQ; QR; RR) are designed to optimize the separation of PON1(192) phenotypes; however, they have not been optimized for evaluating in vivo rates of OP detoxication. This study describes the adaptation of a non-OP, two-substrate determination of PON1 status to the conversion of the PON1 status data to physiologically relevant rates of DZO and CPO detoxication. Conversion factors were generated for rates of hydrolysis of different substrates.  
Keywords: 2921-88-2  
Keywords: Aryldialkylphosphatase -- metabolism  
Keywords: Humans  
Keywords: Aryldialkylphosphatase  
Keywords: Organophosphorus Compounds  
Keywords: Insecticides  
Keywords: Gene Expression Regulation, Enzymologic  
Keywords: 9FX08D2L1U  
Keywords: Organophosphorus Compounds -- metabolism  
Keywords: Isoenzymes  
Keywords: Molecular Structure  
Keywords: Insecticides -- metabolism  
Keywords: Aryldialkylphosphatase -- genetics  
Keywords: Polymorphism, Genetic  
Keywords: PON1 protein, human  
Keywords: O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphate  
Keywords: Hydrolysis  
Keywords: EC 3.1.8.1  
Keywords: Chlorpyrifos  
Keywords: 0  
Keywords: 5598-15-2  
Keywords: Chlorpyrifos -- analogs & derivatives  
Keywords: diazoxon  
Keywords: Substrate Specificity  
Keywords: Chlorpyrifos -- metabolism  
Date completed - 2009-03-06  
Date created - 2009-02-09  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 1-9  
ProQuest ID - 66903303  
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British nursing index edition - Toxicology and applied pharmacology, February 15, 2009, 235(1):1-9  
Corporate institution author - Richter, Rebecca J; Jarvik, Gail P; Furlong, Clement E  
DOI - MEDL-19071155; 19071155; NIHMS99874; PMC3045428; 1096-0333 eng

1131. Ridano, Magali E.; Racca, Ana C.; Flores-Mart+¡n, J+ sica; Camolotto, Soledad A.; de Potas, Gladis Magnarelli; Genti-Raimondi, Susana, and Panzetta-Dutari, Graciela M. Chlorpyrifos modifies the expression of genes involved in human placental function. 2012 Jun; 33, (3): 331-338.   
Rec #: 310  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: The effects of organophosphate pesticides on human placenta remain poorly investigated although an increased risk of pregnancy alterations has been reported in women chronically exposed to these pesticides. Here, we have addressed whether chlorpyrifos (CPF) modifies the expression of genes relevant for placental function. Human placental JEG-3 cells were exposed to increasing CPF concentrations up to 100 ++M for 24 and 48 h and cell viability, mRNA, protein and hormone levels were analyzed. Quantitative RT-PCR assays revealed that CPF increased the expression of ABCG2, GCM1 and, even more significantly, +\_hCG mRNAs in conditions where cell viability and morphology were not compromised. In addition, +\_hCG protein synthesis and secretion were time-dependently augmented. Present results may reflect a CPF nocive effect on placenta cells or a placental-defense mechanism to preserve its function. These novel CPF trophoblast target genes should be considered in future studies of pregnancy outcomes associated with in vivo exposures. Organophosphate pesticide/ Trophoblast/ Gene expression/ +\_hCG/ Pregnancy

1132. Riederer, A. M.; Hunter, R. E.; Hayden, S. W., and Ryan, P. B. Pyrethroid and Organophosphorus Pesticides in Composite Diet Samples from Atlanta, USA Adults. 2010; 44, (1): 483-490.   
Rec #: 67659  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Four pyrethroid (permethrin, cyfluthrin, cypermethrin, deltamethrin) and 3 organophosphorus (chlorpyrifos, diazinon, malathion) pesticides were measured in 4 days of 24 h duplicate diet samples collected from 12 Atlanta adults over two cycles (2005-2006). Samples were composited into 9 categories, by food type, to evaluate their contribution to daily intakes. The resulting 437 samples were analyzed using a multiresidue method using liquid-liquid and solid-phase extraction followed by quantification via gas chromatograph with electron-capture detection. Total daily intakes (mg/kg-d) were calculated by summing the mass of a pesticide in all composites collected that day and dividing by body weight. Chlorpyrifos diazinon, and cypermethrin in were detected in a range of composite types at frequencies >= 30%, whereas other pesticides were detected at lower frequencies. Concentrations ranged from the detection limits (0.38-0.88 ng/g) to several hundred ng/g, exceeding U.S. tolerances in a few cases. We also detected pesticides in some foods labeled organic. Total daily intakes were below the U.S. Environmental Protection Agency's oral reference doses, except in 6% of cases when the organophosphorus concentrations were summed. Results show frequent dietary exposure of our participants to the target pesticides from a range of food types.  
Keywords: EXPOSURE, RESIDUES, FOOD, INSECTICIDES, CHLORPYRIFOS, VARIABILITY,  
ISI Document Delivery No.: 539PB

1133. Riederer, A. M.; Pearson, M. A., and Lu, C. S. Comparison of food consumption frequencies among NHANES and CPES children: Implications for dietary pesticide exposure and risk assessment. 2010; 20, (7): 602-614.   
Rec #: 67669  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Characterizing food consumption patterns among children is critical to dietary pesticide exposure assessment. We have used public release data from the US National Health and Nutrition Examination Survey (NHANES) and the longitudinal Children's Pesticide Exposure Study (CPES) to illustrate the magnitude of potential error introduced by using national-scale, cross-sectional data to estimate the consumption frequencies for smaller cohorts. We focused on foods commonly consumed by children in the target CPES age and income group (3-11 years; annual household income >$75,000) and foods likely to contain organophosphorus or pyrethroid pesticide residues. We defined "percent eaters'' as the percentage of study participants who reported eating a particular food in a 24-h period. We computed the weighted percent eaters and 95% confidence limits (CL) for the target age/income group using the NHANES 24-h dietary recall data and compared these with the CPES percent eaters by sampling day and season. For certain foods, particularly the seasonally available produce (for example, apples, peaches/nectarines, melon, grapes, pears, strawberries), soy milk, and peanut butter, the CPES percent eaters fell outside the NHANES 95% CLs on many sampling days. For other foods (for example, orange juice and cow's milk), differences were not readily apparent. Although the differences we observed for certain foods may be, in part, because of measurement error, they also likely reflect seasonal and geographic patterns among the CPES data that the public release NHANES data do not capture. Using NHANES data to estimate pesticide intakes from strawberries, for example, may underestimate the exposure of the CPES children, as significantly more CPES than NHANES children ate strawberries on many sampling days. For other sampling days or other foods, overestimation is also possible. Journal of Exposure Science and Environmental Epidemiology (2010) 20, 602-614; doi:10.1038/jes.2009.48; published online 9 September 2009  
Keywords: children, CPES, diet survey, NHANES, pesticides, risk assessment  
ISI Document Delivery No.: 667CO

1134. ---. Dietary patterns among the Metro Atlanta Cohort: Implications for population-based longitudinal dietary pesticide exposure and risk assessment. 2011; 21, (2): 142-149.   
Rec #: 67679  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Characterizing dietary consumption patterns is critical to dietary pesticide exposure assessment. We compared consumption patterns between adults (age 18-60) in the Metro Atlanta Cohort (MAC), a longitudinal study of pesticide exposure among Atlanta residents, and US National Health and Nutrition Examination Survey (NHANES) adults. We focused on foods commonly eaten by US adults and foods likely to contain certain pesticide residues. MAC participants provided consumption data for 6 days per month for I year using a web-based data collection tool. We defined "percent eaters" as the percent of participants who reported eating a particular food in 24 h. We computed the NHANES weighted percent eaters and 95% confidence limits (CLs) using the 24-h dietary recall data. We calculated the MAC percent eaters for each sampling day and the percent of days this number fell below, within, or above the NHANES 95% CLs. We also re-sampled the MAC percent eaters across sampling days to find whether the resulting distribution resembled the NHANES estimate, and used the Kruskal-Wallis test to evaluate whether season affected the number of MAC eaters of a particular food on a given sampling day. In general, across all sampling days, a greater proportion of MAC participants reported eating banana, broccoli, cream, grapes, lettuce, onion, peach, pear, peas, strawberries, string beans, and tomatoes than the national estimate, whereas the proportion of apple, spinach, catsup and white bread/roll eaters was similar, and the proportion of milk drinkers was lower. Season predicted the number of MAC peach and strawberry eaters but not other foods. The data show how a higher proportion of Atlanta adults may eat certain foods (e.g., peaches in summer or strawberries in spring) than the national average depending on season or other factors. An exposure assessment that ignored this difference could underestimate dietary pesticide intakes. Journal of Exposure Science and Environmental Epidemiology (2011) 21, 142-149; doi:10.1038/jes.2009.72; published online 31 March 2010  
Keywords: food consumption, longitudinal, dietary pesticide exposure, risk  
ISI Document Delivery No.: 730SN

1135. Riskallah, M. R.; El-Sayed, M. M., and Hindi, S. A. Study on the Stability of Leptophos in Water Under Laboratory Conditions. 1979; 23, 607-614.   
Rec #: 1270  
Keywords: FATE  
Call Number: NO FATE (CPY)  
Notes: Chemical of Concern: CPY

1136. Riva, M. C.; Lopez, D., and Fabian, L. Toxicity of Organophosphorus Pesticides to Aquatic Microalgae. M.C.Riva, Universidad Politecnica de Catalunya. Jefa del Laboratorio de Toxicologla Ambiental del INTEXTER (U.P.C.), Spain//: 1998; 113, 25-29(SPA).   
Rec #: 1280  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

1137. Robinson, P. W. The Toxicity of Pesticides and Organics to Mysid Shrimps can be Predicted from Daphnia spp. Toxicity Data. 1999; 33, (6): 1545-1549.   
Rec #: 2010  
Keywords: MODELING,REFS CHECKED  
Call Number: NO MODELING (13DPE,ACP,BMC,CMPH,CPY,CYH,CYP,CYR,DCB,DFZ,DM,DPDP,DZ,ETHB,LNR,PTP,SFL), NO REFS CHECKED (13DPE,ACP,BMC,CMPH,CPY,CYH,CYP,CYR,DCB,DFZ,DM,DPDP,DZ,ETHB,LNR,PTP,SFL)  
Notes: Chemical of Concern: 13DPE,4CE,4NP,ACP,BMC,CMPH,CPY,CYH,CYP,CYR,DCB,DFZ,DM,DMM,DMP,DPDP,DZ,ETHB,FCX,LNR,NBZ,PTP,SFL,TOL

1138. Robles-Molina, J.; de Vidales, M. J. M.; Garcia-Reyes, J. F.; Canizares, P.; Saez, C.; Rodrigo, M. A., and Molina-Diaz, A. Conductive-diamond electrochemical oxidation of chlorpyrifos in wastewater and identification of its main degradation products by LC-TOFMS. 2012; 89, (10): 1169-1176.   
Rec #: 67729  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The electrochemical transformation of the organophosphorous insecticide chlorpyrifos (CPF) was investigated in wastewater. The oxidation of CPF was carried out in a single-compartment electrochemical flow cell working under batch operation mode, using diamond-based material as anode and stainless steel as cathode. In order to evaluate its persistence and degradation pathway, two different concentration levels (1.0 mg L(-1) and 0.1 mg L(-1)) were studied. Liquid chromatography/mass spectrometry was used for evaluation of the initial and electrolyzed solutions. The identification of CPF transformation products was performed by liquid chromatography-time of flight-mass spectrometry (LC-TOFMS). Results showed that CPF is completely removed at the end of treatment time. Analysis by LC-TOFMS allowed the identification of six degradation products (with Mw 154, 170, 197, 305 321 and 333). Three of the identified intermediates (Mw 170, 305 and 321) were completely removed at the end of electrolysis time. Interestingly, the formation of diethyl 3,5,6-trichloropyridin-2yl phosphate (chlorpyrifos oxon) and 3,5,6-trichloropyridin-2-ol was also found in previous reported degradation pathways using different degradation technologies. (C) 2012 Elsevier Ltd. All rights reserved.  
Keywords: Chlorpyrifos, Priority contaminant, Water, Electrochemical degradation,  
ISI Document Delivery No.: 024ME

1139. Rodrigues, S. R.; Caldeira, C.; Castro, B. B.; Goncalves, F.; Nunes, B., and Antunes, S. C. Cholinesterase (ChE) inhibition in pumpkinseed (Lepomis gibbosus) as environmental biomarker: ChE characterization and potential neurotoxic effects of xenobiotics. 2011; 99, (2): 181-188.   
Rec #: 67749  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Inhibition of cholinesterases (ChEs) has been widely used as an environmental biomarker of exposure to organophosphates (OP) and carbamate (a) pesticides. More recently, this biomarker has been suggested as a putative biomarker for exposure to detergents. The use of cholinesterase inhibition as effect criterion in Ecotoxicology requires the previous characterization of the specific enzymatic forms that may be present in different tissues or organs. Different ChEs isoforms may be present in the same tissue and may exhibit distinct sensitivities towards environmental contaminants. **This work intended to characterize the soluble ChEs present in pumpkinseed sunfish (Lepomis gibbosus) total head and dorsal muscle homogenates, through the use of different substrates and selective inhibitors of cholinesterasic activity.** Also, the in vitro effects of sodium dodecylsulphate (SDS - anionic detergent) and chlorfenvinphos (organophosphate pesticide) on the enzymatic activity of the mentioned species were investigated. In general terms, the predominant cholinesterasic form present in both tissues was acetylcholinesterase. Chlorfenvinphos was responsible for inhibitory effects on AChE activity, while SDS did not cause any significant effect. These results suggest that in environmental monitoring programs, L. gibbosus head and dorsal muscle AChE can be an adequate diagnostic tool for exposure to OP pesticides; this conclusion however is not applicable to detergent residues. We also discuss the usefulness of L. gibbosus as an alternative model system and valuable option for freshwater ecotoxicological monitoring programs. (C) 2010 Elsevier Inc. All rights reserved.  
Keywords: Lepomis gibbosus, Cholinesterases characterization, Environmental  
ISI Document Delivery No.: 716IE

1140. Rodriguez, T.; de Joode, B. V.; Lindh, C. H.; Rojas, M.; Lundberg, I., and Wesseling, C. Assessment of long-term and recent pesticide exposure among rural school children in Nicaragua. 2012; 69, (2): 119-125.   
Rec #: 67779  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Objective This study assessed pesticide exposure of children in rural Nicaragua in relation to parental pesticide use, from around conception to current school age, as part of an epidemiological evaluation of neurodevelopment effects. Methods We included 132 children whose parents were subsistence farmers or plantation workers, or had an agricultural history. As proxies for children's long-term exposures, we constructed cumulative parental pesticide-specific use indices for periods before and after the child's birth from data obtained using an icon-calendar-based questionnaire, of application hours (h) for plantation workers and subsistence farmers, and of kilograms of active ingredients (ai) only for subsistence farmers. Pesticide residues of TCPY, 3-PBA and 2,4-D were analysed in children's urine as indicators for current exposures. Results Life-time indices were highest for the organophosphates chlorpyrifos (median 114 h (min 2; max 1584), 19.2 kg ai (min 0.37; max 548)) and methamidophos (84 h (6; 1964), 12.2 kg ai (0.30; 780)). The P50 values of children's urinary residues were 3.7 mu g/g creatinine for TCPY, 2.8 for 3-PBA and 0.9 for 2,4-D; TCPY values are comparable with those in other countries, but 3-PBA and 2,4-D are considerably higher. The maximum levels for all three pesticides are the highest reported for children. Residues increased on days after application, but most high residue levels were unrelated to parental pesticide applications. Conclusion Urinary pesticide residues reveal high environmental exposure among children in rural Nicaragua. The quantitative parental pesticide use indices as proxies for children's exposures during different periods may be useful for the evaluation of developmental health effects.  
Keywords: PRESCHOOL-CHILDREN, CRITICAL WINDOWS, HEALTH, HOME,  
ISI Document Delivery No.: 879CQ

1141. Roepcke, C. B. S.; Muench, S. B.; Schulze, H.; Bachmann, T.; Schmid, R. D., and Hauer, B. Analysis of Phosphorothionate Pesticides Using a Chloroperoxidase Pretreatment and Acetylcholinesterase Biosensor Detection. 2010; 58, (15): 8748-8756.   
Rec #: 67819  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Acetylcholinesterase (AChE) is responsible for the hydrolysis of acetylcholine in the nervous system. It is inhibited by organophosphate and carbamate pesticides. However, this enzyme is only slightly inhibited by organophosphorothionates, which makes the detection of these pesticides analytically very difficult. A new enzymatic method for the activation and detection of phosphorothionates was developed with the capability to be used directly in food samples without the need of laborious solvent extraction steps. Chloroperoxidase (CPO) from Caldariomyces fumago was combined with tert-butyl hydroperoxide and two halides. **Chlorpyrifos and triazophos were completely oxidized. Fenitrothion, methidathion and parathion methyl showed conversion rates between 54 and 61%. Furthermore, the oxidized solution was submitted to an AChE biosensor assay. Chlorpyrifos spiked in organic orange juice was oxidized, where its oxon product was detected in concentrations** down to 5 mu g/L (final concentration food sample: 25 mu g/L). The complete duration of the method takes about 2 h.  
Keywords: Chloroperoxidase, acetylcholinesterase biosensor, phosphorothionates,  
ISI Document Delivery No.: 633AN

1142. Roex, E. W. M.; Van Gestel, C. A. M.; Van Wezel, A. P., and Van Straalen, N. M. Ratios Between Acute Aquatic Toxicity and Effects on Population Growth Rates in Relation to Toxicant Mode of Action. 2000; 19, (3): 685-693.   
Rec #: 1940  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (AZ,CPY,DCA,DZ,FNV,Zn,Zn element), NO REVIEW (AZ,CPY,DCA,DZ,FNV,Zn,Zn element)  
Notes: Chemical of Concern: AZ,CPY,DCA,DZ,FNV,Zn

1143. Rohlman, D. S.; Lasarev, M.; Anger, W. K.; Scherer, J.; Stupfel, J., and McCauley, L. Neurobehavioral Performance of Adult and Adolescent Agricultural Workers. 2007; 28, (2): 374-380.   
Rec #: 67869  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: There are many occupational hazards associated with working in agriculture including risk of injury and exposure to pesticides. Research examining neurobehavioral effects of pesticide exposure have focused primarily on the acute effects in adults working in agriculture. Organophosphate poisoned populations have shown a consistent pattern of deficits when compared to a non-exposed or non-poisoned population on measures of motor speed and coordination, sustained attention, and information processing speed. Fewer studies have examined the effect of long-term low-level exposure on nervous system functioning in agricultural workers. Pesticides are thought to pose a considerably higher risk to children than to adults, yet little is known about the extent or magnitude of health problems related to occupational exposure to pesticides in children and adolescents. The present study compared the neurobehavioral performance of adolescents and adults working in agriculture and examined the impact of years working in agriculture on neurobehavioral performance. One hundred seventy-five Hispanic adolescent and adults completed a neurobehavioral test battery consisting of 10 computer-based tests measuring attention, response speed, coordination and memory. Age, gender, school experience, and years working in agriculture all impacted performance on the neurobehavioral tests. Comparison of adult and adolescents did not reveal decreased neurobehavioral performance in adolescents. On several tests the adolescents performed better than adult counterparts. The adolescents and adults were engaged in comparable agricultural working environments at the time of the neurobehavioral testing. These findings suggest that, at the time of exposure to pesticides, adolescents are not more vulnerable to the effects of working in agriculture. Evidence from this study suggests that cumulative exposure to low levels of pesticides over many years of agricultural work is associated with neurological impairment as measured by the Selective Attention, Symbol-Digit, Reaction Time tests. Experience handling pesticides was also associated with deficits in neurobehavioral performance. (c) 2006 Elsevier Inc. All rights reserved.  
Keywords: neurobehavioral tests, pesticides, adolescents, agriculture, hispanic  
ISI Document Delivery No.: 184LV

1144. Ronday, R.; Aalderink, G. H., and Crum, S. J. H. Application Methods of Pesticides to an Aquatic Mesocosm in Order to Simulate Effects of Spray Drift. 1998; 32, (1): 147-153.   
Rec #: 1290  
Keywords: NO SPECIES  
Call Number: NO SPECIES (CPY)  
Notes: Chemical of Concern: CPY

1145. Roseboom, D.; Hill, T.; Rodsater, J., and Felsot, A. Stream Yields from Agricultural Chemicals and Feedlot Runoff from an Illinois Watershed. 1990: 133 p.   
Rec #: 1970  
Keywords: NO DURATION,SURVEY  
Call Number: NO DURATION (ACR,ATZ,CBF,CPY,DMT,MTL,TBO,TFN), NO SURVEY (ACR,ATZ,CBF,CPY,DMT,MTL,TBO,TFN)  
Notes: Chemical of Concern: ACR,ATZ,CBF,CPY,CZE,DMT,FNF,MBZ,MTL,TBO,TFN

1146. Rosner, M. R. Map Kinase Meets Mitosis: a Role for Raf Kinase Inhibitory Protein in Spindle Checkpoint Regulation.   
Rec #: 51479  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Nature. 1999 Sep 9;401(6749):173-7 (medline /10490027)  
COMMENTS: Cites: Genes Dev. 1998 Oct 1;12(19):2997-3007 (medline /9765202)  
COMMENTS: Cites: J Biol Chem. 1999 Dec 31;274(53):38083-90 (medline /10608877)  
COMMENTS: Cites: J Biol Chem. 2000 Oct 13;275(41):31876-82 (medline /10884385)  
COMMENTS: Cites: J Biol Chem. 2003 Apr 11;278(15):13061-8 (medline /12551925)  
COMMENTS: Cites: J Cell Biol. 2003 Apr 14;161(1):27-32 (medline /12695496)  
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COMMENTS: Cites: Nature. 2003 Dec 4;426(6966):574-9 (medline /14654844)  
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COMMENTS: Cites: Curr Opin Genet Dev. 2004 Feb;14(1):29-36 (medline /15108802)  
COMMENTS: Cites: Cancer Res. 2004 Aug 1;64(15):5186-92 (medline /15289323)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 1999 Sep 28;96(20):11335-40 (medline /10500177)  
ABSTRACT: Raf Kinase Inhibitory Protein (RKIP) is an evolutionarily conserved protein that functions as a modulator of signaling by the MAP kinase cascade. Implicated as a metastasis suppressor, Raf Kinase Inhibitory Protein depletion correlates with poor prognosis for breast, prostate and melanoma tumors but the mechanism is unknown. Recent evidence indicates that Raf Kinase Inhibitory Protein regulates the mitotic spindle assembly checkpoint by controlling Aurora B Kinase activity, and the mechanism involves Raf/MEK/ERK signaling. In contrast to elevated MAP kinase signaling during the G1, S or G2 phases of the cell cycle that activates checkpoints and induces arrest or senescence, loss of RKIP during M phase leads to bypass of the spindle assembly checkpoint and the generation of chromosomal abnormalities. These results reveal a role for Raf Kinase Inhibitory Protein and the MAP kinase cascade in ensuring the fidelity of chromosome segregation prior to cell division. Furthermore, these data highlight the need for precise titration of the MAP kinase signal to ensure the integrity of the spindle assembly process and provide a mechanism for generating genomic instability in tumors. Finally, these results raise the possibility that RKIP status in tumors could influence the efficacy of treatments such as poisons that stimulate the Aurora B-dependent spindle assembly checkpoint. eng

1147. Roszko, M.; Szterk, A.; Szymczyk, K., and Waszkiewicz-Robak, B. PAHs, PCBs, PBDEs and Pesticides in Cold-Pressed Vegetable Oils. 2012; 89, (3): 389-400.   
Rec #: 67899  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The aim of this study was to investigate levels of polychlorinated biphenyls (marker and dioxin-like congeners), polycyclic aromatic hydrocarbons (EPA 15 + 1), polybrominated diphenyl ethers (14 predominant congeners) and pesticides (74 compounds) in various cold-pressed vegetable oils. Poppy seed oil, rapeseed oil, sesame seed oil, pumpkinseed oil, hempseed oil, linaire oil, borage oil and evening star oil were investigated. Results of this study revealed that concentrations of PCBs, PBDEs and PAHs were low in majority of the investigated samples. However, high concentrations of organophosphorus insecticides were found. Chlorpyrifos methyl and pirimiphos methyl were the pesticide residues most commonly found in the studied oils. Concentration of 15 + 1 EPA PAHs was within the 17.85-37.16 mu g kg(-1) range, concentration of (marker) PCBs varied from 127 to 24,882 pg g(-1), dioxin-like TEQ values were below 0.1 pg TEQ g(-1). Concentration of PBDEs was below LOQ in most cases.  
Keywords: Food contamination, PAH, PCB, PBDE, Pesticides, Vegetable oils  
ISI Document Delivery No.: 959DK

1148. Rotariu, Lucian; Zamfir, Lucian-Gabriel, and Bala, Camelia. A rational design of the multiwalled carbon nanotubeÇô7,7,8,8-tetracyanoquinodimethan sensor for sensitive detection of acetylcholinesterase inhibitors. 2012 Oct 20-; 748, (0): 81-88.   
Rec #: 4770  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: A new, simple and effective amperometric acetylcholinesterase biosensor was developed using screen-printed carbon electrodes modified with carbon nanotubes (MWCNTs)Çô7,7,8,8-tetracyanoquinodimethane (TCNQ). The design of the biosensor was based on the supramolecular arrangement resulted from the interaction of MWCNTs and TCNQ. This arrangement was confirmed by spectroscopic and electrochemical techniques. Two different supramolecular arrangements were proposed based on different MWCNTs:TCNQ ratios. The synergistic effect of MWCNTs and TCNQ was, for the first time, exploited for detection of thiocholine at low potential with high sensitivity. The biosensor developed by immobilization of acetylcholinesterase (AChE) in solÇôgel allowed the detection of two reference AChE inhibitors, paraoxon-methyl and chlorpyrifos with detection limits of 30 pM (7 ppt) and 0.4 nM (0.1 ppb), respectively. Efficient enzyme reactivation was obtained by using obidoxime. Carbon nanotube/ TCNQ/ Acetylcholinesterase/ Supramolecular arrangement/ Screen printed electrode/ Biosensor

1149. Rother, Hanna-Andrea. Falling Through the Regulatory Cracks: Street Selling of Pesticides and Poisoning Among Urban Youth in South Africa. 2010 Apr-2010 Jun 30; 16, (2): 202-13.   
Rec #: 47989  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In South Africa, as in much of the developing world, youth participation in the informal, unregulated street pesticide market results in exposures and risks of acute and chronic effects, yet has gone largely undocumented. A conceptual framework for understanding youth involvement in street pesticide sales and use includes contextual factors, health outcomes, and externalities (unintended negative consequences). An exploratory study based on this framework shows that highly-toxic pesticides, such as aldicarb, methamidophos, and chlorpyrifos, are easily available in informal markets in Cape Town's urban periphery. Youth are involved in the sale, distribution, and use of street pesticides, and are exposed during handling, transportation, spillage, storage, use and other activities, with little safety information available. Demand and supply for street pesticides is driven by joblessness, poverty, and inadequate pest management strategies. National and international efforts addressing underlying contextual determinants are required to protect children from exposures to street pesticides. [PUBLICATION ABSTRACT]  
Keywords: Phosphoric Acid Esters  
Keywords: Cape Town South Africa  
Keywords: Urban Population -- statistics & numerical data  
Keywords: Humans  
Keywords: Pesticides -- poisoning  
Keywords: Aldicarb  
Keywords: Population Surveillance  
Keywords: Environmental Studies  
Keywords: Pyrethrins  
Keywords: Pesticides  
Keywords: Adult  
Keywords: Occupational Exposure -- adverse effects  
Keywords: Middle Aged  
Keywords: South Africa  
Keywords: Adolescent  
Keywords: Human Rights  
Keywords: Aldicarb -- poisoning  
Keywords: Female  
Keywords: Male  
Keywords: Phosphoric Acid Esters -- poisoning  
Keywords: Pyrethrins -- poisoning  
Copyright - Copyright Hamilton Hardy Publishing Apr-Jun 2010  
Language of summary - English  
Location - Cape Town South Africa  
Pages - 202-13  
ProQuest ID - 215551858  
Document feature - Tables; Diagrams; Photographs; References  
SubjectsTermNotLitGenreText - Cape Town South Africa  
Last updated - 2012-03-04  
Place of publication - Philadelphia  
Corporate institution author - Rother, Hanna-Andrea  
DOI - 2034921131; 52165951; 49933; NJOH; 20465065; INODNJOH0000371861 English

1150. Rougier, N. M.; Vico, R. V.; de Rossi, R. H., and Bujan, E. I. Reactivity of the Insecticide Fenitrothion toward O and N Nucleophiles. 2010; 75, (10): 3427-3436.   
Rec #: 67909  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The reactivity of Fenitrothion (1) toward several O- and N-based nucleophiles, including ambident and alpha-nucleophiles, was investigated in basic media at 25 degrees C in water containing 2% 1,4-dioxane. In the reactions with HO(-) and HOO(-) quantitative formation of 3-methyl-4-nitrophenoxide (2) was observed indicating a S(N)2(P) pathway. In the reactions with NH(2)OH, NH(2)O(-), and BuNH(2), demethylfenitrothion (4) was formed along with 2, indicating competition between the S(N)2(P) and S(N)2(C) pathways; no evidence of a S(N)Ar pathway was observed in any case. The observed rate constants were dissected into the values corresponding to the S(N)2(P) and S(N)2(C) pathways. The yield of 4 depends on the nucleophile and on the pH of the reaction, being the main product in the case of BuNH(2). With HOO(-), NH(2)OH, and NH(2)O(-) a significant alpha-effect was observed, confirming the participation of the nucleophile in the rate-limiting step of the reaction.  
Keywords: HYDROPHOBIC ORGANIC-COMPOUNDS, SOIL-WATER INTERACTIONS, PESTICIDE  
ISI Document Delivery No.: 594IT

1151. Rouimi, Patrick; Zucchini-Pascal, Nathalie; Dupont, Gwendoline; Razpotnik, Andrej; Fouche, Edwin; De Sousa, Georges; Rahmani, Roger, and Rouimi, Patrick. Impacts of Low Doses of Pesticide Mixtures on Liver Cell Defence Systems. 2012 Aug; 26, (5): 718-726.   
Rec #: 42649  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Low amounts of residual pesticides are present in the environment, often as mixtures of chemicals which contaminate drinking water and food, being a source of chronic exposure for humans and a growing matter of concern in public health policy. Despite of the needs and growing investigation, little is known about the impact of low doses and mixtures of these chemicals on human health. The purpose of this study was to enlighten if modifications of liver cell metabolic- and/or defence-related capacities could occur under such exposures. In vitro perturbations of several metabolic, stress and survival pathways in human and **mice cultured hepatocytes and liver cells** were evaluated under exposure to low doses of single molecules or equimolecular combinations of the three pesticides, atrazine, chlorpyrifos and endosulfan. Mainly phases I and II enzymes of detoxification were found modulated, together with apoptotic process deregulation. Hence, CYP3A4 and CYP3A11 were upregulated in primary cultured human and mouse hepatocytes, respectively. These inductions were correlated to an anti-apoptotic process (increased Bcl-xL/Bax ratio, inhibition of the PARP protein cleavage). Such disturbances in pathways involved in cell protection may possibly account for initiation of pathologies or decrease in drugs efficiency in humans exposed to multiple environmental contaminants.  
Keywords: Detoxification  
Keywords: Cell survival  
Keywords: Chemicals  
Keywords: Apoptosis  
Keywords: Hepatocytes  
Keywords: Public health  
Keywords: Bcl-x protein  
Keywords: Chronic exposure  
Keywords: Poly(ADP-ribose) polymerase  
Keywords: Food sources  
Keywords: Drugs  
Keywords: Pollution Abstracts; Toxicology Abstracts  
Keywords: X 24330:Agrochemicals  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Stress  
Keywords: Enzymes  
Keywords: Mice  
Keywords: Endosulfan  
Keywords: Chlorpyrifos  
Keywords: Bax protein  
Keywords: Atrazine  
Keywords: Pesticides  
Keywords: Liver  
Keywords: Contaminants  
Keywords: Drinking water  
Date revised - 2012-06-01  
Language of summary - English  
Pages - 718-726  
ProQuest ID - 1020846826  
SubjectsTermNotLitGenreText - Detoxification; Cell survival; Apoptosis; Hepatocytes; Enzymes; Stress; Public health; Endosulfan; Chlorpyrifos; Bcl-x protein; Chronic exposure; Poly(ADP-ribose) polymerase; Bax protein; Food sources; Pesticides; Atrazine; Drinking water; Contaminants; Drugs; Chemicals; Liver; Mice  
Last updated - 2012-12-03  
British nursing index edition - Toxicology In Vitro [Toxicol. In Vitro]. Vol. 26, no. 5, pp. 718-726. Aug 2012.  
Corporate institution author - Rouimi, Patrick; Zucchini-Pascal, Nathalie; Dupont, Gwendoline; Razpotnik, Andrej; Fouche, Edwin; De Sousa, Georges; Rahmani, Roger  
DOI - 10189f36-d607-44a3-8038csamfg201; 16793302; 0887-2333 English

1152. Roy, Anamika; Bajpai, J; Bajpai, a K, and Roy, Anamika. Dynamics of Controlled Release of Chlorpyrifos From Swelling and Eroding Biopolymeric Microspheres of Calcium Alginate and Starch. 2009 Mar; 76, (2): 222-231.   
Rec #: 41349  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the present study biopolymer microspheres of sodium alginate and starch were prepared by employing CaCl2 as a crosslinker. A series of such microspheres of different compositions were prepared by varying the amounts of sodium alginate, starch and CaCl2 in the feed mixture. The prepared microspheres were loaded with an insecticide, chlorpyrifos, and both the native (unloaded) and loaded microspheres were characterized by FTIR and SEM techniques to gain insights into the structural and morphological features of the beads. The swelling experiments were performed for different compositions of beads at varying pH and temperature of the release medium. The swelling and erosion controlled release of insecticide was investigated for 8 days taking bidistilled water as a release medium. The release experiments were carried out under the static and varying experimental conditions and the data obtained were fitted to Ficks equation to evaluate diffusion co-efficient of insecticide. The results were further analyzed by Ficks power law equation, and the possible mechanisms of the insecticide release were suggested. In order to demonstrate the possible applicability of the present release system to natural agricultural fields the soil-pot experiments were designed and release profiles were studied.  
Keywords: Temperature effects  
Keywords: Data processing  
Keywords: Mathematical models  
Keywords: Biopolymers  
Keywords: W 30935:Food Biotechnology  
Keywords: Starch  
Keywords: Controlled release  
Keywords: Chlorpyrifos  
Keywords: Insecticides  
Keywords: sodium alginate  
Keywords: Biotechnology and Bioengineering Abstracts  
Keywords: calcium alginate  
Keywords: microspheres  
Keywords: Diffusion  
Keywords: Carbohydrates  
Keywords: pH effects  
Date revised - 2009-03-01  
Language of summary - English  
Pages - 222-231  
ProQuest ID - 20409655  
SubjectsTermNotLitGenreText - microspheres; Insecticides; Starch; Controlled release; Chlorpyrifos; Mathematical models; sodium alginate; calcium alginate; Data processing; Diffusion; Temperature effects; Carbohydrates; pH effects; Biopolymers  
Last updated - 2011-12-14  
British nursing index edition - Carbohydrate Polymers [Carbohydr. Polym.]. Vol. 76, no. 2, pp. 222-231. Mar 2009.  
Corporate institution author - Roy, Anamika; Bajpai, J; Bajpai, A K  
DOI - MD-0009436451; 9086319; 0144-8617 English

1153. Ruark, C. D.; Hack, C. E.; Robinson, P. J., and Gearhart, J. M. Quantitative Structure-Activity Relationships for Organophosphates Binding to Trypsin and Chymotrypsin. 2011; 74, (1): 1-23.   
Rec #: 67989  
Keywords: QSAR  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphate (OP) nerve agents such as sarin, soman, tabun, and O-ethyl S-[2-(diisopropylamino) ethyl] methylphosphonothioate (VX) do not react solely with acetylcholinesterase (AChE). Evidence suggests that cholinergic-independent pathways over a wide range are also targeted, including serine proteases. These proteases comprise nearly one-third of all known proteases and play major roles in synaptic plasticity, learning, memory, neuroprotection, wound healing, cell signaling, inflammation, blood coagulation, and protein processing. Inhibition of these proteases by OP was found to exert a wide range of noncholinergic effects depending on the type of OP, the dose, and the duration of exposure. Consequently, in order to understand these differences, in silico biologically based dose-response and quantitative structure-activity relationship (QSAR) methodologies need to be integrated. Here, QSAR were used to predict OP bimolecular rate constants for trypsin and -chymotrypsin. A heuristic regression of over 500 topological/constitutional, geometric, thermodynamic, electrostatic, and quantum mechanical descriptors, using the software Ampac 8.0 and Codessa 2.51 (SemiChem, Inc., Shawnee, KS), was developed to obtain statistically verified equations for the models. General models, using all data subsets, resulted in R2 values of .94 and .92 and leave-one-out Q2 values of 0.9 and 0.87 for trypsin and -chymotrypsin. To validate the general model, training sets were split into independent subsets for test set evaluation. A y-randomization procedure, used to estimate chance correlation, was performed 10,000 times, resulting in mean R2 values of .24 and .3 for trypsin and -chymotrypsin. The results show that these models are highly predictive and capable of delineating the complex mechanism of action between OP and serine proteases, and ultimately, by applying this approach to other OP enzyme reactions such as AChE, facilitate the development of biologically based dose-response models.  
Keywords: BLOOD PARTITION-COEFFICIENTS, SERINE-PROTEASE INHIBITORS,  
ISI Document Delivery No.: 687GJ

1154. Rubach, Mascha N; Baird, Donald J; Boerwinkel, Marie-Claire; Maund, Stephen J; Roessink, Ivo; Brink, Paul J, and Rubach, Mascha N. Species Traits as Predictors for Intrinsic Sensitivity of Aquatic Invertebrates to the Insecticide Chlorpyrifos. 2012 Oct; 21, (7): 2088-2101.   
Rec #: 38519  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Ecological risk assessment (ERA) has followed a taxonomy-based approach, making the assumption that related species will show similar sensitivity to toxicants, and using safety factors or species sensitivity distributions to extrapolate from tested to untested species. In ecology it has become apparent that taxonomic approaches may have limitations for the description and understanding of species assemblages in nature. Therefore it has been proposed that the inclusion of species traits in ERA could provide a useful and alternative description of the systems under investigation. At the same time, there is a growing recognition that the use of mechanistic approaches in ERA, including conceptual and quantitative models, may improve predictive and extrapolative power. Purposefully linking traits with mechanistic effect models could add value to taxonomy-based ERA by improving our understanding of how structural and functional system facets may facilitate inter-species extrapolation. Here, we explore whether and in what ways traits can be linked purposefully to mechanistic effect models to predict intrinsic sensitivity **using available data** on the acute sensitivity and toxicokinetics of a range of freshwater arthropods exposed to chlorpyrifos. The results of a quantitative linking of seven different endpoints and twelve traits demonstrate that while quantitative links between traits and/or trait combinations and process based (toxicokinetic) model parameters can be established, the use of simple traits to predict classical sensitivity endpoints yields little insight. Remarkably, neither of the standard sensitivity values, i.e. the LC sub(50) or EC sub(50), showed a strong correlation with traits. Future research in this area should include a quantitative linking of toxicodynamic parameter estimations and physiological traits, and requires further consideration of how mechanistic trait-process/parameter links can be used for prediction of intrinsic sensitivity across species for different substances in ERA.  
Keywords: Risk assessment  
Keywords: Data processing  
Keywords: Toxicants  
Keywords: Ecology Abstracts; Toxicology Abstracts; Pollution Abstracts  
Keywords: Freshwater environments  
Keywords: Environmental Studies  
Keywords: Models  
Keywords: Chlorpyrifos  
Keywords: Arthropoda  
Keywords: Insecticides  
Keywords: Structure-function relationships  
Keywords: Invertebrata  
Keywords: X 24330:Agrochemicals  
Date revised - 2012-09-01  
Language of summary - English  
Pages - 2088-2101  
ProQuest ID - 1143779992  
SubjectsTermNotLitGenreText - Risk assessment; Chlorpyrifos; Insecticides; Data processing; Toxicants; Freshwater environments; Structure-function relationships; Models; Arthropoda; Invertebrata  
Last updated - 2012-11-09  
Corporate institution author - Rubach, Mascha N; Baird, Donald J; Boerwinkel, Marie-Claire; Maund, Stephen J; Roessink, Ivo; Brink, Paul J  
DOI - OB-19d531ea-9c48-4906-bffamfgefd107; 17187658; 0963-9292; 1573-3017 English

1155. Rudzok, S; Schmucking, E; Graebsch, C; Herbarth, O; Bauer, M, and Rudzok, S. The Inducibility of Human Cytochrome P450 1a by Environmental-Relevant Xenobiotics in the Human Hepatoma Derived Cell Line Hepg2. 2009 Nov; 28, (3): 370-378.   
Rec #: 44539  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Overexpression of the CYP1 family, independent of gender, is focal to the evaluation of the risk of human cancer. We have analysed the ability of 17 anthropogenic environmental xenobiotics widely used in Europe within households and agriculture to induce the human cytochrome P450 1A (CYP1A) in the human hepatoma derived cell line HepG2. The xenobiotics were potent to concomitantly induce both CYP1A mRNA and CYP1A activity in a dose-response relationship. Exceptions were shown by the organophosphate insecticide chlorpyrifos and the imidazole fungicide prochloraz in high concentrations which were capable of both inhibiting the basal or abolishing the initially induced CYP1A activity, respectively. A CYP1A induction has been shown for the first time by the aromatic xenobiotics irgasan, permethrin and azoxystrobin, the nonaromatic tributyltinoxide and for humans by the piperonylbutoxide. The xenobiotics additionally differed by their induced CYP1A isoenzyme pattern. A pronounced CYP1A1 and CYP1A2 mRNA induction was given by the phenyl urea herbicide diuron and benzodiazole insecticide piperonylbutoxide, respectively. In conclusion, out of the environmental xenobiotics, we described new members of human CYP1A inducers which extend chemical structures of biotransformation activators.  
Keywords: Agriculture  
Keywords: imidazole  
Keywords: Organophosphates  
Keywords: biotransformation  
Keywords: Urea  
Keywords: diuron  
Keywords: Europe  
Keywords: Xenobiotics  
Keywords: azoxystrobin  
Keywords: Hepatoma  
Keywords: Prochloraz  
Keywords: Insecticides  
Keywords: Toxicology Abstracts; Environment Abstracts  
Keywords: Dose-response effects  
Keywords: Isoenzymes  
Keywords: X 24330:Agrochemicals  
Keywords: CYP1A2 protein  
Keywords: Diuron  
Keywords: Permethrin  
Keywords: Herbicides  
Keywords: organophosphates  
Keywords: Cancer  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: mRNA  
Keywords: Chlorpyrifos  
Keywords: Cytochrome  
Keywords: CYP1A protein  
Keywords: Fungicides  
Keywords: Cytochrome P450  
Keywords: Aromatics  
Date revised - 2009-10-01  
Language of summary - English  
Location - Europe  
Pages - 370-378  
ProQuest ID - 20944792  
SubjectsTermNotLitGenreText - Agriculture; imidazole; CYP1A2 protein; Diuron; biotransformation; Permethrin; Herbicides; Urea; organophosphates; Xenobiotics; Cancer; mRNA; azoxystrobin; Chlorpyrifos; Hepatoma; Prochloraz; CYP1A protein; Insecticides; Dose-response effects; Fungicides; Isoenzymes; Cytochrome P450; Aromatics; Cytochrome; Organophosphates; diuron; Europe  
Last updated - 2011-12-14  
British nursing index edition - Environmental Toxicology and Pharmacology [Environ. Toxicol. Pharmacol.]. Vol. 28, no. 3, pp. 370-378. Nov 2009.  
Corporate institution author - Rudzok, S; Schmucking, E; Graebsch, C; Herbarth, O; Bauer, M  
DOI - MD-0010595319; 11034675; 1382-6689 English

1156. Ruggenenti, P.; Fassi, A.; Ilieva, A.; Iliev, I. P.; Chiurchiu, C.; Rubis, N.; Gherardi, G.; Ene-Iordache, B.; Gaspari, F.; Perna, A.; Cravedi, P.; Bossi, A.; Trevisan, R.; Motterlini, N.; Remuzzi, G., and Benedict-B Study Investigators. Effects of Verapamil Added-on Trandolapril Therapy in Hypertensive Type 2 Diabetes Patients With Microalbuminuria: the Benedict-B Randomized Trial.   
Rec #: 50309  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: OBJECTIVES: To address whether nondihydropyridine calcium-channel blocker added-on angiotensin-converting-enzyme inhibitor therapy ameliorates albuminuria and cardiovascular outcomes in type 2 diabetes patients.  
ABSTRACT: DESIGN: The Bergamo Nephrologic Diabetes Complications Trial-B was a multicentre, prospective, double-blind, parallel-group trial comparing renal and cardiovascular outcomes in 281 hypertensive type 2 diabetes patients with microalbuminuria randomized to at least 2-year VeraTran (verapamil/trandolapril 180 mg/2 mg daily) or trandolapril (2 mg daily, identical image) treatment. Main outcome was persistent macroalbuminuria (albuminuria >200 &micro;g/min in two consecutive visits). Treatment targets were SBP/DBP less than 120/80 mmHg and HbA1C less than 7%.  
ABSTRACT: RESULTS: Over a median follow-up of 4.5 years, 18 patients (13%) on VeraTran vs. 15 (10.5%) on trandolapril [unadjusted hazard ratio (95% confidence interval [CI]) 1.07 (0.54-2.12), P = 0.852] progressed to macroalbuminuria, respectively; 62 (44.9%) vs. 71 (49.7%) [0.80 (0.57-1.12), P = 0.198] regressed to normoalbuminuria (urinary albumin excretion < 20 &micro;g/min), and 20 (14.5%) vs. 21 (14.7%) [hazard ratio 0.93 (0.50-1.72), P = 0.816] had major cardiovascular events. BP and metabolic control were similar between groups. Patients with cardiovascular events were significantly less [13 (9.8%) vs. 28 (18.9%), hazard ratio: 0.37 (0.19-0.71), P = 0.003] among those regressing to normoalbuminuria than those without regression. Difference was independent of treatment allocation and was significant also after adjusting for baseline characteristics [0.40 (0.20-0.79), P = 0.009], follow-up SBP [0.40 (0.20-0.80), P = 0.010] or DBP [0.36 (0.18-0.73), P = 0.004] BP or HbA1C [0.43 (0.21-0.88), P = 0.021].  
ABSTRACT: CONCLUSION: In hypertensive type 2 diabetes patients with microalbuminuria, verapamil added-on trandolapril did not improve renal or cardiovascular outcomes. Independent of verapamil, trandolapril normalized albuminuria in half of patients and this translated into significant cardioprotection.  
MESH HEADINGS: Aged  
MESH HEADINGS: Albuminuria/\*complications/\*drug therapy  
MESH HEADINGS: Angiotensin-Converting Enzyme Inhibitors/administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Antihypertensive Agents/\*administration &amp  
MESH HEADINGS: dosage/adverse effects  
MESH HEADINGS: Calcium Channel Blockers/administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Cardiovascular Diseases/prevention &amp  
MESH HEADINGS: control  
MESH HEADINGS: Diabetes Mellitus, Type 2/\*complications/\*drug therapy  
MESH HEADINGS: Double-Blind Method  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: Hypertension/\*complications/\*drug therapy  
MESH HEADINGS: Indoles/\*administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Male  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: Prospective Studies  
MESH HEADINGS: Treatment Outcome  
MESH HEADINGS: Verapamil/\*administration &amp  
MESH HEADINGS: dosage eng

1157. Rush, T; Liu, X Q; Hjelmhaug, J, and Lobner, D. Mechanisms of Chlorpyrifos and Diazinon Induced Neurotoxicity in Cortical Culture. 2010 Mar 31; 166, (3): 899-906.   
Rec #: 40669  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The main action of organophosphorous insecticides is generally believed to be the inhibition of acetylcholinesterase (AChE). However, these compounds also inhibit many other enzymes, any of which may play a role in their toxicity. **We tested the neurotoxic mechanism of two organophosphorous insecticides, chlorpyrifos and diazinon in primary cortical cultures**. Exposure to the insecticides caused a concentration-dependent toxicity that could not be directly attributed to the oxon forms of the compounds which caused little toxicity but strongly inhibited AChE. Addition of 1 mM acetylcholine or carbachol actually attenuated the toxicity of chlorpyrifos and diazinon, and the muscarinic receptor antagonist, atropine, and the nicotinic receptor antagonist, mecamylamine, did not attenuate the toxicity of either insecticide. These results strongly suggest that the organophosphorous toxicity observed in this culture system is not mediated by buildup of extracellular acetylcholine resulting from inhibition of AChE. The toxicity of chlorpyrifos was attenuated by antagonists of either the NMDA or AMPA/kainate-type glutamate receptors, but the cell death was potentiated by the caspase inhibitor ZVAD. Diazinon toxicity was not affected by glutamate receptor antagonists, but was attenuated by ZVAD. Chlorpyrifos induced diffuse nuclear staining characteristic of necrosis, while diazinon induced chromatin condensation characteristic of apoptosis. Also, chlorpyrifos exposure increased the levels of extracellular glutamate, while diazinon did not. The results suggest two different mechanisms of neurotoxicity of the insecticides, neither one of which involved acetylcholine. Chlorpyrifos induced a glutamate-mediated excitotoxicity, while diazinon induced apoptotic neuronal death. Copyright 2010 IBRO. Published by Elsevier Ltd. All rights reserved.  
Keywords: 2921-88-2  
Keywords: Cerebral Cortex -- cytology  
Keywords: Animals  
Keywords: Cerebral Cortex -- drug effects  
Keywords: Apoptosis  
Keywords: Cerebral Cortex -- metabolism  
Keywords: Acetylcholinesterase  
Keywords: Receptors, Kainic Acid -- physiology  
Keywords: Caspase Inhibitors  
Keywords: Acetylcholine -- metabolism  
Keywords: Receptors, N-Methyl-D-Aspartate -- physiology  
Keywords: Necrosis  
Keywords: Insecticides  
Keywords: Cholinesterase Inhibitors -- toxicity  
Keywords: Acetylcholinesterase -- metabolism  
Keywords: 333-41-5  
Keywords: Receptors, Kainic Acid  
Keywords: Extracellular Space -- enzymology  
Keywords: EC 3.1.1.7  
Keywords: Receptors, N-Methyl-D-Aspartate  
Keywords: 51-84-3  
Keywords: Insecticides -- toxicity  
Keywords: Diazinon -- toxicity  
Keywords: benzyloxycarbonylvalyl-alanyl-aspartyl fluoromethyl ketone  
Keywords: Mice  
Keywords: Chlorpyrifos  
Keywords: Cholinesterase Inhibitors  
Keywords: 0  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Cells, Cultured  
Keywords: Amino Acid Chloromethyl Ketones  
Keywords: Receptors, N-Methyl-D-Aspartate -- antagonists & inhibitors  
Keywords: Acetylcholine  
Keywords: Receptors, Kainic Acid -- antagonists & inhibitors  
Keywords: Amino Acid Chloromethyl Ketones -- pharmacology  
Keywords: Diazinon  
Date completed - 2010-05-17  
Date created - 2010-03-11  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 899-906  
ProQuest ID - 733525226  
Last updated - 2013-01-19  
British nursing index edition - Neuroscience, March 31, 2010, 166(3):899-906  
Corporate institution author - Rush, T; Liu, X Q; Hjelmhaug, J; Lobner, D  
DOI - MEDL-20096330; 20096330; 1873-7544 eng

1158. Rush, Travis and Lobner, Doug. Mechanisms of Neuronal Death Induced by Environmental Toxicants in Murine Cortical Culture. 2011: (UMI# 3478356 ).   
Rec #: 51669  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study was directed at examining the neurotoxic mechanisms of several classes of environmental toxicants implicated in neurodegenerative disease. Primary cortical cultures were exposed to organophosphorus pesticides, heavy metals and the cyanobacterial toxin, beta-N-methylamino-L-alanine (BMAA). Several components relating to neuronal injury were assessed in each study and novel aspects are described. The main action of organophosphorous insecticides is generally believed to be the inhibition of acetylcholinesterase. However, these compounds are now recognized to inhibit many other enzymes and cause neuronal death through a variety of mechanisms. I found that exposure to chlorpyrifos or diazinon caused concentration-dependent neurotoxicity that could not be attributed to acetylcholinesterase inhibition. Chlorpyrifos exposure increased extracellular glutamate and induced a diffuse nuclear staining characteristic of necrosis; the toxicity was sensitive to ionotropic glutamate receptor antagonists. Diazinon toxicity was blocked by caspase inhibitors. Additionally, diazinon induced punctuate chromatin staining characteristic of apoptosis. These results represent two distinct, novel mechanisms of organophosphorous neurotoxicity. Heavy metals are ubiquitous in the environment and are of significant health concern worldwide. Exposure to lead, iron, mercurials (inorganic mercury, methylmercury, or thimerosal, i.e. ethylmercury) or other heavy metals is implicated as a risk factor for neurodegenerative disease. I found that the toxicity of these metals may be enhanced when interacting with chelators used to treat metal intoxication. As well, my studies describe a new role for mercury-induced oxidative stress as a cytoprotective signal to enhance glutathione levels. My data also suggests an obligate role for MRP1 in the detoxification of methylmercury. Neurodegenerative diseases likely involve complex interactions between genetic predisposition and multiple environmental factors. My final study tested the interaction of the methylmercury and BMAA. Importantly, concentrations of BMAA that caused no toxicity by themselves potentiated methyl mercury toxicity. BMAA plus methylmercury, at concentrations that had no effect by themselves, depleted cellular glutathione. The combined toxicity was attenuated by glutathione monoethyl ester, and the free radical scavenger, trolox, but not by the NMDA receptor antagonist, MK-801. The results indicate a synergistic neurotoxic interaction targeting the cellular redox state. This finding may have implications for neurodegenerative disease caused by environmental toxicant exposure.  
Start Page: 140  
ISSN/ISBN: 9781124958026  
Keywords: 0383:Surgery  
Keywords: Methylmercury  
Keywords: Toxicants  
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Keywords: Glutathione  
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Keywords: 0383:Toxicology  
Keywords: Health and environmental sciences  
Keywords: Neurodegeneration  
Keywords: Biological sciences  
Keywords: 0317:Neurosciences  
Methylmercury  
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66569  
0383: Surgery  
Neurodegeneration  
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0317: Neurosciences  
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Biological sciences  
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1159. Rutschmann, S. and Hoebe, K. Dissecting Innate Immunity by Germline Mutagenesis.   
Rec #: 51319  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Curr Biol. 2002 Jun 25;12(12):996-1000 (medline /12123572)  
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ABSTRACT: The innate arm of our immune system is the first line of defence against infections. In addition, it is believed to drive adaptive immune responses, which help fight pathogens and provide long-term memory. As such, the innate immune system is instrumental for protection against pathogens that would otherwise destroy their host. Although our understanding of the innate immune components involved in pathogen sensing and fighting is improving, it is still limited. This is particularly exemplified by increased documentation of innate immune deficiencies in humans that often result in high and recurrent susceptibility to infections or even death, without the genetic cause being evident. To provide further insight into the mechanisms by which pathogen sensing and eradication occur, several strategies can be used. **The current review focuses on the forward genetic approaches that have been used to dissect innate immunity in the fruit fly and the mouse**. For both animal models, forward genetics has been instrumental in the deciphering of innate immunity and has greatly improved our understanding of how we respond to invading pathogens.  
MESH HEADINGS: Animals  
MESH HEADINGS: Disease Models, Animal  
MESH HEADINGS: Drosophila Proteins/immunology  
MESH HEADINGS: Drosophila melanogaster/genetics/immunology  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunity, Innate/\*genetics  
MESH HEADINGS: Lymphohistiocytosis, Hemophagocytic/genetics/immunology  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred Strains  
MESH HEADINGS: \*Models, Animal  
MESH HEADINGS: Mutagenesis  
MESH HEADINGS: Pedigree eng

1160. Ryberg, Karen R; Vecchia, Aldo V; Martin, Jeffrey D; Gilliom, Robert J, and Ryberg, Karen R. Trends in Pesticide Concentrations in Urban Streams in the United States, 1992-2008. 2010.  
Rec #: 44389  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticide concentration trends in streams dominated by urban land use were assessed using data from 27 urban streams sampled as part of the U.S. Geological Survey National Water-Quality Assessment Program. The sites were divided into four regions, Northeast, South, Midwest, and West, to examine possible regional patterns. Three partially overlapping 9-year periods (1992-2000, 1996-2004, and 2000-2008) were examined for eight herbicides and one degradation product (simazine, prometon, atrazine, deethylatrazine, metolachlor, trifluralin, pendimethalin, tebuthiuron, and Dacthal), and five insecticides and two degradation products (chlorpyrifos, malathion, diazinon, fipronil, fipronil sulfide, desulfinylfipronil, and carbaryl). The data were analyzed for trends in concentration using a parametric regression model with seasonality, flow-related variability, and trend, called SEAWAVE-Q. The SEAWAVE-Q model also was used to generate estimated daily concentration percentiles for each analysis period to provide a summary of concentration magnitudes. For herbicides, the largest 90th percentiles of estimated concentrations for simazine were in the South, prometon at some sites in all of the regions, atrazine and deethylatrazine in the South and Midwest, metolachlor in the Midwest and a few sites in the South, pendimethalin at scattered sites in all of the regions, and tebuthiuron in the South and a few sites in the Midwest and West. For insecticides, the largest 90th percentiles of estimated concentrations for diazinon and carbaryl were distributed among various sites in all regions (especially during 1996-2004), and fipronil at isolated sites in all of the regions during 2000-2008. Trend analysis results for the herbicides indicated many significant trends, both upward and downward, with varying patterns depending on period, region, and herbicide. Overall, deethylatrazine showed the most consistent pattern of upward trends, especially in the Northeast (2000-2008), South (1996-2004 and 2000-2008), and Midwest (1996-2004 and 2000-2008). Other herbicides showed less consistent upward trends, including simazine in the South (1996-2004), prometon in the Midwest (2000-2008), and atrazine in the South (1996-2004). The most consistent downward trends were for simazine in the Northeast and Midwest (1996-2004), prometon in the Northeast and Midwest (1996-2004) and West (1996-2004 and 2000-2008), and tebuthiuron in the South (1996-2004 and 2000-2008) and West (2000-2008). Strong similarity existed between the trends for atrazine and deethylatrazine during 1996-2004. During 2000-2008, however, there were mixed upward and downward trends in atrazine and predominantly upward trends in deethylatrazine. Ten sites with a downward trend in atrazine were paired with an upward trend in deethylatrazine and for three of these sites (1 in the South and 2 in the Midwest) both opposing trends were significant. Opposing trends showing a decrease in atrazine and an increase in deethylatrazine may indicate that decreases in atrazine from surface runoff are being offset in some cases by increases in deethylatrazine from groundwater for the latter analysis period. Trend results for insecticides indicated widespread significant downward trends for chlorpyrifos (especially 1996-2004), diazinon (1996-2004 and 2000-2008), and malathion (especially 1996-2004); widespread significant upward trends for fipronil and its degradation products (2000-2008); and mostly nonsignificant trends for carbaryl (1996-2004 and 2000-2008). The downward trends for chlorpyrifos and diazinon were consistent with the regulatory phaseout of residential uses of these insecticides and the upward trends for fipronil and its degradation products were consistent with its introduction in 1996 and subsequent increasing use as a possible substitute for chlorpyrifos and diazinon. The downward trends in malathion may be caused by voluntary substitution of pyrethroids or fipronil for malathio  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: Seasonality  
Keywords: Q1 01604:Stock assessment and management  
Keywords: Resource management  
Keywords: SW 3040:Wastewater treatment processes  
Keywords: Triazine Pesticides  
Keywords: Herbicides  
Keywords: Q5 01502:Methods and instruments  
Keywords: Streams  
Keywords: Sulphides  
Keywords: USA  
Keywords: Agricultural Chemicals  
Keywords: Insecticides  
Keywords: Aqualine Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; ASFA 1: Biological Sciences & Living Resources  
Keywords: Atrazine  
Keywords: Pesticides  
Keywords: Geological surveys  
Keywords: Degradation Products  
Keywords: Diazinon  
Keywords: Runoff  
Date revised - 2011-11-01  
Language of summary - English  
Location - USA  
ProQuest ID - 904477976  
SubjectsTermNotLitGenreText - Seasonality; Sulphides; Resource management; Insecticides; Geological surveys; Pesticides; Herbicides; Streams; Runoff; Agricultural Chemicals; Triazine Pesticides; Atrazine; Degradation Products; Diazinon; USA  
Last updated - 2012-03-29  
British nursing index edition - Scientific Investigations Report. U.S. Geological Survey. no. 2010-5139, [np]. 2010.  
Corporate institution author - Ryberg, Karen R; Vecchia, Aldo V; Martin, Jeffrey D; Gilliom, Robert J  
DOI - 58c7d2fb-0d67-423d-99fdcsamfg201; 15957708; NO1100786 English

1161. Sachana, M ; Flaskos, J; Sidiropoulou, E; Yavari, Ca; Hargreaves, a J, and Sachana, M. Inhibition of Extension Outgrowth in Differentiating Rat C6 Glioma Cells by Chlorpyrifos and Chlorpyrifos Oxon: Effects on Microtubule Proteins. 2008 Aug; 22, (5): 1387-1391.   
Rec #: 42049  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The aim of this work was to assess the toxic effects of the phosphorothionate insecticide chlorpyrifos (CPF) and its major in vivo metabolite chlorpyrifos oxon (CPO) on **differentiating rat C6 glioma cells.** At sublethal concentrations (1-10 mu M), both compounds were able to inhibit the development of extensions from C6 cells induced to differentiate by sodium butyrate. Western blot analysis of C6 cell lysates revealed that 4h exposure to CPF was associated with decreased levels of the cytoskeletal protein MAP1B compared to controls, whereas the levels of the cytoskeletal proteins tubulin and MAP2c were not significantly affected. Western blot analysis of extracts of cells treated with CPO showed a significant, concentration-dependent decrease in the levels of tubulin after 24h. MAP-1B levels were also significantly decreased. The above changes were not temporally related to acetylcholinesterase (AChE) inhibition. These results suggest that both CPF and CPO can exert toxic effects directly on glial cell differentiation and that the latter compound has a potent effect on the microtubule network.  
Keywords: Western blotting  
Keywords: Microtubules  
Keywords: Microtubule-associated protein 1  
Keywords: Acetylcholinesterase  
Keywords: Glial cells  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: Toxicology Abstracts; CSA Neurosciences Abstracts  
Keywords: Metabolites  
Keywords: Cytoskeleton  
Keywords: Chlorpyrifos  
Keywords: Differentiation  
Keywords: Insecticides  
Keywords: Sodium butyrate  
Keywords: Glioma cells  
Keywords: Tubulin  
Keywords: X 24330:Agrochemicals  
Date revised - 2008-07-01  
Language of summary - English  
Pages - 1387-1391  
ProQuest ID - 20728201  
SubjectsTermNotLitGenreText - Chlorpyrifos; Glioma cells; Tubulin; Western blotting; Cytoskeleton; Microtubules; Acetylcholinesterase; Glial cells; Microtubule-associated protein 1; Sodium butyrate; Differentiation; Metabolites; Insecticides  
Last updated - 2011-12-13  
British nursing index edition - Toxicology In Vitro [Toxicol. In Vitro]. Vol. 22, no. 5, pp. 1387-1391. Aug 2008.  
Corporate institution author - Sachana, M; Flaskos, J; Sidiropoulou, E; Yavari, CA; Hargreaves, A J  
DOI - MD-0008229220; 8299216; 0887-2333 English

1162. Sadashiva Murthy, Bm; Ramesh, H S; Mahadevaswamy, M, and Sadashiva Murthy, BM. Pollution Migration Study in Subsurface Environment. 2009; 3, (4): 545-556.   
Rec #: 45219  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The sources of groundwater pollution such as, industrial effluents, sewage and extensive farming have lead to agrochemical pollution. Mathematical modeling helps to analyze the existing situation, allows forecasting, and to evaluate the effects of changes in the surrounding water quality. The present research has been focused mainly towards understanding the various processes affecting the transport of chemicals in soils. Dispersion coefficient for the sandy loam soil was found to be 0247 m super(2)/d, 0.150 m super(2)/d and 0.01 m super(2)/d for nitrates, phosphates and Chlorpyriphos through column, and 0.337m super(2)/d, 0.217 m super(2)/d and 0.077 m super(2)/d for nitrate, phosphates and Chlorpyriphos through channel studies, respectively. For similar analysis of the breakthrough curves, dispersion coefficient for the clay soil was found to be 0.0835 m super(2)/d, 0.0632 m super(2)/d and 0.008 m super(2)/d for nitrates, phosphates and Chlorpyriphos through column and 0.147 m super(2)/d, 0.0848 m super(2)/d and 0.022 m super(2)/d for nitrates, phosphates and Chlorpyriphos through channel studies, respectively. The one-dimensional analytical model has been used and validated with the experimental data obtained from column and channel studies in sandy loam and clay soils and compared with model output (in which total elimination rate "K" is considered as zero). From this a variation of about 40-60 percent in the leaching characteristics of pollutants was being observed (nitrates, phosphates and chlorpyriphos).  
Keywords: Chemicals  
Keywords: water quality  
Keywords: M3 1010:Issues in Sustainable Development  
Keywords: Pollution dispersion  
Keywords: EE 30:Soil Pollution: Monitoring, Control & Remediation  
Keywords: Groundwater Pollution  
Keywords: Loam  
Keywords: Clays  
Keywords: Soil  
Keywords: sandy soils  
Keywords: Agricultural Chemicals  
Keywords: J3G  
Keywords: Sustainability Science Abstracts; Pollution Abstracts; Environment Abstracts; Aqualine Abstracts; Environmental Engineering Abstracts  
Keywords: migration  
Keywords: groundwater recharge  
Keywords: Leaching  
Keywords: Clay  
Keywords: Industrial effluents  
Keywords: Nitrates  
Keywords: Industrial Wastewater  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: J3T  
Keywords: J3P  
Keywords: Model Studies  
Keywords: Channels  
Keywords: ENA 06:Food & Drugs  
Keywords: AQ 00007:Industrial Effluents  
Keywords: loam  
Keywords: Phosphates  
Date revised - 2010-02-01  
Language of summary - English  
Location - J3G  
Pages - 545-556  
ProQuest ID - 294035038  
SubjectsTermNotLitGenreText - J3T; J3G; Phosphates; Nitrates; Channels; Model Studies; Industrial Wastewater; Groundwater Pollution; Loam; Clays; Agricultural Chemicals; Soil; Pollution dispersion; Clay; water quality; Leaching; Chemicals; groundwater recharge; loam; Industrial effluents; migration; sandy soils; J3P  
Last updated - 2011-10-26  
Corporate institution author - Sadashiva Murthy, BM; Ramesh, H S; Mahadevaswamy, M  
DOI - OB-MD-0010891162; 11147739; 1735-6865 English

1163. Sadlo, S.; Szpyrka, E.; Jazwa, A., and Zawislak, A. Pesticide residues in fruit and vegetables from southeastern Poland, 2004-05. 2007; 16, (2): 313-319.   
Rec #: 68079  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Our paper presents results from surveillance of pesticide residues in fruits and vegetables carried out in 2004-05. 747 samples of 39 different types of fresh fruit and vegetables were analyzed for their pesticide residue contents. The highest resides found were: bupirimate residues (2.19 mg/kg), captan residues (1.82 mg/kg), ethylenebisdithiocarbamate residues (1.6 mg/kg), tolylfluanid residues (1.44 mg/kg), procymidone residues (1.19 mg/kg) and chlorpyrifos residues (1.01 mg/kg). In 27 samples (3.6%) residues exceeded national MRLs. Comparisons of the highest residues to ADI levels indicate that fresh fruit and vegetables from southeastern Poland seem to be quite safe for toddlers and adults.  
Keywords: southeastern Poland, fresh fruits and vegetables, pesticide residues,  
ISI Document Delivery No.: 155KI

1164. Saison, C. ; Waller, N. J.; Kumar, A., and Kookana, R. S. Effects of thiobencarb in combinations with molinate and chlorpyrifos on selected soil microbial processes. 2009; 44, (3): 226-234.   
Rec #: 68099  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The impact of pesticides, namely thiobencarb (TBC), molinate (MOL) and chlorpyrifos (CPF), on soil microbial processes was studied in two Australian soils. Substrate induced respiration (SIR), substrate induced nitrification (SIN) and phosphatases and chitinase enzymatic activities were assessed during a 30-day microcosm study. The pesticides were applied to soils at recommended rates either alone, or as binary mixtures with TBC. Soil samples were sampled at 5, 15 and 30 days after pesticide treatments. Substrate induced respiration was only transiently affected by pesticides in both soils. In contrast, the process of indigenous nitrification was affected by the presence of pesticides in both soils, especially when the pesticides were applied as binary mixtures. Substrate induced nitrification increased with pesticides in the Griffith soil (except with MOL+TBC after 5 days) whereas SIN values were non-significantly different to the control on the Coleambally soil. The binary mixtures of pesticides with TBC resulted in a decrease in SIN in both soils, but the effects disappeared within 30 days. The enzymatic activities were not consistently affected by pesticides, and varied with the soil and pesticides studied. This study showed that, when applied at recommended application rates, TBC, MOL, and CPF (individually or as binary mixtures), had little or only transitory effects on the functional endpoints studied. However, further investigations are needed to assess the effect on microbial densities and community structure despite the low disturbance to the functions noted in this work.  
Keywords: Enzyme activities, microcosms, nitrification, respiration, pesticides,  
ISI Document Delivery No.: 417XV

1165. Saito, Y.; Murata-Kamiya, N.; Hirayama, T.; Ohba, Y., and Hatakeyama, M. Conversion of Helicobacter Pylori Caga From Senescence Inducer to Oncogenic Driver Through Polarity-Dependent Regulation of P21.   
Rec #: 50449  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Mol Cell Biol. 1997 Sep;17(9):5598-611 (medline /9271435)  
COMMENTS: Cites: Mol Cell Biol. 1998 Dec;18(12):6962-70 (medline /9819384)  
COMMENTS: Cites: Biochem J. 1998 Dec 15;336 ( Pt 3):551-60 (medline /9841865)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2001 Jun 5;98(12):6686-91 (medline /11390996)  
COMMENTS: Cites: Science. 2002 Jan 25;295(5555):683-6 (medline /11743164)  
COMMENTS: Cites: Biochem Biophys Res Commun. 2002 Jul 19;295(3):695-701 (medline /12099696)  
COMMENTS: Cites: J Biol Chem. 2003 Feb 7;278(6):3664-70 (medline /12446738)  
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COMMENTS: Cites: Science. 2005 Mar 11;307(5715):1603-9 (medline /15761148)  
COMMENTS: Cites: Trends Microbiol. 2005 Oct;13(10):476-84 (medline /16099656)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 2000 Feb 1;97(3):1263-8 (medline /10655519)  
COMMENTS: Cites: J Exp Med. 2000 Feb 21;191(4):593-602 (medline /10684851)  
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COMMENTS: Cites: Curr Opin Microbiol. 2008 Feb;11(1):30-7 (medline /18243773)  
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COMMENTS: Cites: Mol Cell Biol. 2009 May;29(10):2483-8 (medline /19273606)  
COMMENTS: Cites: Nat Cell Biol. 2009 Apr;11(4):460-7 (medline /19287376)  
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COMMENTS: Cites: Clin Cancer Res. 2009 Apr 15;15(8):2657-65 (medline /19336515)  
COMMENTS: Cites: J Clin Invest. 2009 Jun;119(6):1420-8 (medline /19487818)  
COMMENTS: Cites: J Clin Invest. 2009 Jun;119(6):1438-49 (medline /19487820)  
COMMENTS: Cites: J Biol Chem. 2009 Aug 21;284(34):23024-36 (medline /19553659)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 2009 Nov 10;106(45):19035-9 (medline /19858489)  
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COMMENTS: Cites: Nat Struct Mol Biol. 2010 Jan;17(1):130-2 (medline /19966800)  
COMMENTS: Cites: Cell Host Microbe. 2010 May 20;7(5):399-411 (medline /20478541)  
COMMENTS: Cites: Mol Cell Biol. 1997 Sep;17(9):5588-97 (medline /9271434)  
ABSTRACT: The Helicobacter pylori CagA bacterial oncoprotein plays a critical role in gastric carcinogenesis. Upon delivery into epithelial cells, CagA causes loss of polarity and activates aberrant Erk signaling. We show that CagA-induced Erk activation results in senescence and mitogenesis in nonpolarized and polarized epithelial cells, respectively. In nonpolarized epithelial cells, Erk activation results in oncogenic stress, up-regulation of the p21(Waf1/Cip1) cyclin-dependent kinase inhibitor, and induction of senescence. In polarized epithelial cells, CagA-driven Erk signals prevent p21(Waf1/Cip1) expression by activating a guanine nucleotide exchange factor-H1-RhoA-RhoA-associated kinase-c-Myc pathway. The microRNAs miR-17 and miR-20a, induced by c-Myc, are needed to suppress p21(Waf1/Cip1) expression. CagA also drives an epithelial-mesenchymal transition in polarized epithelial cells. These findings suggest that CagA exploits a polarity-signaling pathway to induce oncogenesis.  
MESH HEADINGS: Animals  
MESH HEADINGS: Antigens, Bacterial/biosynthesis/\*genetics  
MESH HEADINGS: Bacterial Proteins/biosynthesis/\*genetics  
MESH HEADINGS: Cell Aging/\*genetics  
MESH HEADINGS: Cell Line  
MESH HEADINGS: Cell Polarity/\*genetics  
MESH HEADINGS: Cell Transformation, Neoplastic/genetics  
MESH HEADINGS: Cercopithecus aethiops  
MESH HEADINGS: Cyclin-Dependent Kinase Inhibitor p21/antagonists &amp  
MESH HEADINGS: inhibitors/genetics/metabolism  
MESH HEADINGS: Dogs  
MESH HEADINGS: \*Epithelial Cells/metabolism/microbiology/pathology  
MESH HEADINGS: Epithelial-Mesenchymal Transition/genetics  
MESH HEADINGS: Genes, myc  
MESH HEADINGS: Helicobacter Infections/metabolism/microbiology/pathology  
MESH HEADINGS: Helicobacter pylori/\*genetics  
MESH HEADINGS: MicroRNAs  
MESH HEADINGS: Signal Transduction/genetics  
MESH HEADINGS: Up-Regulation eng

1166. Sakai, M. Acute Toxic Tests of Rainwater Samples Using Daphnia magna. 2006; 64, 215-220.   
Rec #: 2300  
Keywords: MIXTURE  
Call Number: NO MIXTURE (1Major ions,ATZ,CLNB,CPY,CTN,CaCl2,DDVP,DS,DZ,ES1,ES2,FNT,FTL,Halides,MLN,MLO,MLT,MP,NaNO3,PDM,PNB,PZM,SA2Na,SZ,TBC,TFN)  
Notes: Chemical of Concern: ATZ,BTC,CLNB,CPY,CTN,CaCl2,DDVP,DS,DZ,EPRN,ES1,ES2,FNT,FNTH,FTL,HCCH,Halides,KCl,MLN,MLO,MLT,MP,MgSO4,NPP,NaNO3,ODZ,PDM,PNB,PPCP,PRN,PZM,SA2Na,SZ,TBC,TCM,TFN

1167. Sakurai, M.; Stamler, J.; Miura, K.; Brown, I. J.; Nakagawa, H.; Elliott, P.; Ueshima, H.; Chan, Q.; Tzoulaki, I.; Dyer, A. R.; Okayama, A.; Zhao, L., and Intermap Research Group. Relationship of Dietary Cholesterol to Blood Pressure: the Intermap Study.   
Rec #: 50349  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Comment in: J Hypertens. 2011 Feb;29(2):194-7 (medline /21191277)  
ABSTRACT: OBJECTIVE: A direct relationship of dietary cholesterol to blood pressure of men has been reported in a few observational studies from the USA. It is not clear whether this association prevails consistently, for example, in populations with varied dietary habits, across ethnic groups, and sexes. Cross-sectional data from the International Study of Macro/Micro-nutrients and Blood Pressure (INTERMAP) were used to assess relations of dietary cholesterol intake to blood pressure in men and women from four countries.  
ABSTRACT: METHODS: Data include 83 nutrients from four multipass 24-h dietary recalls and two-timed 24-h urine collections; eight blood pressure readings, and questionnaire data, for 4680 participants ages 40-59 years from 17 population samples in Japan, People's Republic of China, UK, and USA.  
ABSTRACT: RESULTS: With sequential models to control for multiple possible confounders (dietary, other), linear regression analyses showed that dietary cholesterol was directly related to SBP for all participants and for nonhypertensive individuals, but not to DBP. With adjustment for 12 variables, estimated SBP differences with 2SD for higher cholesterol intake (131.0 mg/1000 kcal) were 0.9 mmHg (P < 0.05) for all participants and 1.1 mmHg (P < 0.01) for nonhypertensive individuals, findings attenuated with addition of height and weight to the model.  
ABSTRACT: CONCLUSION: INTERMAP found a low-order, positive relationship of dietary cholesterol intake to SBP with control for multiple possible confounders. Reduction of dietary cholesterol intake may contribute to prevention and control of adverse blood pressure levels in general populations.  
MESH HEADINGS: Adult  
MESH HEADINGS: Blood Pressure/\*physiology  
MESH HEADINGS: Cholesterol, Dietary/\*administration &amp  
MESH HEADINGS: dosage/\*adverse effects  
MESH HEADINGS: Cross-Sectional Studies  
MESH HEADINGS: Diet  
MESH HEADINGS: Female  
MESH HEADINGS: Food  
MESH HEADINGS: Humans  
MESH HEADINGS: Hypertension/\*etiology/physiopathology/prevention &amp  
MESH HEADINGS: control  
MESH HEADINGS: Male  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: Regression Analysis  
MESH HEADINGS: Risk Factors eng

1168. Sala, Serenella; Migliorati, Sonia; Monti, Gianna S; Vighi, Marco, and Sala, Serenella. Ssd-Based Rating System for the Classification of Pesticide Risk on Biodiversity. 2012 May; 21, (4): 1050-1062.   
Rec #: 46749  
Keywords: MODELING  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A novel approach, based on Species sensitivity distribution (SSD), is proposed for the development of an index for classifying ecotoxicological pesticide risk in surface waters. In this approach, the concept of TER (Toxicity Exposure Ratio), commonly used in traditional risk indices, is substituted by the concept of PAF (Potentially Affected Fraction), which takes into account several species within the biological community of interest, rather than just a small number of indicator species assumed as being representative of the ecosystem. The procedure represents a probabilistic tool to quantitatively assess the ecotoxicological risk on biodiversity considering the distribution of toxicological sensitivity. It can be applied to assess chemical risk on generic aquatic and terrestrial communities as well as on site-specific natural communities. Examples of its application are shown for some pesticides in freshwater ecosystems. In order to overcome the problem of insufficient reliable ecotoxicological data, a methodology and related algorithms are proposed for predicting SSD curves for chemicals that do not have sufficient available data. The methodology is applicable within congeneric classes of chemicals and has been tested and statistically validated on a group of organophosphorus insecticides. Values and limitations of the approach are discussed.  
Keywords: Data processing  
Keywords: Ecology Abstracts; Toxicology Abstracts; Pollution Abstracts  
Keywords: Surface water  
Keywords: Algorithms  
Keywords: Biodiversity  
Keywords: Toxicity  
Keywords: Environmental Studies  
Keywords: Platelet-activating factor  
Keywords: Freshwater ecosystems  
Keywords: Insecticides  
Keywords: Classification  
Keywords: Pesticides  
Keywords: X 24330:Agrochemicals  
Keywords: Indicator species  
Date revised - 2012-06-01  
Language of summary - English  
Pages - 1050-1062  
ProQuest ID - 1018918464  
SubjectsTermNotLitGenreText - Platelet-activating factor; Insecticides; Freshwater ecosystems; Data processing; Classification; Surface water; Pesticides; Algorithms; Biodiversity; Toxicity; Indicator species  
Last updated - 2012-06-07  
Corporate institution author - Sala, Serenella; Migliorati, Sonia; Monti, Gianna S; Vighi, Marco  
DOI - OB-db6c76ce-db61-4d26-b184mfgefd101; 16761616; 0963-9292; 1573-3017 English

1169. Salazar, J. G.; Revert+\_, I.; Cabr+\_, M.; S+ínchez-Santed, F.; Domingo, J. L., and Colomina, M. T. Neurotoxicity effects 2 months after exposure to repeated doses of chlorpyrifos in an animal model (TG2576) of Alzheimer's disease: Abstracts of the XII International Congress of Toxicology. 2010 Jul 17-; 196, Supplement, (0): S224.   
Rec #: 2540  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

1170. Salm, P.; Taylor, P. J.; Roberts, D., and de Silva, J. Liquid chromatography-tandem mass spectrometry method for the simultaneous quantitative determination of the organophosphorus pesticides dimethoate, fenthion, diazinon and chlorpyrifos in human blood. 2009; 877, (5-6): 568-574.   
Rec #: 68139  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Simultaneous determination of the organophosphorus pesticides dimethoate, fenthion, diazinon and chlorpyrifos in human blood by HPLC-tandem mass spectrometry was developed and validated. The pesticides were extracted by a simple one-step protein precipitation procedure. Chromatography was performed on a Luna C(18) (30 mm x 2.0 mm, 3 pm) column, using a step-gradient at a flow rate of 0.4 ml/min. The assay was linear from 0.5 to 100 ng/ml(r(2)>0.992, n=24) for all pesticides. The inter- and intra-day accuracy and precision for the method was 96.6-106.1% and <10%, respectively. The lower limit of quantification was 0.5 ng/ml. In conclusion, the method described displays analytical performance characteristics that are suitable for the quantification of these pesticides in cases of acute poisoning. (C) 2009 Elsevier B.V. All rights reserved.  
Keywords: Organophosphorus pesticides, Dimethoate, Fenthion, Diazinon,  
ISI Document Delivery No.: 411BX

1171. Samadi, S.; Sereshti, H., and Assadi, Y. Ultra-preconcentration and determination of thirteen organophosphorus pesticides in water samples using solid-phase extraction followed by dispersive liquid-liquid microextraction and gas chromatography with flame photometric detection. 2012; 1219, 61-65.   
Rec #: 68149  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An ultra-preconcentration technique composed of solid-phase extraction (SPE) and dispersive liquid-liquid microextraction (DLLME) coupled with gas chromatography-flame photometric detection (GC-FPD) was used for determination of thirteen organophosphorus pesticides (OPPs) including phorate, diazinon, disolfotane, methyl parathion, sumithion, chlorpyrifos, malathion, fenthion, profenphose, ethion, phosalone, azinphose-methyl and co-ral in aqueous samples. The analytes were collected from large volumes of aqueous solutions (100 mL) into 100 mg of a SPE C(18) sorbent. The effective variables of SPE including type and volume of elution solvent, volume and flow rate of sample solution, and salt concentration were investigated and optimized. Acetone was selected as eluent in SPE and disperser solvent in DLLME and chlorobenzene was used as extraction solvent. Under the optimal conditions, the enrichment factors were between 15,160 and 21,000 and extraction recoveries were 75.8-105.0%. The linear range was 1-10,000 ng L(-1) and limits of detection (LODs) were between 0.2 and 1.5 ng L(-1). The relative standard deviations (RSDs) for 50 ng L(-1) of OPPs in water with and without an internal standard, were in the range of 1.4-7.9% (n = 5) and 4.0-11.6%. respectively. The relative recoveries of OPPs from well and farm water sat spiking levels of 25 and 250 ng L(-1) were 88-109%. (C) 2011 Elsevier B.V. All rights reserved.  
Keywords: Dispersive liquid-liquid microextraction, Solid-phase extraction, Gas  
ISI Document Delivery No.: 882TD

1172. Samet, Youssef; Agengui, Lamia, and Abdelh+\_di, Ridha. Electrochemical degradation of chlorpyrifos pesticide in aqueous solutions by anodic oxidation at boron-doped diamond electrodes. 2010 Jul 1-; 161, (1Çô2): 167-172.   
Rec #: 1200  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Laboratory experiments were carried out on the kinetic of the electrochemical degradation of aqueous solutions containing chlorpyrifos as model compounds of organophosphorus pesticides. The process was studied under galvanostatic polarization mode in acidic medium using boron-doped diamond (BDD) anodes and graphite carbon bar as cathode. The chemical oxygen demand (COD) measurement during the processing permitted the evaluation of the kinetic of organic matter decay and the instantaneous current efficiency. The results showed that the degradation of this pesticide is dependent on its initial concentration, current density and temperature. COD decay follows a pseudo first-order kinetic and the process was under mass transport control within the range studied, regardless of the experimental conditions. The removal rate of COD increases with applied current density until 20 mA cmęĆ2 and decreases for higher values. The degradation rate increased significantly with increasing temperature and initial concentration of chlorpyrifos. The best obtained conditions for COD removal on the BDD anode to degrade chlorpyrifos solutions (COD(0) = 456 mg LęĆ1) include operating at 20 mA cmęĆ2 and 70 -\_C. This arrangement allows to completely degrade chlorpyrifos in just 6 h. Compared with PbO2, BDD anode has shown more performance and rapidity in the COD removal in the same electrolysis device. Chlorpyrifos/ Electrochemical degradation/ Boron-doped diamond/ Lead dioxide/ Hydroxyl radicals

1173. Samet, Youssef; Hmani, Emna, and Abdelhă©Di, Ridha. Fenton and Solar Photo-Fenton Processes for the Removal of Chlorpyrifos Insecticide in Wastewater. 2012 Jul; 38, (4): 537-542.   
Rec #: 38739  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The degradation of chlorpyrifos in water by Fenton (H^sub 2^O^sub 2^/Fe^sup 2+^) and solar photo-Fenton (H^sub 2^O^sub 2^/Fe^sup 2+^/solar light) processes was investigated. A laboratory-scale reactor was designed to evaluate and select the optimal oxidation condition. The degradation rate is strongly dependent on pH, temperature, H^sub 2^O^sub 2^ dosing rate, and initial concentrations of the insecticide and Fe^sup 2+^. The kinetics of organic matter decay was evaluated by means of chemical oxygen demand (COD) measurement. Overall kinetics can be described by a pseudo-second-order rate equation with respect to COD. The optimum conditions were obtained at pH 3, H^sub 2^O^sub 2^ dosing rate 120 mg.min^sup -1^, [Fe^sup 2+^]^sub 0^ 5.0 mM, initial COD 1 330 mg.l^sup -1^ and 35Â°C for the Fenton process. However, in the solar photo-Fenton process, the degradation rate increased significantly. To achieve 90% of COD removal, the solar photo-Fenton process needs 50% less time than that used in the Fenton process which translates to a 50% gain of H^sub 2^O^sub 2^. [PUBLICATION ABSTRACT]  
Keywords: Water Resources  
Copyright - Copyright Water Research Commission Jul 2012  
Language of summary - English  
Pages - 537-542  
ProQuest ID - 1034899835  
Document feature - Diagrams; Equations; Graphs; Tables; References  
Last updated - 2012-08-24  
Place of publication - Gezina  
Corporate institution author - Samet, Youssef; Hmani, Emna; AbdelhĂ©di, Ridha  
DOI - 2743869141; 71343722; 110023; WTSA; INNNWTSA0001037920  
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XU M, WANG Q and HAO Y (2007) Removal of organic carbon from wastepaper pulp effluent by lab-scale solar photo-Fenton process. J. Hazard. Mater. 148 103-109. English

1174. Sams, Craig; Jones, Kate, and Sams, Craig. Human Volunteer Studies Investigating the Potential for Toxicokinetic Interactions Between the Pesticides Deltamethrin; Pirimicarb and Chlorpyrifos-Methyl Following Oral Exposure at the Acceptable Daily Intake. 2011 Jan 15; 200, (1-2): 41-45.   
Rec #: 40029  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Human volunteer studies have been conducted by orally administering the pesticides deltamethrin (0.01mg/kg/day) or pirimicarb (0.02mg/kg/day) at the acceptable daily intake (ADI) together with chlorpyrifos-methyl (0.01mg/kg/day), in order to investigate any potential interactions that may occur during dietary exposure. Deltamethrin and pirimicarb are metabolised in vivo by hydrolytic enzymes, which may be susceptible to inhibition by esterase-inhibiting compounds, such as chlorpyrifos-methyl. Urine samples were collected at time points up to at least 48h post-exposure and metabolites were quantified. Urinary metabolite excretion data obtained from the mixed exposures were compared with data obtained from the same individuals given a dose of each individual pesticide on a separate occasion. Metabolite excretion profiles for both pesticides administered as a mixed dose with chlorpyrifos-methyl were qualitatively similar to those obtained for the individual doses. Peak excretion of deltamethrin and pirimicarb metabolites occurred at around 4h post-exposure for both the individual and the mixed exposure scenarios, and metabolite excretion was almost complete within 24h. No statistically significant differences were found between the individual and mixed doses for either metabolite excretion half-life or metabolite levels quantified in 24-h total urine collections. The data presented here indicate that no significant toxicokinetic interactions occur between either deltamethrin or pirimicarb and chlorpyrifos-methyl when orally administered together at the ADI.  
Keywords: Diets  
Keywords: Environment Abstracts; Toxicology Abstracts  
Keywords: Pharmacy And Pharmacology  
Keywords: Data processing  
Keywords: Statistical analysis  
Keywords: Oral administration  
Keywords: Enzymes  
Keywords: Metabolites  
Keywords: Deltamethrin  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Urine  
Keywords: Pesticides  
Keywords: Excretion  
Keywords: X 24330:Agrochemicals  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 41-45  
ProQuest ID - 852261611  
SubjectsTermNotLitGenreText - Data processing; Urine; Pesticides; Oral administration; Statistical analysis; Enzymes; Excretion; Metabolites; Deltamethrin; Diets  
Last updated - 2011-12-12  
Corporate institution author - Sams, Craig; Jones, Kate  
DOI - OB-9c802660-3cfe-4e33-a732csamfg201; 14199936; 0378-4274 English

1175. Sanagi, M. M.; Ghani, Nfya; Miskam, M.; Ibrahim, W. A. W., and Aboul-Enein, H. Y. ANALYSIS OF ORGANOPHOSPHORUS PESTICIDES IN VEGETABLE SAMPLES BY HOLLOW FIBER LIQUID PHASE MICROEXTRACTION COUPLED WITH GAS CHROMATOGRAPHY-ELECTRON CAPTURE DETECTION. 2010; 33, (5): 693-703.   
Rec #: 68209  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A method based on hollow fibre liquid phase microextraction (HF-LPME) coupled with gas chromatography electron capture detection (GC-ECD) has been developed for the determination of organophosphorus pesticides (OPPs) (chlorpyrifos and profenofos) in vegetable samples. In this method, a microsyringe needle with 1.5cm polypropylene hollow fibre containing a volume of organic acceptor phase (n-dodecane) was immersed in an aqueous donor solution, and at the completion of extraction, the acceptor phase was withdrawn and transferred to GC-ECD for analysis. The effects of extraction solvent, volume of acceptor phase, and volume of donor phase were investigated. The optimized conditions for HF-LPME of the selected OPPs were n-dodecane as organic solvent, 11mL of donor phase, and 3L of acceptor phase. The correlation coefficient (r2) of the calibration curves ranged from 0.998 to 0.999. The limits of detection (LOD) were between 0.099 and 0.128g/mL. The developed method provided excellent RSDs ranging from 0.54% to 8.00% and analyte recoveries ranging from 60.8% to 88.0%. This method was applied successfully for determination of organophosphorus pesticides in selected vegetables.  
Keywords: GC-ECD, hollow-fiber liquid phase microextraction, organophosphorus  
ISI Document Delivery No.: 563EY

1176. Sanchez, Critina Solis and Grineski, Sara. Geography of Pesticide Exposure in the Lower Valley (El Paso County, Texas). 2009: (UMI# 1477827 ).   
Rec #: 51789  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Previous studies using GIS have been used to understand the demographics of particular areas of a city and the risks associated with living there. In the Lower Valley (Socorro, Clint, and San Elizario) area of El Paso County (TX), there has been a rapid growth in population. This increase in growth has led to this project about the types of pesticides used in farms and if they are creating possible health risks for people living in this area and which populations are most at risk. **To determine population risk**, I use existing GIS information, specifically a USDA aerial photograph taken when crops were at full leaf, US Bureau of the Census data from 2000, and data regarding pesticide usage and crop growth gathered by myself to analyze, compare, and assess possible health risks from living, or attending school, near farm fields. I focus on five pesticides commonly used on local crops (e.g., cotton, pecans, and chiles) and the level of danger that they present to the surrounding population. In regards to the defoliant Defol 750 used on chile, the populations that are mostly at risk are Hispanics and people who are 65 years of age and over. When looking at the insecticides Lorsban 4E and Whirlwind, the populations that are most affected are non Hispanic Whites, renters, and adults 18 to 64 years of age. In regards to Roundup ProMax herbicide and Trimax Pro insecticides, the populations that are most at risk are non Hispanic Whites, renters, and adults 18 to 64 years of age. In terms of schools, nine schools are located within 300 feet of the nearest farm field, putting students and school staff at risk. We can see that there is an overall significant pattern of increased risk in regards to populations that are non Hispanic Whites, adults, and renters, as well as to schools that surround farmlands. In sum, there are a substantial amount of people at risk due to the proximity of farms that use pesticides to homes and schools in the Lower Valley.  
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Keywords: 0768:Environmental science  
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Keywords: Health and environmental sciences  
Keywords: Lower Valley  
Keywords: Geography  
Keywords: Biological sciences  
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Pestecide  
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0768: Environmental science  
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Health and environmental sciences  
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604663280  
Biological sciences  
2076885071  
2010-07-22 English

1177. Sanchez-Sanchez, L.; Roman, R., and Vazquez-Duhalt, R. Pesticide transformation by a variant of CYPBM3 with improved peroxygenase activity. 2012; 102, (2): 169-174.   
Rec #: 68229  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The activity of the mutant CYPBM3 "21B3", which is able to use hydrogen peroxide as the final electron acceptor, was evaluated against two major environmental pollutants; organochlorine and organophosphorus pesticides. This evolved CYP from Bacillus megaterium is able to transform a variety of structurally different pesticides. The catalytic parameters for two organochlorine; dichlorophen (k(cat) = 9.2 min(-1), K(M) = 64.1 mu M) and linuron (k(cat) = 226.5 min(-1), K(M) = 468.2 mu M), and two organophosphorus compounds; parathion (k(cat) = 10.9 min(-1), K(M) = 59.3 mu M) and chlorpyrifos (k(cat) = 9.2 min(-1), K(M) = 226.5 mu M) were determined giving catalytic efficiencies between 0.143 and 1.107 min(-1) mu M(-1). CYPBM3 "21B3" has the ability to both activate and detoxify organophosphorus pesticides, as demonstrated by the chemical nature of the reaction products. The capacity to transform structurally diverse compounds together with the great stability, easy production and relatively inexpensive cofactors needed, makes CYPBM3 "21B3" an enzyme with a potential use on the environmental field. (C) 2012 Elsevier Inc. All rights reserved.  
Keywords: CYP variant, Organophosphorus, Organochlorine, Pesticides,  
ISI Document Delivery No.: 904QE

1178. Sandal, Suleyman; Yilmaz, Bayram, and Sandal, Suleyman. Genotoxic Effects of Chlorpyrifos, Cypermethrin, Endosulfan and 2,4-D on Human Peripheral Lymphocytes Cultured From Smokers and Nonsmokers. 2011 Oct; 26, (5): 433-442.   
Rec #: 39359  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticides often cause environmental pollution and adverse effects on human health. We have chosen four structurally different pesticides (endosulfan, an organochlorine pesticide; chlorpyrifos, an organophosphate insecticide; cypermethrin, type II pyrethroid insecticide, and 2,4-dichlorophenoxyacetic acid, a chlorinated aromatic hydrocarbon acid pesticide) to examine and compare their effects on DNA damage in acutely cultured human lymphocytes by the comet assay. In addition, possible differences in response between smoking and nonsmoking subjects were also investigated. Venous blood samples were obtained from healthy male nonsmoker (n = 7) and smoker (n = 8) donors. Primary cultures of lymphocytes were prepared and test groups were treated with three different concentrations (1, 5, and 10 Delta \*mM) of endosulfan, chlorpyrifos, cypermehrin, and 2,4-D. DNA damage was assessed by alkaline comet assay. We determined an increase in the ratio of DNA migration in human lymphocyte cell cultures as a result of treatment with cypermethrin, 2,4-D and chlorpyrifos at high concentration. Endosulfan had no significant genotoxic effect even at 10 Delta \*mM concentration. We suggest that chlorpyrifos and cypermethrin are more potentially genotoxic than endosulfan and 2,4-D. Our findings also indicate that the only significant DNA damage between smokers and nonsmokers was observed in the 2,4-D-treated group. ? 2010 Wiley Periodicals, Inc. Environ Toxicol, 2010.  
Keywords: 2,4-D  
Keywords: Cell culture  
Keywords: Lymphocytes  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Leukocyte migration  
Keywords: Smoking  
Keywords: Insecticides  
Keywords: X 24380:Social Poisons & Drug Abuse  
Keywords: Aromatic hydrocarbons  
Keywords: 2,4-Dichlorophenoxyacetic acid  
Keywords: Pyrethroids  
Keywords: Pollution  
Keywords: Cypermethrin  
Keywords: Genotoxicity  
Keywords: Pesticides (organochlorine)  
Keywords: organophosphates  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Endosulfan  
Keywords: Chlorpyrifos  
Keywords: DNA damage  
Keywords: cypermethrin  
Keywords: Pollution Abstracts; Toxicology Abstracts; Environment Abstracts  
Keywords: Pesticides  
Keywords: DNA  
Keywords: Comet assay  
Keywords: Side effects  
Date revised - 2012-05-01  
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ProQuest ID - 1017978641  
SubjectsTermNotLitGenreText - 2,4-D; Cypermethrin; Genotoxicity; Pesticides (organochlorine); Cell culture; organophosphates; Lymphocytes; Endosulfan; Chlorpyrifos; Leukocyte migration; Smoking; DNA damage; Insecticides; Aromatic hydrocarbons; Comet assay; Pyrethroids; Side effects; Pollution; cypermethrin; Pesticides; DNA; 2,4-Dichlorophenoxyacetic acid  
Last updated - 2012-09-10  
British nursing index edition - Environmental Toxicology [Environ. Toxicol.]. Vol. 26, no. 5, pp. 433-442. Oct 2011.  
Corporate institution author - Sandal, Suleyman; Yilmaz, Bayram  
DOI - 310ddbbe-ae91-4c14-8907csamfg201; 16709987; 1522-7278 English

1179. Sanders, W. R.; Mankin, R. W.; Liburd, O. E., and Stelinski, L. L. ACOUSTIC DETECTION OF ARTHROPOD INFESTATION OF GRAPE ROOTS: SCOUTING FOR GRAPE ROOT BORER (LEPIDOPTERA: SESIIDAE). 2011; 94, (2): 296-302.   
Rec #: 68259  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The grape root borer, **Vitacea polistiformis** Harris, is the principal pest of grapes (Vitis spp. L.) in Florida where chlorpyrifos is 1 of the few chemicals registered for its control. However, chlorpyrifos is not an ideal treatment because it is highly toxic to birds, fish, aquatic invertebrates, and honeybees. Also, the recommended timing of application conflicts with harvest dates. There is an effective cultural control method, known as mounding, but this method is currently cost prohibitive for commercial production and is not widely used. If mounding could be applied only to infested plants, the cost of this method would be reduced considerably. **This study evaluated the potential of acoustics for detecting the larvae in-situ. Human listeners assessed likelihood of arthropod infestation for each site based on live acoustic samples as they were being recorded.** Computer software later constructed acoustic indicators from these recordings that were used for computer assessment of infestation likelihood. After recording, the roots of sampled vines were excavated to determine infestation levels. Infestation likelihood predictions of both human listeners and computer software largely reflected infestation condition of tested sites. Consequently, acoustic methods could be developed as tools for growers to employ mounding only at sites most likely to be infested, and thus enable more cost-effective use of this cultural control tactic.  
Keywords: IPM, monitoring, mounding, grape pest, Vitis spp.  
ISI Document Delivery No.: 787WH

1180. Sangchan, W.; Hugenschmidt, C.; Ingwersen, J.; Schwadorf, K.; Thavornyutikarn, P.; Pansombat, K., and Streck, T. Short-term dynamics of pesticide concentrations and loads in a river of an agricultural watershed in the outer tropics. 2012 Sep 1-; 158, (0): 1-14.   
Rec #: 3090  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: The intensification of agriculture in the mountainous regions of northern Thailand has led to an increased input of agrochemicals, which may be lost to streams and contaminate the surface water of the lowlands. The present study quantifies the dynamics of pesticide loads in a tropical river during three runoff events. To elucidate the processes involved in pesticide transport from agricultural fields to the stream water we used a high temporal resolution of sampling (1 h) and applied a time series analysis. Water samples were analyzed for seven pesticides (atrazine, chlorothalonil, chlorpyrifos, cypermethrin, dichlorvos, +\_- and +\_-endosulfan). Six of the seven pesticides were detected in the river water. Only dichlorvos was below the detection limit in all samples. In particular, pesticides with low Koc value such as atrazine and dimethoate were transported during the runoff peaks. In case of chlorothalonil, chlorpyrifos, +\_- and +\_-endosulfan and cypermethrin, short concentration peaks lasting about 1 h were detected during the falling limbs of the runoff peaks, indicating that a fast and sporadic sub-surface flow component (e.g., preferential interflow) plays an important role as a transport pathway. Our study demonstrates that in tropical areas sampling schemes with a high temporal resolution are needed to adequately assess the pesticide contamination of rivers. Otherwise, extreme situations may remain unsampled. Atrazine/ Dimethoate/ Chlorothalonil/ Chlorpyrifos/ +\_-Endosulfan/ +\_-Endosulfan/ Cypermethrin/ Pesticides in surface water/ Pesticide load/ Sub-surface transport/ Mountainous watershed/ Thailand

1181. Sanjuan-Herraez, Daniel; Rodriguez-Carrasco, Yelko; Juan-Peiro, Luis; Pastor, Agustin; De La Guardia, Miguel, and Sanjuan-Herraez, Daniel. Determination of Indoor Air Quality of a Phytosanitary Plant. 2011 May 23; 694, (1-2): 67-74.   
Rec #: 47279  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A new methodology has been developed to determine volatile organic compounds (VOCs) and pesticides in ambient air using membrane based devices as passive samplers. Pesticides were determined by gas chromatography with mass spectrometry detection (GC-MS) after their microwave-assisted extraction (MAE) from the passive sampler and the required clean-up. On the other hand, VOCs were also caught with the same samplers and directly determined by head space (HS) coupled to GC-MS. The use of samplers filled with florisil and activated carbon allows us to catch with a simple device both, VOCs and pesticides, with a high vapor pressure. Results obtained in the deployment of samplers in different sites of a phytosanitary plant evidenced the presence of high quantities of chlorpyriphos at thousand ng m super(3) and also metalaxyl, oxyfluorphen and lindane at ng m super(3) together with carbon disulfide, 2,2,4-trimethylpentane, ethylbenzene and xylene.  
Keywords: catches  
Keywords: P 0000:AIR POLLUTION  
Keywords: Activated carbon  
Keywords: Indoor air  
Keywords: Mass spectrometry  
Keywords: Volatile organic compound emission from vegetation  
Keywords: Lindane  
Keywords: Organic compounds in atmosphere  
Keywords: Environment Abstracts; Pollution Abstracts; Meteorological & Geoastrophysical Abstracts  
Keywords: vapor pressure  
Keywords: M2 551.510.42:Air Pollution (551.510.42)  
Keywords: Xylene  
Keywords: Gas chromatography  
Keywords: Pesticides  
Keywords: Volatile organic compound emission by motor vehicles  
Keywords: Vapor pressure  
Keywords: Volatile organic compounds  
Keywords: ENA 01:Air Pollution  
Date revised - 2011-06-01  
Language of summary - English  
Pages - 67-74  
ProQuest ID - 874190588  
SubjectsTermNotLitGenreText - Gas chromatography; Volatile organic compound emission by motor vehicles; Indoor air; Volatile organic compound emission from vegetation; Mass spectrometry; Organic compounds in atmosphere; Vapor pressure; vapor pressure; catches; Xylene; Activated carbon; Pesticides; Lindane; Volatile organic compounds  
Last updated - 2012-03-29  
British nursing index edition - Analytica Chimica Acta [Anal. Chim. Acta]. Vol. 694, no. 1-2, pp. 67-74. 23 May 2011.  
Corporate institution author - Sanjuan-Herraez, Daniel; Rodriguez-Carrasco, Yelko; Juan-Peiro, Luis; Pastor, Agustin; De la Guardia, Miguel  
DOI - 2a8baf49-ef18-4a1f-958dcsaobj201; 14977638; 0003-2670 English

1182. Santaguida, S.; Tighe, A.; D'alise, A. M.; Taylor, S. S., and Musacchio, A. Dissecting the Role of Mps1 in Chromosome Biorientation and the Spindle Checkpoint Through the Small Molecule Inhibitor Reversine.   
Rec #: 50489  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Science. 2003 Mar 14;299(5613):1743-7 (medline /12637748)  
COMMENTS: Cites: Curr Biol. 2003 Apr 1;13(7):590-7 (medline /12676091)  
COMMENTS: Cites: J Cell Biol. 2003 Apr 28;161(2):281-94 (medline /12707311)  
COMMENTS: Cites: J Cell Biol. 2003 Apr 28;161(2):267-80 (medline /12719470)  
COMMENTS: Cites: Mol Cell. 2003 Oct;12(4):851-62 (medline /14580337)  
COMMENTS: Cites: Nat Cell Biol. 2004 Mar;6(3):232-7 (medline /14767480)  
COMMENTS: Cites: J Cell Sci. 1992 Jul;102 ( Pt 3):387-92 (medline /1506421)  
COMMENTS: Cites: Curr Biol. 2007 Feb 20;17(4):304-15 (medline /17291761)  
COMMENTS: Cites: Mol Biol Cell. 2007 Nov;18(11):4553-64 (medline /17699588)  
COMMENTS: Cites: J Biol Chem. 2007 Oct 19;282(42):30553-61 (medline /17728254)  
COMMENTS: Cites: Curr Biol. 2007 Dec 18;17(24):2175-82 (medline /18060784)  
COMMENTS: Cites: Curr Biol. 2007 Dec 18;17(24):2143-9 (medline /18065224)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2007 Dec 18;104(51):20232-7 (medline /18083840)  
COMMENTS: Cites: Biochim Biophys Acta. 2008 Sep;1786(1):60-72 (medline /18662747)  
COMMENTS: Cites: Mol Biol Cell. 2009 Jan;20(1):10-20 (medline /18923149)  
COMMENTS: Cites: J Cell Biol. 2009 Feb 9;184(3):373-81 (medline /19193623)  
COMMENTS: Cites: J Biol Chem. 2009 Jun 5;284(23):15359-63 (medline /19228686)  
COMMENTS: Cites: Cell. 2009 May 15;137(4):672-84 (medline /19450515)  
COMMENTS: Cites: EMBO J. 2001 Nov 15;20(22):6371-82 (medline /11707408)  
COMMENTS: Cites: Genes Dev. 2001 Dec 1;15(23):3118-29 (medline /11731476)  
COMMENTS: Cites: Curr Biol. 2004 Jun 8;14(11):953-64 (medline /15182668)  
COMMENTS: Cites: Chromosoma. 2004 Aug;113(1):1-15 (medline /15235793)  
COMMENTS: Cites: Dev Cell. 2004 Jul;7(1):45-60 (medline /15239953)  
COMMENTS: Cites: Curr Biol. 2005 Feb 8;15(3):214-25 (medline /15694304)  
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COMMENTS: Cites: Curr Biol. 2006 Aug 8;16(15):1489-501 (medline /16890524)  
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COMMENTS: Cites: Curr Biol. 2006 Sep 5;16(17):1764-9 (medline /16950116)  
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COMMENTS: Cites: Cell. 2006 Dec 1;127(5):969-82 (medline /17129782)  
COMMENTS: Cites: Cell. 2006 Dec 1;127(5):983-97 (medline /17129783)  
COMMENTS: Cites: Nat Rev Mol Cell Biol. 2007 May;8(5):379-93 (medline /17426725)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2007 Jun 19;104(25):10482-7 (medline /17566101)  
COMMENTS: Cites: J Cell Biol. 2007 Jun 18;177(6):1005-15 (medline /17576797)  
COMMENTS: Cites: Nat Rev Mol Cell Biol. 2007 Oct;8(10):798-812 (medline /17848966)  
COMMENTS: Cites: Cell. 2008 Jan 25;132(2):233-46 (medline /18243099)  
COMMENTS: Cites: Mol Cell. 2008 Mar 14;29(5):637-43 (medline /18342609)  
COMMENTS: Cites: J Cell Biol. 2008 Apr 21;181(2):241-54 (medline /18426974)  
COMMENTS: Cites: Cell. 2008 May 2;133(3):427-39 (medline /18455984)  
COMMENTS: Cites: Mol Cancer Ther. 2008 May;7(5):1140-9 (medline /18483302)  
COMMENTS: Cites: J Cell Biol. 2008 Jun 16;181(6):893-901 (medline /18541701)  
COMMENTS: Cites: PLoS One. 2008;3(6):e2415 (medline /18545697)  
COMMENTS: Cites: J Cell Biol. 2008 Aug 25;182(4):623-9 (medline /18710927)  
COMMENTS: Cites: Cell Death Differ. 2009 Feb;16(2):321-30 (medline /18974773)  
COMMENTS: Cites: Curr Biol. 2008 Nov 25;18(22):1785-91 (medline /19026542)  
COMMENTS: Cites: Curr Biol. 2008 Nov 25;18(22):1778-84 (medline /19026543)  
COMMENTS: Cites: Science. 2009 Mar 6;323(5919):1350-3 (medline /19150808)  
COMMENTS: Cites: Curr Opin Cell Biol. 2009 Feb;21(1):51-8 (medline /19185479)  
COMMENTS: Cites: J Cell Biol. 2009 Feb 9;184(3):383-90 (medline /19188492)  
COMMENTS: Cites: Cancer Res. 2009 Feb 15;69(4):1509-16 (medline /19190331)  
COMMENTS: Cites: EMBO J. 2009 Apr 22;28(8):1099-110 (medline /19300438)  
COMMENTS: Cites: J Cell Biol. 2009 Jun 1;185(5):859-74 (medline /19468067)  
COMMENTS: Cites: Curr Biol. 2009 Jul 28;19(14):1176-81 (medline /19592249)  
COMMENTS: Cites: J Cell Biol. 2009 Sep 7;186(5):675-84 (medline /19720871)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2009 Dec 1;106(48):20204-9 (medline /19918049)  
COMMENTS: Cites: J Cell Sci. 2010 Mar 15;123(Pt 6):825-35 (medline /20200228)  
COMMENTS: Cites: J Cell Biol. 2010 Mar 22;188(6):809-20 (medline /20231380)  
COMMENTS: Cites: Nat Chem Biol. 2010 May;6(5):359-68 (medline /20383151)  
COMMENTS: Cites: PLoS One. 2010;5(4):e10251 (medline /20422024)  
COMMENTS: Cites: Structure. 2010 May 12;18(5):616-26 (medline /20462495)  
COMMENTS: Cites: Mol Cell. 2010 May 14;38(3):383-92 (medline /20471944)  
COMMENTS: Cites: J Cell Biol. 2010 Jul 12;190(1):25-34 (medline /20624899)  
COMMENTS: Cites: J Cell Biol. 2010 Jul 12;190(1):89-100 (medline /20624902)  
COMMENTS: Cites: Science. 1989 Nov 3;246(4930):629-34 (medline /2683079)  
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COMMENTS: Cites: J Am Chem Soc. 2004 Jan 21;126(2):410-1 (medline /14719906)  
COMMENTS: Cites: Dev Cell. 2004 Feb;6(2):253-68 (medline /14960279)  
COMMENTS: Cites: Mol Biol Cell. 2004 Oct;15(10):4584-96 (medline /15269280)  
COMMENTS: Cites: Curr Biol. 2005 Jan 26;15(2):160-5 (medline /15668173)  
COMMENTS: Cites: Curr Biol. 2005 Jun 7;15(11):1070-6 (medline /15936280)  
COMMENTS: Cites: Trends Cell Biol. 2005 Sep;15(9):486-93 (medline /16084093)  
COMMENTS: Cites: Mol Cell Proteomics. 2006 Apr;5(4):749-57 (medline /16340016)  
COMMENTS: Cites: PLoS One. 2009;4(6):e5832 (medline /19503796)  
COMMENTS: Cites: EMBO J. 2009 Sep 2;28(17):2511-31 (medline /19629042)  
COMMENTS: Cites: Cold Spring Harb Symp Quant Biol. 1991;56:613-9 (medline /1819511)  
COMMENTS: Cites: J Cell Biol. 1969 Oct;43(1):40-50 (medline /5824068)  
COMMENTS: Cites: Nature. 1995 Feb 16;373(6515):630-2 (medline /7854422)  
COMMENTS: Cites: J Cell Sci. 2001 Dec;114(Pt 24):4385-95 (medline /11792804)  
COMMENTS: Cites: Cell. 2002 Feb 8;108(3):317-29 (medline /11853667)  
COMMENTS: Cites: Curr Biol. 2002 Jun 4;12(11):900-5 (medline /12062053)  
COMMENTS: Cites: Cell. 2003 Feb 21;112(4):407-21 (medline /12600307)  
ABSTRACT: The catalytic activity of the MPS1 kinase is crucial for the spindle assembly checkpoint and for chromosome biorientation on the mitotic spindle. We report that the small molecule reversine is a potent mitotic inhibitor of MPS1. Reversine inhibits the spindle assembly checkpoint in a dose-dependent manner. Its addition to mitotic HeLa cells causes the ejection of Mad1 and the ROD-ZWILCH-ZW10 complex, both of which are important for the spindle checkpoint, from unattached kinetochores. By using reversine, we also demonstrate that MPS1 is required for the correction of improper chromosome-microtubule attachments. We provide evidence that MPS1 acts downstream from the AURORA B kinase, another crucial component of the error correction pathway. Our experiments describe a very useful tool to interfere with MPS1 activity in human cells. They also shed light on the relationship between the error correction pathway and the spindle checkpoint and suggest that these processes are coregulated and are likely to share at least a subset of their catalytic machinery.  
MESH HEADINGS: Cell Cycle Proteins/genetics/\*metabolism  
MESH HEADINGS: Chromosomes, Human/genetics/\*metabolism  
MESH HEADINGS: Dose-Response Relationship, Drug  
MESH HEADINGS: HeLa Cells  
MESH HEADINGS: Humans  
MESH HEADINGS: Kinetochores/metabolism  
MESH HEADINGS: Microtubules/genetics/metabolism  
MESH HEADINGS: Mitosis/\*drug effects/physiology  
MESH HEADINGS: Mitotic Spindle Apparatus/genetics/\*metabolism  
MESH HEADINGS: Morpholines/\*pharmacology  
MESH HEADINGS: Multiprotein Complexes/genetics/metabolism  
MESH HEADINGS: Protein-Serine-Threonine Kinases/genetics/\*metabolism  
MESH HEADINGS: Protein-Tyrosine Kinases  
MESH HEADINGS: Purines/\*pharmacology eng

1183. Santos, Mjg; Sousa, J P; Tiago, I; Verissimo, a; Lemos, Mfl, and Santos, MJG. Amplified Ribosomal Dna Restriction Analysis as a Routine Tool to Assess Toxicant Driven Changes in Hindgut Bacterial Populations of Porcellio Dilatatus (Crustacea: Isopoda). 2011 Aug; 13, (8): 2102-2104.   
Rec #: 47189  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Changes in saprophytic organism's gut microbial communities may present a threat to organic matter breakdown which can ultimately lead to soil function impairment. In this study, Amplified Ribosomal DNA Restriction Analysis (ARDRA) was evaluated as a potential simple molecular tool to assess shifts in bacterial community structure in hindgut populations of Porcellio dilatatus exposed to contaminated food. This prospective tool can also be used for a variety of purposes and samples prior to the use of more specific and sophisticated methods.  
Keywords: Environmental monitoring  
Keywords: Bacteria  
Keywords: Toxicants  
Keywords: P 5000:LAND POLLUTION  
Keywords: Crustacea  
Keywords: Organic matter  
Keywords: Microbial activity  
Keywords: N 14810:Methods  
Keywords: Biochemistry Abstracts 2: Nucleic Acids; Environment Abstracts; Pollution Abstracts  
Keywords: Food contamination  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Porcellio dilatatus  
Keywords: Isopoda  
Keywords: Soil  
Keywords: Digestive tract  
Keywords: Hindgut  
Keywords: Community structure  
Keywords: DNA  
Date revised - 2012-01-01  
Language of summary - English  
Pages - 2102-2104  
ProQuest ID - 907232618  
SubjectsTermNotLitGenreText - Soil; Environmental monitoring; Digestive tract; Hindgut; Toxicants; Community structure; Organic matter; DNA; Food contamination; Microbial activity; Isopoda; Bacteria; Crustacea; Porcellio dilatatus  
Last updated - 2012-01-26  
Corporate institution author - Santos, MJG; Sousa, J P; Tiago, I; Verissimo, A; Lemos, MFL  
DOI - OB-MD-0017451604; 15742541; 1464-0325 English

1184. Sanyal, Doyeli and Rani, Anita. Proficiency Test for Chemical Laboratories for the Analysis of a Pesticide in a Formulated Product: Interlaboratory Study. 2009; 92, (1): 271-278.   
Rec #: 45229  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A multilaboratory proficiency testing program was conducted by the National Accreditation Board for Testing and Calibration Laboratories (India) and coordinated by the Institute of Pesticide Formulation Technology. This program was conducted to compare the performance of individual laboratories in the area of pesticide formulation (Chlorpyrifos 20 EC) analysis. A total of 24 laboratories in India participated. Analysis of 2 parameters (i.e., estimation of the active ingredient and the acidity) of 2 samples of Chlorpyrifos 20 EC was the objective of this program. Homogeneity tests were performed before sample distribution. Performance of the participating laboratories was evaluated by using new robust statistics given in the guidelines of the National Association of Testing Authorities, Australia. Results were collated and statistically computed to calculate the value of 2 types of Z-scores (Zwi and Zbi). In addition to the statistical analysis, a graphical representation such as the Youden plot was also generated to evaluate the performance of participating laboratories.  
Keywords: Pesticides -- analysis  
Keywords: 2921-88-2  
Keywords: Analysis of Variance  
Keywords: Accreditation -- standards  
Keywords: Reproducibility of Results  
Keywords: Materials Testing -- standards  
Keywords: Materials Testing -- methods  
Keywords: Calibration  
Keywords: Insecticides -- analysis  
Keywords: Laboratories -- standards  
Keywords: India  
Keywords: Chlorpyrifos  
Keywords: Chlorpyrifos -- analysis  
Keywords: Insecticides  
Keywords: 0  
Keywords: Pesticides  
Date completed - 2009-06-23  
Date created - 2009-04-22  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 271-278  
ProQuest ID - 67156649  
Last updated - 2013-01-19  
British nursing index edition - Journal of AOAC International, January 2009, 92(1):271-278  
Corporate institution author - Sanyal, Doyeli; Rani, Anita  
DOI - MEDL-19382586; 19382586; 1060-3271 eng

1185. Sarkar, O. ; Mathur, P. P.; Cheng, C. Y., and Mruk, D. D. Interleukin 1 Alpha (Il1a) Is a Novel Regulator of the Blood-Testis Barrier in the Rat.   
Rec #: 51339  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Am J Anat. 1977 Mar;148(3):313-28 (medline /857632)  
COMMENTS: Cites: FASEB J. 2007 Feb;21(2):438-48 (medline /17167075)  
COMMENTS: Cites: Biochem Biophys Res Commun. 1990 Mar 16;167(2):548-53 (medline /2157407)  
COMMENTS: Cites: J Endocrinol. 1970 May;47(1):81-6 (medline /5428920)  
COMMENTS: Cites: Life Sci. 1984 Apr 30;34(18):1747-54 (medline /6427545)  
COMMENTS: Cites: Endocrinology. 1995 Jul;136(7):3070-8 (medline /7789334)  
COMMENTS: Cites: Endocrinology. 1993 Jan;132(1):293-9 (medline /8380379)  
COMMENTS: Cites: Eur J Cell Biol. 1997 Jul;73(3):222-31 (medline /9243183)  
COMMENTS: Cites: Endocrinology. 2000 Jan;141(1):238-46 (medline /10614644)  
COMMENTS: Cites: Fertil Steril. 2000 Jun;73(6):1132-7 (medline /10856470)  
COMMENTS: Cites: J Am Vet Med Assoc. 2001 Mar 1;218(5):669-96 (medline /11280396)  
COMMENTS: Cites: Mol Cell Endocrinol. 2002 Feb 22;187(1-2):125-32 (medline /11988319)  
COMMENTS: Cites: J Reprod Immunol. 2003 Feb;58(1):1-26 (medline /12609522)  
COMMENTS: Cites: Endocr Rev. 2004 Oct;25(5):747-806 (medline /15466940)  
COMMENTS: Cites: J Cell Physiol. 2006 Jul;208(1):175-87 (medline /16547975)  
COMMENTS: Cites: J Immunol. 2006 May 1;176(9):5598-606 (medline /16622029)  
COMMENTS: Cites: Reproduction. 2006 Aug;132(2):233-46 (medline /16885532)  
COMMENTS: Cites: J Androl. 2007 Jan-Feb;28(1):176-85 (medline /16988326)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2007 Mar 13;104(11):4365-70 (medline /17360530)  
COMMENTS: Cites: Am J Anat. 1979 Jun;155(2):259-79 (medline /474448)  
COMMENTS: Cites: J Reprod Immunol. 1990 Aug;18(1):51-76 (medline /2170642)  
COMMENTS: Cites: Nature. 1970 Aug 15;227(5259):680-5 (medline /5432063)  
COMMENTS: Cites: J Cell Sci. 1994 Mar;107 ( Pt 3):367-75 (medline /8006058)  
COMMENTS: Cites: J Clin Endocrinol Metab. 1997 May;82(5):1426-33 (medline /9141528)  
COMMENTS: Cites: Endocrinology. 1998 Apr;139(4):1853-62 (medline /9528971)  
COMMENTS: Cites: J Androl. 2000 Sep-Oct;21(5):625-35 (medline /10975408)  
COMMENTS: Cites: Biol Reprod. 2001 Nov;65(5):1340-51 (medline /11673248)  
COMMENTS: Cites: Clin Exp Rheumatol. 2002 Sep-Oct;20(5 Suppl 27):S1-13 (medline /14989423)  
COMMENTS: Cites: J Cell Physiol. 2005 Oct;205(1):141-57 (medline /15880438)  
COMMENTS: Cites: Cell. 2006 Mar 24;124(6):1225-39 (medline /16564013)  
COMMENTS: Cites: J Endocrinol. 2006 Aug;190(2):313-29 (medline /16899565)  
COMMENTS: Cites: Anal Biochem. 1976 May 7;72:248-54 (medline /942051)  
ABSTRACT: Throughout spermatogenesis, leptotene spermatocytes must traverse the blood-testis barrier (BTB) at stages VIII-XI to gain entry into the adluminal compartment for continued development. However, the mechanism underlying BTB restructuring remains somewhat elusive. In this study, interleukin 1 alpha (IL1A) was administered intratesticularly to adult rats in order to assess its effects on spermatogenesis. IL1A was shown to perturb Sertoli-germ cell adhesion, resulting in germ cell loss from approximately 50% of seminiferous tubules by 15 days posttreatment. Equally important, the functional integrity of the BTB was compromised when inulin-fluorescein isothiocyanate was detected in the adluminal compartment of the seminiferous epithelium following its administration via the jugular vein. Interestingly, IL1A did not affect the steady-state levels of proteins that confer BTB function, namely OCLN, CLDN1, F11R, TJP1, and CDH2. Instead, the localizations of OCLN, F11R, and TJP1 in the seminiferous epithelium were altered; these proteins appeared to move away from sites of cell-cell contact. Moreover, IL1A was shown to perturb the orderly arrangement of filamentous actin at the BTB and apical ectoplasmic specialization with distinct areas illustrating loss of actin filaments. Taken collectively, these results suggest that IL1A-induced BTB disruption is not mediated via the reduction of target protein levels. Instead, IL1A's primary cellular target appears to be the Sertoli cell actin cytoskeleton. It is possible that localized production of IL1A by Sertoli and/or germ cells in vivo results in BTB restructuring, and this may facilitate the movement of leptotene spermatocytes across the BTB.  
MESH HEADINGS: Actins/metabolism  
MESH HEADINGS: Animals  
MESH HEADINGS: Blood-Testis Barrier/drug effects/metabolism/\*physiology  
MESH HEADINGS: Cell Adhesion/drug effects  
MESH HEADINGS: Cell Membrane Permeability/drug effects  
MESH HEADINGS: Interleukin-1alpha/metabolism/pharmacology/\*physiology  
MESH HEADINGS: Male  
MESH HEADINGS: Models, Biological  
MESH HEADINGS: Rats  
MESH HEADINGS: Rats, Sprague-Dawley  
MESH HEADINGS: Sertoli Cells/drug effects/metabolism  
MESH HEADINGS: Spermatogenesis/drug effects  
MESH HEADINGS: Spermatogonia/drug effects/metabolism/physiology  
MESH HEADINGS: Tight Junctions/metabolism  
MESH HEADINGS: Tissue Distribution/drug effects eng

1186. Sarkouhi, M.; Shamsipur, M., and Hassan, J. (31)P-NMR evaluation of organophosphorus pesticides degradation through metal ion promoted hydrolysis. 2012; 184, (12): 7383-7393.   
Rec #: 68359  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The degradation of some organophosphorus pesticides (OPPs) in the presence of metal ions was studied by (31)P-NMR spectroscopy. Both (31)P-NMR and gas chromatography/mass spectroscopy results were used in order to determine the nature of metabolites formed after degradation. The degraded organophosphorus pesticide were investigated for chlorpyrifos and phoxim in the presence of several metal ions including Hg(2+), Cu(2+), Cd(2+), Ni(2+), Pb(2+), and Ag(+). (31)P-NMR results indicated Ag(+) and Hg(2+) ion promoted degradation of OPPs and other metal ions formed complex with OPPs and cannot degrade OPPs. We found that the degradation of chlorpyrifos and phoxim with Ag(+) or Hg(2+) led to the formation of O,O-diethyl-O-methyl phosphorothionate, (C(2)H(5)O)(2)(CH(3)O)PS, at metal ion/pesticide mole ratios <= 1.0 and completely decomposed at a higher mole ratio of 10. Finally, the method was successfully applied to the degradation study of a number of technical and formulated pesticides in the presence of Ag(+) ion at a metal ion/pesticide mole ratio of 10.  
Keywords: P-NMR, Organophosphorus pesticides, Metal ions, Degradation  
ISI Document Delivery No.: 032TO

1187. Sarkouhi, Masoumeh; Shamsipur, Mojtaba; Hassan, Jalal, and Sarkouhi, Masoumeh. Super(31)P-Nmr Evaluation of Organophosphorus Pesticides Degradation Through Metal Ion Promoted Hydrolysis. 2012 Dec; 184, (12): 7383-7393.   
Rec #: 42399  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The degradation of some organophosphorus pesticides (OPPs) in the presence of metal ions was studied by super(31)P-NMR spectroscopy. Both super(31)P-NMR and gas chromatography/mass spectroscopy results were used in order to determine the nature of metabolites formed after degradation. The degraded organophosphorus pesticide were investigated for chlorpyrifos and phoxim in the presence of several metal ions including Hg super(2+), Cu super(2+), Cd super(2+), Ni super(2+), Pb super(2+), and Ag super(+). super(31)P-NMR results indicated Ag super(+) and Hg super(2+) ion promoted degradation of OPPs and other metal ions formed complex with OPPs and cannot degrade OPPs. We found that the degradation of chlorpyrifos and phoxim with Ag super(+) or Hg super(2+) led to the formation of O,O-diethyl-O-me thyl phosphorothionate, (C sub(2)H sub(5)O) sub(2)(CH sub(3)O)PS, at metal ion/pesticide mole ratios less than or equal to 1.0 and completely decomposed at a higher mole ratio of 10. Finally, the method was successfully applied to the degradation study of a number of technical and formulated pesticides in the presence of Ag super(+) ion at a metal ion/pesticide mole ratio of 10.  
Keywords: Chlorpyrifos  
Keywords: Metals  
Keywords: Metal ions  
Keywords: Degradation  
Keywords: ENA 09:Land Use & Planning  
Keywords: Environment Abstracts; Oceanic Abstracts  
Keywords: Pesticides  
Keywords: Metabolites  
Keywords: Spectroscopy  
Keywords: Hydrolysis  
Keywords: Mass spectroscopy  
Date revised - 2013-01-01  
Language of summary - English  
Pages - 7383-7393  
ProQuest ID - 1272704134  
SubjectsTermNotLitGenreText - Chlorpyrifos; Metals; Metal ions; Degradation; Pesticides; Metabolites; Spectroscopy; Hydrolysis; Mass spectroscopy  
Last updated - 2013-02-08  
British nursing index edition - Environmental Monitoring and Assessment [Environ. Monit. Assess.]. Vol. 184, no. 12, pp. 7383-7393. Dec 2012.  
Corporate institution author - Sarkouhi, Masoumeh; Shamsipur, Mojtaba; Hassan, Jalal  
DOI - 5894cc93-4c79-4616-b16cmfgefd107; 17443605; 0167-6369; 1573-2959 English

1188. Sasikala, C.; Jiwal, S.; Rout, P., and Ramya, M. Biodegradation of chlorpyrifos by bacterial consortium isolated from agriculture soil. 2012; 28, (3): 1301-1308.   
Rec #: 68369  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorous pesticides are widely used in agriculture to control major insect pests. Chlorpyrifos is one of the major organophosphorous pesticides which is used to control insects including termites, beetles. The widespread use of these pesticides is hazardous to the environment and also toxic to mammals, thus it is essential to remove the same from the environment. From the chlorpyrifos contaminated soil nine morphologically different bacterial strains, one actinomycete and two fungal strains were isolated. Among those isolates four bacterial strains which were more efficient were developed as consortium. The four bacterial isolates namely Pseudomonas putida (NII 1117), Klebsiella sp., (NII 1118), Pseudomonas stutzeri (NII 1119), Pseudomonas aeruginosa (NII 1120) present in the consortia were identified on the basis of 16S rDNA analysis. The intracellular fractions of the consortium exhibited more organophosphorus hydrolase activity (0.171 +/- A 0.003 U/mL/min). The degradation studies were carried out at neutral pH and temperature 37A degrees C with chlorpyrifos concentration 500 mg L(-1). LC-mass spectral analysis showed the presence of metabolites chlopyrifos-oxon and Diethylphosphorothioate. These results highlight an important potential use of this consortium for the cleanup of chlorpyrifos contaminated pesticide waste in the environment.  
Keywords: Biodegradation, Organophosphorous pesticides, Chlorpyrifos, Chlorpyrifos  
ISI Document Delivery No.: 892MN

1189. Saulsbury, Md; Heyliger, So; Wang, K; Round, D, and Saulsbury, MD. Characterization of Chlorpyrifos-Induced Apoptosis in Placental Cells. 2008 Feb 28; 244, (2-3): 98-110.   
Rec #: 42269  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The mechanism by which chlorpyrifos exerts its toxicity in fetal and perinatal animals has yet to be elucidated. Since the placenta is responsible for transport of nutrients and is a major supplier hormone to the fetus, exposure to xenobiotics that alter the function or viability of placenta cells could ostensibly alter the development of the fetus. In this study, JAR cells were used to determine if CPF and the metabolites 3,5,6-trichloro-2-pyridinol (TCP) and chlorpyrifos-oxon (CPO) are toxic to the placenta. Our results indicate that chlorpyrifos (CPF), and its metabolite chlorpyrifos-oxon (CPO) caused a dose-dependent reduction in cellular viability with CPF being more toxic than its metabolites. Chlorpyrifos-induced toxicity was characterized by the loss of mitochondrial potential, the appearance of nuclear condensation and fragmentation, down-regulation of Bcl-2 as well as up-regulation of TNF alpha and FAS mRNA. Pharmacological inhibition of FAS, nicotinic and TNF- alpha receptors did not attenuate CPF-induced toxicity. Atropine exhibited minimal ability to reverse toxicity. Furthermore, signal transduction inhibitors PD98059, SP600125, LY294002 and U0126 failed to attenuate toxicity; however, SB202190 (inhibitor of p38 alpha and p38sz MAPK) sensitized cells to CPF-induced toxicity. Pan-caspase inhibitor Q-VD-OPh produced a slight but significant reversal of CPF-induced toxicity indicating that the major caspase pathways are not integral to CPF-induced toxicity. Taken collectively, these results suggest that chlorpyrifos induces apoptosis in placental cells through pathways not dependent on FAS /TNF signaling, activation of caspases or inhibition of cholinesterase. In addition, our data further indicates that activation of p38 MAPK is integral to the protection cells against CPF-induced injury.  
Keywords: MAP kinase  
Keywords: Pharmacy And Pharmacology  
Keywords: Apoptosis  
Keywords: Injuries  
Keywords: Fetal alcohol syndrome  
Keywords: Mitochondria  
Keywords: Nutrients  
Keywords: Metabolites  
Keywords: Xenobiotics  
Keywords: Toxicity  
Keywords: Cholinesterase  
Keywords: Hormones  
Keywords: Fetuses  
Keywords: mRNA  
Keywords: Chlorpyrifos  
Keywords: Placenta  
Keywords: Tumor necrosis factor-^a  
Keywords: Caspase  
Keywords: Condensation  
Keywords: Bcl-2 protein  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Signal transduction  
Keywords: Atropine  
Date revised - 2008-06-01  
Language of summary - English  
Pages - 98-110  
ProQuest ID - 289837567  
SubjectsTermNotLitGenreText - Toxicity; Placenta; Chlorpyrifos; Metabolites; Fetal alcohol syndrome; Fetuses; MAP kinase; Tumor necrosis factor-^a; Apoptosis; Signal transduction; Caspase; Nutrients; Mitochondria; Xenobiotics; Hormones; Injuries; Atropine; Bcl-2 protein; Condensation; mRNA; Cholinesterase  
Last updated - 2011-11-02  
Corporate institution author - Saulsbury, MD; Heyliger, SO; Wang, K; Round, D  
DOI - OB-MD-0008082769; 8184214; 0300-483X English

1190. Saunders, Margaret; Magnanti, Brooke L; Correia Carreira, Sara; Yang, Aileen; Alamo-HernăˇNdez, Urinda; Riojas-Rodriguez, Horacio ; Calamandrei, Gemma; Koppe, Janna G; Krayer Von Krauss, Martin; Keune, Hans, and Bartonova, Alena. Chlorpyrifos and Neurodevelopmental Effects: a Literature Review and Expert Elicitation on Research and Policy. 2012; 11, (Suppl 1): S5.   
Rec #: 39099  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Doc number: S5 Abstract Background: Organophosphate pesticides are widely used on food crops grown in the EU. While they have been banned from indoor use in the US for a decade due to adverse health effects, they are still the most prevalent pesticides in the EU, with Chlorpyrifos (CPF) being the most commonly applied. It has been suggested CPF affects neurodevelopment even at levels below toxicity guidelines. Younger individuals may be more susceptible than adults due to biological factors and exposure settings. Methods: A literature review was undertaken to assess the evidence for CPF contributing to neurodevelopmental disorders in infants and children. Other literature was consulted in order to formulate a causal chain diagram showing the origins, uptake, and neurological effects of animal and human exposure to CPF. The causal chain diagram and a questionnaire were distributed online to scientific experts who had published in relevant areas of research. They were asked to assess their confidence levels on whether CPF does in fact contribute to adverse neurodevelopment outcomes and rate their confidence in the scientific evidence. A second questionnaire queried experts as to which kind of policy action they consider justifiable based on current knowledge. In a special workshop session at the EuroTox congress in Dresden in 2009 the results of both questionnaires were further discussed with invited experts, as a basis for a policy brief with main messages for policy makers and stakeholders. Results: Most experts who responded to the first questionnaire felt that there was already enough evidence to support a ban on indoor uses of CPF in the EU. However, most felt additional research is still required in several areas. The responses from the first questionnaire were used to formulate the second questionnaire addressing the feasibility of government action. In turn, these expert participants were invited to attend a special session at the EuroTox congress in Dresden in 2009. Conclusions: Some of the evidence that CPF contributes to neurodevelopmental disorders is still disputed among experts, and the overall sense is that further research and public awareness are warranted. There have been campaigns in North America making the potential exposure concerns known, but such information is not widely known in the EU. The ability of government action to produce change is strongly felt in some quarters while others believe better knowledge of consumer use trends would have a greater impact.  
Keywords: Insecticides -- toxicity  
Keywords: Insecticides -- metabolism  
Keywords: Environmental Health  
Keywords: Humans  
Keywords: Nervous System -- drug effects  
Keywords: Prenatal Exposure Delayed Effects -- epidemiology  
Keywords: Child Development -- drug effects  
Keywords: Child  
Keywords: Health Policy  
Keywords: Expert Testimony  
Keywords: Pregnancy  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos  
Keywords: Insecticides  
Keywords: European Union  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Prenatal Exposure Delayed Effects -- chemically induced  
Keywords: Environmental Exposure  
Keywords: Male  
Keywords: Female  
Keywords: Chlorpyrifos -- metabolism  
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Language of summary - English  
Pages - S5  
ProQuest ID - 1022432554  
Last updated - 2012-11-07  
Place of publication - London  
Corporate institution author - Saunders, Margaret; Magnanti, Brooke L; Correia Carreira, Sara; Yang, Aileen; Alamo-HernĂˇndez, Urinda; Riojas-Rodriguez, Horacio; Calamandrei, Gemma; Koppe, Janna G; Krayer von Krauss, Martin; Keune, Hans; Bartonova, Alena  
DOI - 2698091141; 70110152; 58366; ENVH; 22759505; BMDDENVH201201011476069X11S1S5  
[1] Van den Hazel P, Zuurbier M, PINCHE project: Final report WP1 exposure assessment Arnhem, Netherlands: Public Health Services Gelderland Midden,2005  
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ABSTRACT: Commercial seasonal flu vaccines induce production of antibodies directed mostly towards hemaglutinin (HA). Because HA changes rapidly in the circulating virus, the protection remains partial. Several conserved viral proteins, e.g., nucleocapsid (NP) and matrix proteins (M1), are present in the vaccine, but are not immunogenic. To improve the protection provided by these vaccines, we used nanoparticles made of the coat protein of a plant virus (papaya mosaic virus; PapMV) as an adjuvant. Immunization of mice and ferrets with the adjuvanted formulation increased the magnitude and breadth of the humoral response to NP and to highly conserved regions of HA. They also triggered a cellular mediated immune response to NP and M1, and long-lasting protection in animals challenged with a heterosubtypic influenza strain (WSN/33). Thus, seasonal flu vaccine adjuvanted with PapMV nanoparticles can induce universal protection to influenza, which is a major advancement when facing a pandemic.  
MESH HEADINGS: Amino Acid Sequence  
MESH HEADINGS: Animals  
MESH HEADINGS: Biological Transport  
MESH HEADINGS: Carica/\*virology  
MESH HEADINGS: Hemagglutinin Glycoproteins, Influenza Virus/chemistry/immunology  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunity, Humoral/immunology  
MESH HEADINGS: Influenza A Virus, H1N1 Subtype/immunology  
MESH HEADINGS: Influenza Vaccines/\*chemistry/\*immunology/metabolism  
MESH HEADINGS: Interferon-gamma/immunology/secretion  
MESH HEADINGS: Lymph Nodes/immunology/metabolism  
MESH HEADINGS: Male  
MESH HEADINGS: Mice  
MESH HEADINGS: Molecular Sequence Data  
MESH HEADINGS: Mosaic Viruses/\*chemistry/\*immunology/metabolism  
MESH HEADINGS: Nanoparticles/\*virology  
MESH HEADINGS: Seasons  
MESH HEADINGS: T-Lymphocytes/immunology/secretion  
MESH HEADINGS: Vaccines, Inactivated/chemistry/immunology/metabolism eng

1192. Schadendorf, D.; Algarra, S. M.; Bastholt, L.; Cinat, G.; Dreno, B.; Eggermont, A. M.; Espinosa, E.; Guo, J.; Hauschild, A.; Petrella, T.; Schachter, J., and Hersey, P. Immunotherapy of Distant Metastatic Disease.   
Rec #: 50809  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Clin Oncol. 2008 Feb 20;26(6):955-62 (medline /18281670)  
COMMENTS: Cites: Expert Opin Biol Ther. 2008 Mar;8(3):315-23 (medline /18294102)  
COMMENTS: Cites: J Natl Cancer Inst. 1994 Aug 3;86(15):1159-66 (medline /8028037)  
COMMENTS: Cites: J Clin Oncol. 1993 Oct;11(10):1969-77 (medline /8410122)  
COMMENTS: Cites: Melanoma Res. 1993 Apr;3(2):133-8 (medline /8518552)  
COMMENTS: Cites: J Clin Oncol. 1991 Aug;9(8):1403-8 (medline /2072144)  
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COMMENTS: Cites: Int J Cancer. 2004 Jun 20;110(3):326-35 (medline /15095296)  
COMMENTS: Cites: Science. 2002 Oct 25;298(5594):850-4 (medline /12242449)  
COMMENTS: Cites: J Clin Oncol. 2002 Oct 15;20(20):4169-80 (medline /12377960)  
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COMMENTS: Cites: Annu Rev Immunol. 2002;20:395-425 (medline /11861608)  
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COMMENTS: Cites: Clin Oncol (R Coll Radiol). 2001;13(6):458-65 (medline /11824887)  
COMMENTS: Cites: J Clin Oncol. 2002 Jan 1;20(1):125-33 (medline /11773161)  
COMMENTS: Cites: J Clin Oncol. 2008 Jan 1;26(1):26-31 (medline /18165637)  
COMMENTS: Cites: Cancer. 2007 Dec 15;110(12):2614-27 (medline /18000991)  
COMMENTS: Cites: J Clin Oncol. 2007 Dec 1;25(34):5426-34 (medline /18048825)  
COMMENTS: Cites: Clin Cancer Res. 2007 Dec 1;13(23):6926-32 (medline /18056166)  
COMMENTS: Cites: Cancer Invest. 2007 Oct;25(7):613-31 (medline /18027152)  
COMMENTS: Cites: Clin Cancer Res. 2007 Nov 15;13(22 Pt 1):6681-8 (medline /17982122)  
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COMMENTS: Cites: Nat Rev Cancer. 2007 Feb;7(2):95-106 (medline /17251916)  
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COMMENTS: Cites: J Clin Oncol. 2006 Nov 1;24(31):5060-9 (medline /17075125)  
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COMMENTS: Cites: J Clin Oncol. 2006 May 20;24(15):2283-9 (medline /16710025)  
COMMENTS: Cites: Nat Rev Immunol. 2006 May;6(5):383-93 (medline /16622476)  
COMMENTS: Cites: Clin Cancer Res. 2006 Apr 1;12(7 Pt 2):2337s-2341s (medline /16609055)  
COMMENTS: Cites: Ann Oncol. 2006 Apr;17(4):571-7 (medline /16469753)  
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COMMENTS: Cites: J Clin Oncol. 2006 Mar 1;24(7):1188-94 (medline /16505439)  
COMMENTS: Cites: J Clin Oncol. 2005 Dec 10;23(35):9001-7 (medline /16260697)  
COMMENTS: Cites: J Clin Oncol. 2005 Sep 20;23(27):6747-55 (medline /16170182)  
COMMENTS: Cites: J Clin Oncol. 2005 Sep 1;23(25):6043-53 (medline /16087944)  
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COMMENTS: Cites: J Clin Oncol. 1999 Mar;17(3):968-75 (medline /10071291)  
COMMENTS: Cites: J Clin Oncol. 1998 Sep;16(9):2921-9 (medline /9738559)  
COMMENTS: Cites: J Clin Oncol. 1998 May;16(5):1743-51 (medline /9586887)  
COMMENTS: Cites: Br J Cancer. 1998 Apr;77(8):1280-6 (medline /9579834)  
COMMENTS: Cites: J Clin Oncol. 1997 Jul;15(7):2579-88 (medline /9215828)  
COMMENTS: Cites: Semin Oncol. 1997 Feb;24(1 Suppl 4):S24-31 (medline /9122731)  
COMMENTS: Cites: J Clin Oncol. 1994 Apr;12(4):806-11 (medline /8151323)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 2001 Aug 28;98(18):10290-5 (medline /11517302)  
COMMENTS: Cites: J Clin Oncol. 2001 Aug 1;19(15):3477-82 (medline /11481353)  
COMMENTS: Cites: J Clin Oncol. 2001 Aug 15;19(16):3635-48 (medline /11504745)  
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COMMENTS: Cites: J Clin Oncol. 1999 Jul;17(7):2105-16 (medline /10561265)  
COMMENTS: Cites: Br J Cancer. 2000 Mar;82(6):1158-62 (medline /10735499)  
COMMENTS: Cites: J Exp Med. 1999 Dec 6;190(11):1669-78 (medline /10587357)  
COMMENTS: Cites: J Clin Oncol. 2008 Dec 10;26(35):5748-54 (medline /19001327)  
COMMENTS: Cites: J Immunother. 2008 Oct;31(8):742-51 (medline /18779745)  
COMMENTS: Cites: Cancer. 2008 Sep 15;113(6):1404-11 (medline /18615619)  
COMMENTS: Cites: Cancer Immunol Immunother. 2008 Oct;57(10):1439-49 (medline /18286285)  
COMMENTS: Cites: N Engl J Med. 2008 Jun 19;358(25):2698-703 (medline /18565862)  
COMMENTS: Cites: Nat Rev Cancer. 2008 May;8(5):351-60 (medline /18418403)  
COMMENTS: Cites: Mol Ther. 2008 May;16(5):985-94 (medline /18388930)  
COMMENTS: Cites: J Clin Oncol. 2008 Apr 20;26(12):2034-9 (medline /18347008)  
COMMENTS: Cites: Crit Rev Oncol Hematol. 2008 May;66(2):118-34 (medline /18262431)  
COMMENTS: Cites: Nat Rev Cancer. 2008 Apr;8(4):299-308 (medline /18354418)  
COMMENTS: Cites: Ann Oncol. 2008 Apr;19(4):801-6 (medline /18178958)  
COMMENTS: Cites: Cancer Treat Rev. 2008 Apr;34(2):145-56 (medline /18077098)  
ABSTRACT: Immunotherapy of metastatic melanoma consists of various approaches leading to specific or non-specific immunomodulation. The use of FDA-approved interleukin (IL)-2 alone, in combination with interferon alpha, and/or with various chemotherapeutic agents (biochemotherapy) is associated with significant toxicity and poor efficacy that does not improve overall survival of 96% of patients. Many studies with allogeneic and autologous vaccines have demonstrated no clinical benefit, and some randomised trials even showed a detrimental effect in the vaccine arm. The ongoing effort to develop melanoma vaccines based on dendritic cells and peptides is driven by advances in understanding antigen presentation and processing, and by new techniques of vaccine preparation, stabilisation and delivery. Several agents that have shown promising activity in metastatic melanoma including IL-21 and monoclonal antibodies targeting cytotoxic T lymphocyte-associated antigen 4 (anti-CTLA-4) or CD137 are discussed. Recent advances of intratumour gene transfer technologies and adoptive immunotherapy, which represents a promising although technically challenging direction, are also discussed.  
MESH HEADINGS: Cancer Vaccines/\*therapeutic use  
MESH HEADINGS: Humans  
MESH HEADINGS: \*Immunotherapy  
MESH HEADINGS: Melanoma/secondary/\*therapy  
MESH HEADINGS: Skin Neoplasms/pathology/\*therapy eng

1193. Schaffer, A. Pesticide Effects on Enzyme Activities in the Soil Ecosystem. 1993: 273-340.   
Rec #: 1930  
Keywords: REVIEW  
Call Number: NO REVIEW (24D,24DXY,ACR,ADC,ATZ,BMY,BS,BTY,CAP,CBD,CBL,CPP,CPY,CTN,Captan,DD,DFQ,DMB,DMT,DU,DZ,EP,FMP,FNT,Folpet,GYP,LNR,MB,MCPP1,MDT,MITC,MLN,MTL,MZB,Maneb,NaN3,OML,OMT,OXD,PAQT,PMT,PPN,PPX,PRT,PYZ,SID,SZ,TBC,TBO,TCF,TDF,TFN,THM)  
Notes: EcoReference No.: 110308  
Chemical of Concern: 24D,24DXY,ACR,ADC,ATZ,BMY,BS,BTC,BTY,CAP,CBD,CBL,CHO,CPP,CPY,CTN,CYC,CZE,Captan,DD,DFQ,DLD,DMB,DMT,DU,DZ,EN,EP,EPRN,ETN,FMP,FMU,FNF,FNT,FRN,Folpet,GYP,HCCH,HYX,LNR,MB,MBZ,MCPP1,MDT,MITC,MLN,MTL,MZB,Maneb,NTP,NaN3,OML,OMT,OXD,PAQT,PCL,PDMN,PIM,PMT,PPCP,PPN,PPX,PRN,PRT,PYZ,SID,SZ,TBC,TBO,TCF,TDF,TFN,TFT,THM,TMMC,TOL

1194. Schleier, Jerome J; Davis, Ryan S; Barber, Loren M; Macedo, Paula a, and Peterson, Robert K D. A Probabilistic Risk Assessment for Deployed Military Personnel After the Implementation of the "Leishmaniasis Control Program" at Tallil Air Base, Iraq. 2009 May; 46, (3): 693-702.   
Rec #: 44829  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Leishmaniasis has been of concern to the U.S. military and has re-emerged in importance because of recent deployments to the Middle East. We conducted a retrospective probabilistic risk assessment for military personnel potentially exposed to insecticides during the "Leishmaniasis Control Plan" (LCP) undertaken in 2003 at Tallil Air Base, Iraq. We estimated acute and subchronic risks from resmethrin, malathion, piperonyl butoxide (PBO), and pyrethrins applied using a truck-mounted ultra-low-volume (ULV) sprayer and lambda-cyhalothrin, cyfluthrin, bifenthrin, chlorpyrifos, and cypermethrin used for residual sprays. We used the risk quotient (RQ) method for our risk assessment (estimated environmental exposure/toxic endpoint) and set the RQ level of concern (LOC) at 1.0. Acute RQs for truck-mounted ULV and residual sprays ranged from 0.00007 to 33.3 at the 95th percentile. Acute exposure to lambda-cyhalothrin, bifenthrin, and chlorpyrifos exceeded the RQ LOC. Subchronic RQs for truck-mounted ULV and residual sprays ranged from 0.00008 to 32.8 at the 95th percentile. Subchronic exposures to lambda-cyhalothrin and chlorpyrifos exceeded the LOC. However, estimated exposures to lambda-cyhalothrin, bifenthrin, and chlorpyrifos did not exceed their respective no observed adverse effect levels.  
Keywords: Insecticides -- toxicity  
Keywords: United States  
Keywords: Leishmaniasis -- prevention & control  
Keywords: Animals  
Keywords: Pyrethrins -- toxicity  
Keywords: Humans  
Keywords: Models, Statistical  
Keywords: Iraq  
Keywords: Risk Assessment  
Keywords: Organophosphorus Compounds  
Keywords: Insecticides  
Keywords: 0  
Keywords: Pyrethrins  
Keywords: Military Personnel  
Keywords: Organophosphorus Compounds -- toxicity  
Keywords: Psychodidae -- parasitology  
Keywords: Occupational Exposure -- analysis  
Keywords: Insect Control  
Date completed - 2009-08-06  
Date created - 2009-06-05  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 693-702  
ProQuest ID - 67327780  
Last updated - 2013-01-19  
British nursing index edition - Journal of medical entomology, May 2009, 46(3):693-702  
Corporate institution author - Schleier, Jerome J; Davis, Ryan S; Barber, Loren M; Macedo, Paula A; Peterson, Robert K D  
DOI - MEDL-19496443; 19496443; 0022-2585 eng

1195. Schlumpf, Margret; Kypke, Karin; Wittassek, Matthias; Angerer, Juergen; Mascher, Hermann; Mascher, Daniel; Voekt, Cora; Birchler, Monika; Lichtensteiger, Walter, and Schlumpf, Margret. Exposure Patterns of Uv Filters, Fragrances, Parabens, Phthalates, Organochlor Pesticides, Pbdes, and Pcbs in Human Milk: Correlation of Uv Filters With Use of Cosmetics. 2010 Nov; 81, (10): 1171-1183.   
Rec #: 47619  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In order to assess potential risks of exposure to environmental chemicals, more information on concomitant exposure to different chemicals is needed. We present data on chemicals in human milk of a cohort study (2004, 2005, 2006) of 54 mother/child pairs, where for the first time, cosmetic UV filters, synthetic musks, parabens and phthalate metabolites were analyzed in the same sample along with persistent organochlor pollutants (POPs), i.e., organochlor pesticides and metabolites, polybrominated diphenylethers and polychlorinated biphenyls (PCBs). The two groups of chemicals exhibited different exposure patterns. Six out of seven PCB congeners and a majority of pesticides were present in all milk samples, with significant correlations between certain PCB congener and pesticide levels, whereas the cosmetic-derived compounds, UV filters, parabens and synthetic musks, exhibited a more variable exposure pattern with inter-individual differences. UV filters were present in 85.2% of milk samples, in the range of PCB levels. Comparison with a questionnaire revealed a significant correlation between use of products containing UV filters and their presence in milk for two frequently used and detected UV filters, 4-methylbenzylidene camphor and octocrylene, and for the whole group of UV filters. Concentrations of PCBs and organochlor pesticides were within ranges seen in Western and Southern European countries. For several POPs, mean and/or maximum daily intake calculated from individual concentrations was above recent US EPA reference dose values. Our data emphasize the need for analyses of complex mixtures to obtain more information on inter-individual and temporal variability of human exposure to different types of chemicals.  
Keywords: Chemicals  
Keywords: Inventories  
Keywords: X 24340:Cosmetics, Toiletries & Household Products  
Keywords: Data processing  
Keywords: Milk  
Keywords: Breast milk  
Keywords: Metabolites  
Keywords: Cosmetics  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Phthalic acid  
Keywords: Environmental Studies  
Keywords: Filters  
Keywords: phthalates  
Keywords: Toxicology Abstracts; Environment Abstracts; Pollution Abstracts  
Keywords: P 9000:ENVIRONMENTAL ACTION  
Keywords: polychlorinated biphenyls  
Keywords: Pollutants  
Keywords: Pesticides  
Keywords: cosmetics  
Keywords: Congeners  
Keywords: Sunscreens  
Keywords: Fragrances  
Keywords: PCB compounds  
Keywords: PCB  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 1171-1183  
ProQuest ID - 845867038  
SubjectsTermNotLitGenreText - Inventories; Data processing; Breast milk; Cosmetics; Metabolites; Phthalic acid; polychlorinated biphenyls; Pollutants; Pesticides; Sunscreens; Congeners; Fragrances; PCB; Chemicals; Filters; phthalates; Milk; cosmetics; PCB compounds  
Last updated - 2011-12-13  
Corporate institution author - Schlumpf, Margret; Kypke, Karin; Wittassek, Matthias; Angerer, Juergen; Mascher, Hermann; Mascher, Daniel; Voekt, Cora; Birchler, Monika; Lichtensteiger, Walter  
DOI - OB-5ede22d4-3f1e-4093-a21ecsamfg201; 13961404; 0045-6535 English

1196. Schlusselhuber, M.; Jung, S.; Bruhn, O.; Goux, D. ; Leippe, M.; Leclercq, R.; Laugier, C.; Gr”Tzinger, J., and Cauchard, J. In Vitro Potential of Equine Defa1 and Ecath1 as Alternative Antimicrobial Drugs in Rhodococcosis Treatment.   
Rec #: 49999  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Rhodococcus equi, the causal agent of rhodococcosis, is a severe pathogen of foals but also of immunodeficient humans, causing bronchopneumonia. The pathogen is often found together with Klebsiella pneumoniae or Streptococcus zooepidemicus in foals. Of great concern is the fact that some R. equi strains are already resistant to commonly used antibiotics. In the present study, we evaluated the in vitro potential of two equine antimicrobial peptides (AMPs), eCATH1 and DEFA1, as new drugs against R. equi and its associated pathogens. The peptides led to growth inhibition and death of R. equi and S. zooepidemicus at low micromolar concentrations. Moreover, eCATH1 was able to inhibit growth of K. pneumoniae. Both peptides caused rapid disruption of the R. equi membrane, leading to cell lysis. Interestingly, eCATH1 had a synergic effect together with rifampin. Furthermore, eCATH1 was not cytotoxic against mammalian cells at bacteriolytic concentrations and maintained its high killing activity even at physiological salt concentrations. Our data suggest that equine AMPs, especially eCATH1, may be promising candidates for alternative drugs to control R. equi in mono- and coinfections.  
MESH HEADINGS: Actinomycetales Infections/\*drug therapy/\*microbiology/veterinary  
MESH HEADINGS: Animals  
MESH HEADINGS: Anti-Bacterial Agents/chemistry/\*pharmacology  
MESH HEADINGS: Cell Survival/drug effects  
MESH HEADINGS: Cercopithecus aethiops  
MESH HEADINGS: Circular Dichroism  
MESH HEADINGS: Drug Resistance, Bacterial  
MESH HEADINGS: Drug Synergism  
MESH HEADINGS: Female  
MESH HEADINGS: Hemolysis  
MESH HEADINGS: Horse Diseases/\*drug therapy/\*microbiology  
MESH HEADINGS: Horses  
MESH HEADINGS: Liposomes/chemistry  
MESH HEADINGS: Microbial Sensitivity Tests  
MESH HEADINGS: Microscopy, Electron, Scanning  
MESH HEADINGS: Phospholipids/chemistry  
MESH HEADINGS: \*Rhodococcus equi/drug effects/ultrastructure  
MESH HEADINGS: Salt-Tolerance  
MESH HEADINGS: Sheep  
MESH HEADINGS: Vero Cells  
MESH HEADINGS: alpha-Defensins/chemistry/\*pharmacology eng

1197. Schmajuk, N. A. and Bushnell, P. J. A computational model reveals classical conditioning mechanisms underlying visual signal detection in rats. 2009; 82, (3): 340-351.   
Rec #: 68509  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We applied a neural network model of classical conditioning proposed by Schmajuk et al. (1996) to visual signal detection and discrimination tasks designed to assess sustained attention in rats (Bushnell, 1999). We used a sign-tracking description of signal detection behavior by assuming that rats approach the location of the lever that they expect will be rewarded. We also assumed that although the visual signals contribute to set the occasion for the approach response to be generated, they do not become strongly associated with reward. The model accurately described Bushnell's (1999) results showing an increased proportion of hits with increasing signal intensity, decreased proportion of hits with increasing trial rate, and lower accuracy in a discrimination task compared to a detection task. In addition, observation of the behavior of rats performing the task confirmed assumptions and predictions of the model: (a) rats learn to approach the location of the lever they expect to be rewarded; (b) during the pre-signal interval, rats approach the location of the blank lever because it matches the intensity of the light they experience during that interval; and (c) the rats' behavior is directed to the location of the levers and not towards the light, which acts only as an "occasion setter" for the lever to be selected and pressed. (C) 2009 Elsevier B.V. All rights reserved.  
Keywords: Signal detection, Classical conditioning, Model, Operant conditioning,  
ISI Document Delivery No.: 522TP

1198. Schmidlin, O.; Tanaka, M.; Sebastian, A., and Morris, R. C. Jr. Selective Chloride Loading Is Pressor in the Stroke-Prone Spontaneously Hypertensive Rat Despite Hydrochlorothiazide-Induced Natriuresis.   
Rec #: 50679  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Hypertension. 2007 Dec;50(6):1085-92 (medline /17938378)  
COMMENTS: Cites: J Hypertens. 1988 Aug;6(8):613-7 (medline /3183367)  
COMMENTS: Cites: Am J Physiol. 1999 Nov;277(5 Pt 2):R1392-400 (medline /10564212)  
COMMENTS: Cites: Am J Physiol Heart Circ Physiol. 2007 Oct;293(4):H2039-53 (medline /17693546)  
COMMENTS: Cites: Am J Physiol Regul Integr Comp Physiol. 2006 Mar;290(3):R514-23 (medline /16467498)  
COMMENTS: Cites: Kidney Int. 2001 Mar;59(3):1066-76 (medline /11231362)  
COMMENTS: Cites: Physiol Rev. 2005 Apr;85(2):679-715 (medline /15788708)  
COMMENTS: Cites: Can J Physiol Pharmacol. 1991 Apr;69(4):501-6 (medline /1647853)  
COMMENTS: Cites: J Cardiovasc Pharmacol. 1989;13 Suppl 4:S79-82 (medline /2475698)  
COMMENTS: Cites: Science. 1991 Jun 28;252(5014):1813-6 (medline /2063193)  
COMMENTS: Cites: Hypertension. 1987 Jun;9(6 Pt 2):III171-5 (medline /3596784)  
COMMENTS: Cites: Cell. 2001 Feb 23;104(4):545-56 (medline /11239411)  
COMMENTS: Cites: Hypertension. 2007 May;49(5):1032-9 (medline /17372035)  
COMMENTS: Cites: Hypertension. 2005 May;45(5):867-73 (medline /15837831)  
COMMENTS: Cites: Am J Physiol. 1999 May;276(5 Pt 2):H1807-10 (medline /10330267)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1997 Dec 23;94(26):14748-52 (medline /9405684)  
COMMENTS: Cites: Am J Physiol. 1996 May;270(5 Pt 2):F749-55 (medline /8928835)  
COMMENTS: Cites: Annu Rev Physiol. 1987;49:295-317 (medline /3551802)  
COMMENTS: Cites: N Engl J Med. 1987 Oct 22;317(17):1043-8 (medline /3309653)  
ABSTRACT: OBJECTIVE: To test the hypothesis that in the stroke-prone spontaneously hypertensive rat (SHRSP), the pressor effect of selective dietary chloride loading depends on a positive external sodium balance.  
ABSTRACT: METHODS: In 43 male SHRSP fed a Japanese style diet containing a low normal amount of NaCl (0.4%), we compared the effects on telemetrically measured SBP of hydrochlorothiazide, 25 mg/kg per day, alone ('TZ', n = 11); hydrochlorothiazide combined with either KCl ('KCLTZ', 2%K, n = 10) or KHCO3 ('KBCTZ', 2%K, n = 11) and no hydrochlorothiazide ('CTL', n = 11) over a 10-week period starting at 10 weeks of age.  
ABSTRACT: RESULTS: With either TZ or KBCTZ, SBP did not increase above baseline values. However, KCLTZ induced a sustained increase in SBP of 17 mmHg (P < 0.0001), an increase almost half of that occurring without hydrochlorothiazide (CTL), 38 mmHg (P < 0.0001). Such divergence of blood pressures with KCLTZ and KBCTZ began over the first 3 days of their administration, even while they induced similarly negative external sodium balances, a positive one occurring only in CTL. Body weight increased more without, than with, hydrochlorothiazide, but did not differ between KCLTZ and KBCTZ. Changes in SBP occurring on day 2 after treatment assignment predicted final changes.  
ABSTRACT: CONCLUSION: These results demonstrate that in the SHRSP, dietary KCl loading can induce a pressor effect despite concomitant hydrochlorothiazide-induced natriuresis that elicits a negative external sodium balance. The results provide evidence that in the SHRSP the pressor effect of selective chloride loading does not depend on a positive external sodium balance, but rather on a mechanism actuated by chloride per se.  
MESH HEADINGS: Animal Feed/analysis  
MESH HEADINGS: Animals  
MESH HEADINGS: Blood Pressure/\*drug effects/physiology  
MESH HEADINGS: Blood Pressure Monitoring, Ambulatory  
MESH HEADINGS: Chlorides/\*metabolism  
MESH HEADINGS: Diuretics/\*pharmacology  
MESH HEADINGS: Drug Therapy, Combination  
MESH HEADINGS: Hydrochlorothiazide/\*pharmacology  
MESH HEADINGS: Hypertension/\*chemically induced/drug therapy/physiopathology  
MESH HEADINGS: Male  
MESH HEADINGS: Natriuresis/\*drug effects/physiology  
MESH HEADINGS: Potassium Chloride/administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Rats  
MESH HEADINGS: Rats, Inbred SHR  
MESH HEADINGS: Sodium/metabolism  
MESH HEADINGS: Sodium, Dietary/administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Telemetry  
MESH HEADINGS: Water-Electrolyte Balance/drug effects/physiology eng

1199. Schmieder, R. E.; Philipp, T.; Guerediaga, J.; Gorostidi, M.; Bush, C., and Keefe, D. L. Aliskiren-Based Therapy Lowers Blood Pressure More Effectively Than Hydrochlorothiazide-Based Therapy in Obese Patients With Hypertension: Sub-Analysis of a 52-Week, Randomized, Double-Blind Trial.   
Rec #: 50849  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: OBJECTIVES: To compare the long-term efficacy, safety and tolerability of the direct renin inhibitor aliskiren against the diuretic hydrochlorothiazide (HCTZ) in obese patients with hypertension.  
ABSTRACT: METHODS: A post hoc analysis of 396 obese patients (body mass index > or = 30 kg/m2) in a 52-week study in 1124 patients with hypertension was performed. Patients were randomized to receive aliskiren 150 mg or HCTZ 12.5 mg for 3 weeks, or placebo for 6 weeks. At week 3, active treatment doses were doubled. Patients receiving placebo were randomized to aliskiren 300 mg or HCTZ 25 mg at week 6. Add-on amlodipine 5-10 mg was permitted from week 12 to achieve blood pressure (BP) control ( < 140/90 mmHg).  
ABSTRACT: RESULTS: In the subgroup of obese patients, aliskiren monotherapy provided significantly greater BP reductions than HCTZ at week 12 endpoint (-16.7/-12.3 vs. -12.2/-9.1 mmHg, P < or = 0.001). Reductions were also greater with aliskiren-based therapy than HCTZ-based therapy at week 52 endpoint (-19.9/-15.5 vs. -17.5/-13.3 mmHg; P = 0.138 for systolic BP and P = 0.007 for diastolic BP). Mean BP reductions from baseline with aliskiren-based therapy were similar in obese and nonobese patients. By contrast, HCTZ-based therapy provided significantly smaller mean reductions in BP from baseline in obese patients vs. nonobese patients (P < 0.05). Aliskiren-based therapy was generally well tolerated in obese patients, and was associated with a significantly lower incidence of hypokalemia (1.0 vs. 14.0%, P < 0.0001) than HCTZ-based therapy.  
ABSTRACT: CONCLUSION: Aliskiren-based therapy provided superior BP reductions to HCTZ-based therapy with good tolerability in obese patients with hypertension.  
MESH HEADINGS: Amides/adverse effects/\*therapeutic use  
MESH HEADINGS: Antihypertensive Agents/adverse effects/\*therapeutic use  
MESH HEADINGS: Double-Blind Method  
MESH HEADINGS: Fumarates/adverse effects/\*therapeutic use  
MESH HEADINGS: Humans  
MESH HEADINGS: Hydrochlorothiazide/\*therapeutic use  
MESH HEADINGS: Hypertension/complications/\*drug therapy  
MESH HEADINGS: Obesity/\*complications  
MESH HEADINGS: Placebos eng

1200. Schopfer, L. M.; Furlong, C. E., and Lockridge, O. Development of diagnostics in the search for an explanation of aerotoxic syndrome. 2010; 404, (1): 64-74.   
Rec #: 68519  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Aerotoxic syndrome is assumed to be caused by exposure to tricresyl phosphate, an additive in engine lubricants and hydraulic fluids that is activated to the toxic 2-(ortho-cresyl)-4H-1,3,2-benzodioxaphosphoran-2-one (CBDP). Currently, there is no laboratory evidence to support intoxication of airline crew members by CBDP. Our goal was to develop methods for testing in vivo exposure by identifying and characterizing biomarkers. Mass spectrometry was used to study the reaction of CBDP with human albumin, free tyrosine, and human butyrylcholinesterase. Human albumin made a covalent bond with CBDP, adding a mass of 170 amu to Tyr411 to yield the o-cresyl phosphotyrosine derivative. Human butyrylcholinesterase made a covalent bond with CBDP on Ser198 to yield five adducts with added masses of 80, 108, 156, 170, and 186 amu. The most abundant adduct had an added mass of 80 amu from phosphate (HPO(3)), a surprising result given that no pesticide or nerve agent is known to yield phosphorylated serine with an added mass of 80 amu. The next most abundant adduct had an added mass of 170 amu to form o-cresyl phosphoserine. It is concluded that toxic gases or oil mists in cabin air may form adducts on plasma butyrylcholinesterase and albumin, detectable by mass spectrometry. (C) 2010 Elsevier Inc. All rights reserved.  
Keywords: CBDP, Butyrylcholinesterase, Serum albumin, Tyrosine, Organophosphorus  
ISI Document Delivery No.: 624FX

1201. Schopfer, L. M.; Grigoryan, H.; Li, B.; Nachon, F.; Masson, P., and Lockridge, O. Mass spectral characterization of organophosphate-labeled, tyrosine-containing peptides: Characteristic mass fragments and a new binding motif for organophosphates. 2010; 878, (17-18): 1297-1311.   
Rec #: 68529  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We have identified organophosphorus agent (OP)-tyrosine adducts on 12 different proteins labeled with six different OP. Labeling was achieved by treating pure proteins with up to 40-fold molar excess of OP at pH 8-8.6. OP-treated proteins were digested with trypsin, and peptides were separated by HPLC. Fragmentation patterns for 100 OP-peptides labeled on tyrosine were determined in the mass spectrometer. The goals of the present work were (1) to determine the common features of the OP-reactive tyrosines, and (2) to describe non-sequence MSMS fragments characteristic of OP-tyrosine peptides. Characteristic ions at 272 and 244 amu for tyrosine-OP immonium ions were nearly always present in the MSMS spectrum of peptides labeled on tyrosine by chlorpyrifos-oxon. Characteristic fragments also appeared from the parent ions that had been labeled with diisopropylfluorophosphate (216 amu), satin (214 amu), soman (214 amu) or FP-biotin (227, 312, 329, 691 and 708 amu). In contrast to OP-reactive serines, which lie in the consensus sequence GXSXG, the OP-reactive tyrosines have no consensus sequence. Their common feature is the presence of nearby positively charged residues that activate the phenolic hydroxyl group. The significance of these findings is the recognition of a new binding motif for OP to proteins that have no active site serine. Modified peptides are difficult to find when the OP bears no radiolabel and no tag. The characteristic MSMS fragment ions are valuable because they are identifiers for OP-tyrosine, independent of the peptide. (C) 2009 Elsevier B.V. All rights reserved.  
Keywords: Tyrosine, Organophosphorus, Covalent bond, Mass spectrometry,  
ISI Document Delivery No.: 601RU

1202. Schulz, R. Field Studies on Exposure, Effects, and Risk Mitigation of Aquatic Nonpoint-Source Insecticide Pollution: A Review. 2004; 33, 419-448.   
Rec #: 1300  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ADC,AZ,CBF,CBL,CPY,CYF,CYP,DCF,DDVP,DM,DMT,DS,DZ,ES,FNT,FNV,MDT,MLN,MP,OML,OXD,PMR,TBC,TBO,TCF), NO REVIEW (ADC,AZ,CBF,CBL,CPY,CYF,CYP,DCF,DDVP,DM,DMT,DS,DZ,ES,FNT,FNV,MDT,MLN,MP,OML,OXD,PMR,TBC,TBO,TCF)  
Notes: Chemical of Concern: ADC,AZ,CBF,CBL,CPY,CYF,CYP,DCF,DDVP,DLD,DM,DMT,DS,DZ,EPRN,ES,ETN,FNF,FNT,FNTH,FNV,HCCH,MDT,MLN,MP,OML,OXD,PIM,PMR,PPCP,PRN,TBC,TBO,TCF,TXP

1203. Scognamiglio, Viviana; Pezzotti, Italo; Pezzotti, Gianni; Cano, Juan; Manfredonia, Ivano; Buonasera, Katia; Arduini, Fabiana; Moscone, Danila; Palleschi, Giuseppe, and Giardi, Maria Teresa. Towards an integrated biosensor array for simultaneous and rapid multi-analysis of endocrine disrupting chemicals. 2012 Nov 2-; 751, (0): 161-170.   
Rec #: 5000  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY   
Abstract: In this paper we propose the construction and application of a portable multi-purpose biosensor array for the simultaneous detection of a wide range of endocrine disruptor chemicals (EDCs), based on the recognition operated by various enzymes and microorganisms. The developed biosensor combines both electrochemical and optical transduction systems, in order to increase the number of chemical species which can be monitored. Considering to the maximum residue level (MRL) of contaminants established by the European Commission, the biosensor system was able to detect most of the chemicals analysed with very high sensitivity. In particular, atrazine and diuron were detected with a limit of detection of 0.5 nM, with an RSD% less than 5%; paraoxon and chlorpyrifos were revealed with a detection of 5 ++M and 4.5 ++M, respectively, with an RSD% less than 6%; catechol and bisphenol A were identified with a limit of detection of 1 ++M and 35 ++M respectively, with an RSD% less than 5%. Endocrine disrupting chemicals/ Multi-array/ Biosensor/ Amperometric/ Optical/ Integrated biosensing system

1204. Seaton, K. A. and Joyce, D. C. Effect of Postharvest Dipping in Insecticides on the Vase Life of Geraldton Waxflower. SOIL; 1996; 36, (3): 373-378.   
Rec #: 1310  
Keywords: IN VITRO  
Call Number: NO IN VITRO (CBL,CPY,CYP,DDVP,DM,DMT,ES,FNV,PMR)  
Notes: Chemical of Concern: CBL,CPY,CYP,DDVP,DM,DMT,ES,FNV,PMR

1205. Seebunrueng, K.; Santaladchaiyakit, Y., and Srijaranai, S. Green extraction using catanionic surfactants of trimethyltetradecyl ammonium bromide-sodium dodecyl sulfate for preconcentration of organophosphorus pesticides in fruit samples. 2012; 4, (6): 1674-1680.   
Rec #: 68539  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An extraction method using mixed catanionic surfactants of trimethyltetradecyl ammonium bromide (TTAB) and sodium dodecyl sulfate (SDS) was developed for preconcentration of organophosphorus pesticides (OPPs) before analysis by high performance liquid chromatography (HPLC). The studied OPPs are azinphos-methyl, parathion-methyl, fenitrothion, diazinon, chlorpyrifos, and prothiophos. The optimum extraction condition was 10 mmol L(-1) SDS and 0.5 mmol L(-1) TTAB in the presence of 10% (w/v) NaCl and equilibration at room temperature. The concentrated target pesticides were subsequently analyzed using a Symmetry C8 column, gradient elution of acetonitrile and water, at a flow rate of 0.8 mL min(-1), and detection at 210 nm. Enrichment factors were found in the range of 16-30. The limits of detection of the studied OPPs were 0.001-0.01 mg L(-1) which are below the maximum residue limits (MRLs) established by the European Union. Good repeatability (n = 5) and reproducibility (n = 15) were obtained with the relative standard deviation (RSD) below 2% for retention time and below 9% for peak area, respectively. The validation of the proposed method for fruit sample analyses was carried out by matrix matched calibration. A modified QuEChERS (quick, easy, cheap, effective, rugged, and safe) method was used for sample preparation before extraction and preconcentration. Recovery of the fortified samples at three levels (0.25, 1.50 and 2.50 mg kg(-1)) was higher than 80.9% (on average) for all studied fruit samples (pomelo and pineapple). No detectable residues of OPPs in samples were found.  
Keywords: PERFORMANCE LIQUID-CHROMATOGRAPHY, CLOUD-POINT EXTRACTION,  
ISI Document Delivery No.: 952CX

1206. Seger, Mark R. Nmr Investigation of the Behavior of Chlorpyrifos and Methyl Parathion Sorbed on Clays, and Quantitative Carbon-13 Nmr Analysis of Sequence Distributions in Poly(Ethylene-Co-1-Hexene). 2008: (UMI# 3321312 ).   
Rec #: 51979  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chapters 1 and 2 (and Appendix) . Decomposition of chlorpyrifos and methyl parathion on kaolinite and various cation-exchanged montmorillonites (at room temperature, in the dark) was monitored by 31 P NMR. Decomposition products included the results of hydrolysis reactions, isomerization reactions and oxidation reactions; mineralization also appears to occur in some cases. Assignments of 31 P peaks was based mostly on literature values of chemical shifts of similar structures and 31 P NMR experiments on DMSO-d6 extracts of the pesticide/clay samples. When initially sorbed onto the clay, both pesticides appear by solid-state 31 P NMR to exhibit significant motion on the molecular level, resulting in almost liquid-like spectra. Over a period of days or weeks, the signal due to unreacted pesticide diminishes and was replaced by new 31 P NMR signals arising from various decomposition products. The rate of pesticide decomposition was found to vary greatly, depending on the cation present in montmorillonite. The fastest initial decomposition (disappearance of unreacted pesticide) occurred with the Cu 2+ -exchanged montmorillonites. Higher hydration levels of Al-exchanged montmorillonite were found to reduce the decomposition rate of methyl parathion; similarly, chlorpyrifos decomposed more quickly when sorbed on Zn-montmorillonite with lower hydration levels. Chapter 3 . Different 13 C NMR methods of determining triad distributions in two poly(ethylene-co-1-hexene) copolymers are examined using high signal-to-noise 126 MHz 13 C spectra of the copolymers dissolved in deuterated 1,2,4-trichlorobenzene at 398K. This examination includes three integration techniques, the experimental impact of decoupler sidebands and significantly non-equal 13 C nOe values. A least-squares regression analysis technique for solving for triad mole fractions is tested and appears to be more reliable than two published algebraic expressions. The resultant triad mole fractions are compared to sequence distribution parameters expected by Bernoullian and first-order Markovian statistical models. On the basis of 13 C NMR-determined average reactivity ratios, the copolymer designated sample H (5.3 mol % 1-hexene) appears to be a Bernoullian copolymer resulting from a single-site catalytic system. The copolymer designated sample L (3.6 mol % 1-hexene overall) is better described as a mixture of polyethylene and a Bernoullian copolymer with 6.4 mol % 1-hexene content.  
Start Page: 317  
ISSN/ISBN: 9780549716228  
Keywords: Chlorpyrifos  
Keywords: 0486:Analytical chemistry  
Keywords: Sequence distributions  
Keywords: Carbon-13  
Keywords: Methyl parathion  
Keywords: NMR  
Keywords: Pure sciences  
Keywords: Poly(ethylene-co-1-hexene)  
Keywords: 0494:Physical chemistry  
Keywords: Clays  
2008  
0494: Physical chemistry  
Sequence distributions  
Seger, Mark R.  
0486: Analytical chemistry  
Carbon-13  
3321312  
66569  
n/a  
40714041  
Copyright ProQuest, UMI Dissertations Publishing 2008  
English  
Clays  
Chlorpyrifos  
9780549716228  
2012-07-10  
1575744541  
Methyl parathion  
NMR  
304642793  
Pure sciences  
Poly(ethylene-co-1-hexene) English

1207. Sellin Jeffries, Marlo K; Conoan, Nicholas H; Cox, Marc B; Sangster, Jodi L; Balsiger, Heather a; Bridges, Andrew a; Cowman, Tim; Knight, Lindsey a; Bartelt-Hunt, Shannon L; Kolok, Alan S, and Kolok, Alan S. The Anti-Estrogenic Activity of Sediments From Agriculturally Intense Watersheds: Assessment Using in Vivo and in Vitro Assays. 2011 Sep; 105, (1-2): 189-198.   
Rec #: 47129  
Keywords: SEDIMENT CONC  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The goal of the current study was to determine whether sediments from agriculturally intense watersheds can act as a potential source of anti-estrogenic endocrine-disrupting compounds. The specific objectives of the current study were to determine (1) whether female fathead minnows (Pimephales promelas) experience alterations in endocrine function when exposed to sediments collected from agriculturally intense watersheds and (2) if these sediments display anti-estrogenic activity in an in vitro assay. In addition, sediment samples were analyzed for the presence of steroid hormones and pesticides associated with local agricultural practices. To accomplish this, sediments and water were collected from three sites within two agriculturally intense Nebraska watersheds (Bow Creek and the Elkhorn River). **In 2009, minnows were exposed to sediment and/or water collected from the two Bow Creek sites (East Bow Creek and the Confluence) in the laboratory, while in 2010, minnows were exposed to sediment and/or water from East Bow Creek, the Confluence and the Elkhorn River. F**ollowing the 7-day exposure period, the hepatic mRNA expression of two-estrogen responsive genes, estrogen receptor alpha (ER alpha ) and vitellogenin (Vtg) was determined. In 2009, females exposed to Confluence sediments, in the presence of laboratory water or Confluence water, experienced significant reductions in ER alpha expression relative to unexposed and Confluence water-exposed females. The defeminization of these females suggests the presence of a biologically available anti-estrogenic compound in sediments collected from this site. In 2010, sediments were assessed for anti-estrogenic activity on days 0 and 7 of the exposure period using a 4-h yeast estrogen screen. Lipophilic extracts (LEs) of day 0 sediments collected from the Confluence and the Elkhorn River induced significant reductions in the estrogenic reporter activity of treated yeast cultures suggesting the presence of a lipophilic anti-estrogenic compound in these extracts. Chemical analysis revealed the presence of a variety of steroid hormones, including those associated with the production of beef cattle (i.e. beta -trenbolone, alpha -zearalanol and alpha -zearalenol), in sediments indicating that compounds utilized by local beef cattle operations are capable of entering nearby watersheds. Overall, the results of this study indicate that an environmentally relevant anti-estrogenic compound is present in sediments from agriculturally intense watersheds and that this compound is bioavailable to fish. Furthermore, the presence of steroid hormones in sediments from these watersheds provides evidence indicating that steroids are capable of sorbing to sediments.  
Keywords: Environment Abstracts; Toxicology Abstracts; Pollution Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Environmental Studies--Toxicology And Environmental Safety  
Keywords: Freshwater  
Date revised - 2012-01-01  
Language of summary - English  
Pages - 189-198  
ProQuest ID - 886010585  
SubjectsTermNotLitGenreText - Freshwater  
Last updated - 2012-01-05  
Corporate institution author - Sellin Jeffries, Marlo K; Conoan, Nicholas H; Cox, Marc B; Sangster, Jodi L; Balsiger, Heather A; Bridges, Andrew A; Cowman, Tim; Knight, Lindsey A; Bartelt-Hunt, Shannon L; Kolok, Alan S  
DOI - OB-e10f9426-fe0a-4c95-b11dcsaobj201; 15378914; CS1149752; 0166-445X English

1208. Seralini, G. E.; de Vendomois, J. S.; Cellier, D.; Sultan, C.; Buiatti, M.; Gallagher, L.; Antoniou, M., and Dronamraju, K. R. How Subchronic and Chronic Health Effects can be Neglected for GMOs, Pesticides or Chemicals. 2009; 5, (5): 438-443.   
Rec #: 68579  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chronic health effects are increasing in the world such as cancers, hormonal, reproductive, nervous, or immune diseases, even in young people. During regulatory toxicological subchronic tests to prevent these on mammalian health, prior commercialization of chemicals, including pesticides and drugs, or GMOs, some statistically significant findings may be revealed. This discussion is about the need to investigate the relevant criteria to consider those as biologically significant. The sex differences and the non linear dose or time related effects should be considered in contrast to the claims of a Monsanto-supported expert panel about a GMO, the MON 863 Bt maize, but also for pesticides or drugs, in particular to reveal hormone-dependent diseases and first signs of toxicities.  
Keywords: Pesticides, GMO, MON 863, side effects, toxicological tests  
ISI Document Delivery No.: 468TG

1209. Sergent, Th+ r+ se; Ribonnet, Laurence; Kolosova, Anna; Garsou, Serge; Schaut, Annelore; De Saeger, Sarah; Van Peteghem, Carlos; Larondelle, Yvan; Pussemier, Luc, and Schneider, Yves-Jacques. Molecular and cellular effects of food contaminants and secondary plant components and their plausible interactions at the intestinal level. 2008 Mar; 46, (3): 813-841.   
Rec #: 3380  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: The intestinal mucosa is not simply a barrier allowing entry of compounds such as nutrients or chemicals, and restricting that of others. Intestinal cells and activities perform selective absorption, biotransformations and efflux back to the lumen. Furthermore, food substances affect both bioavailability and intestinal function. Some are able to act as transcriptional regulators and enzyme modulators. Biotransformation/ Efflux/ Cytochrome P450/ Food contaminants/ Intestinal barrier/ Intestinal interactions

1210. Serra-Bonvehi, Josep; Orantes-Bermejo, Jose, and Serra-Bonvehi, Josep. Acaricides and Their Residues in Spanish Commercial Beeswax. 2010 Nov; 66, (11): 1230-1235.   
Rec #: 43809  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: The purpose of this work was to determine residues of acaricides in recycled Spanish beeswax. RESULTS: Chlorfenvinphos, fluvalinate, amitraz, bromopropylate, acrinathrin, flumethrin, coumaphos, chlorpyrifos, chlordimeform, endosulfan and malathion residues were determined by GC-?ECD/NPD/MS detection. Owing to the extreme instability of amitraz, this analyte was transformed into the stable end-metabolite 2,4-dimethylaniline, later derivatised with heptafluorobutyric anhydride and determined by GC- mu ECD/MS. Recoveries from spiked samples ranged from 86 to 108%, while quantification limits varied from 0.10 to 0.30 mg kg-1 using GC- mu ECD/NPD, and from 12 to 85 mu g kg-1 by GC-MSD. Of a total of 197 samples analysed, only eight samples (4%) were free of residues of chlorfenvinphos (0.019-10.6 mg kg-1), fluvalinate was present in 93.6% of samples analysed (0.027 -88.7 mg kg-1), while coumaphos was confirmed in only five of the 134 samples analysed at concentrations of less than 195 mu g kg-1. The remaining acaricides were identified with different levels of incidence at concentrations from 12 to 231 mu g kg-1. CONCLUSIONS: Residues of acaricides were found in an extensive number of beeswax samples. The contamination with chlorfenvinphos and tau-fluvalinate was very relevant, particularly as chlorfenvinphos is not legally authorised for use in beekeeping. The possible impacts of the main acaricides detected on larval and adult honey bees are discussed.  
Keywords: Contamination  
Keywords: Residues  
Keywords: Beeswax  
Keywords: Z 05350:Medical, Veterinary, and Agricultural Entomology  
Keywords: Larvae  
Keywords: Apis mellifera  
Keywords: Chlorfenvinphos  
Keywords: Pest control  
Keywords: Entomology Abstracts; Environment Abstracts  
Keywords: acaricides  
Keywords: Malathion  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Endosulfan  
Keywords: Chlorpyrifos  
Keywords: fluvalinate  
Keywords: Pesticides  
Keywords: Coumaphos  
Keywords: Acaricides  
Date revised - 2012-05-01  
Language of summary - English  
Pages - 1230-1235  
ProQuest ID - 1017972503  
SubjectsTermNotLitGenreText - Chlorpyrifos; fluvalinate; Contamination; Beeswax; Coumaphos; Pest control; Chlorfenvinphos; Acaricides; Malathion; Endosulfan; Residues; Pesticides; Larvae; acaricides; Apis mellifera  
Last updated - 2012-08-24  
British nursing index edition - Pest Management Science [Pest Manage. Sci.]. Vol. 66, no. 11, pp. 1230-1235. Nov 2010.  
Corporate institution author - Serra-Bonvehi, Josep; Orantes-Bermejo, Jose  
DOI - cdf28ca0-85e3-4b82-8826csamfg201; 16710337; 1526-4998 English

1211. Serrano, L. and DeLorenzo, M. E. Water quality and restoration in a coastal subdivision stormwater pond. 2008; 88, (1): 43-52.   
Rec #: 68599  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Stormwater ponds are commonly used in residential and commercial areas to control flooding. The accumulation of urban contaminants in stormwater ponds can lead to a number of water quality problems including high nutrient, chemical contaminant, and bacterial levels. This study examined the interaction between land use and coastal pond water quality in a South Carolina residential subdivision pond. Eutrophic levels of chlorophyll and phosphorus were present in all seasons. Harmful cyanobacterial blooms were prevalent during the summer months. Microcystin toxin and fecal coliform bacteria levels were measured that exceeded health and safety standards. Low concentrations of herbicides (atrazine and 2,4-D) were also detected during summer months. Drainage from the stormwater pond may transport contaminants into the adjacent tidal creek and estuary. A survey of residents within the pond's watershed indicated poor pet waste management and frequent use of fertilizers and pesticides as possible contamination sources. Educational and outreach activities were provided to community members to create an awareness of the water quality conditions in the pond. Pond management strategies were then recommended, and selected mitigation actions were implemented. Water quality problems identified in this study have been observed in other coastal stormwater ponds of varying size and salinity, leading this project to serve as a potential model for coastal stormwater pond management. (C) 2007 Elsevier Ltd. All rights reserved.  
Keywords: stormwater pond, coastal water quality, public outreach, management  
ISI Document Delivery No.: 305VS

1212. Serrano, Roque; Portol+\_s, Tania; Blanes, Miguel A.; Hern+índez, F+ lix; Navarro, Juan C.; Var+¦, Inmaculada, and Amat, Francisco. Characterization of the organic contamination pattern of a hyper-saline ecosystem by rapid screening using gas chromatography coupled to high-resolution time-of-flight mass spectrometry. 2012 Sep 1-; 433, (0): 161-168.   
Rec #: 5270  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: In this paper, gas chromatography coupled to high-resolution time-of-flight mass spectrometry (GCÇôTOF MS) has been applied to evaluate organic pollution in a hyper-saline aquatic environment. Firstly, a target screening was made for a list of 150 GC-amenable organic micro-contaminants, including PAHs, octyl/nonyl phenols, PCBs, PBDEs, and a notable number of pesticides, such us insecticides (organochlorines, organophosphorus, carbamates and pyrethroids), herbicides (triazines and chloroacetanilides), fungicides and several transformation products. This methodology was applied to brine samples, with a salt content from 112 g/L to saturation, and to samples from Artemia populations (crustacean Anostraca) collected during 1 year from three sampling stations in saltworks bodies sited in the Ebro river delta. Around 50 target contaminants, belong to chemical families included in the list of priority substances within the framework on European water policy. Gas chromatography/ Mass spectrometry/ Time-of-flight/ Screening/ Hyper-saline ecosystem/ Organic contaminants

1213. Sethunathan, N. Microbial Degradation of Insecticides in Flooded Soil and in Anaerobic Cultures. 1973; 47, 143-166.   
Rec #: 1910  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (CPY,DZ,MLN), NO REVIEW (CPY,DZ,MLN)  
Notes: Chemical of Concern: AND,CHD,CPY,DDE,DDT,DLD,DZ,EN,EPRN,HCCH,HPT,MLN,MXC,PPCP,PRN

1214. Sethunathan, N. and Pathak, M. D. Increased Biological Hydrolysis of Diazinon After Repeated Application in Rice Paddies. 1972; 20, (3): 586-589.   
Rec #: 1860  
Keywords: FATE  
Call Number: NO FATE (CBF,CPY,DZ)  
Notes: Chemical of Concern: CBF,CPY,DZ,EPRN,HCCH,PPCP,PRN

1215. Shafiq-ur-Rehman. Evaluation of Malonaldialdehyde as an Index of Chlorpyriphos Insecticide Exposure in Apis mellifora: Ameliorating Role of Melatonin and alpha-Tocopherol Against Oxidative Stress. 2009; 91, (6): 1135-1148.   
Rec #: 300  
Keywords: IN VITRO  
Call Number: NO IN VITRO (CPY)  
Notes: Chemical of Concern: CPY

1216. Shah, A. A.; Bazargan-Hejazi, S.; Lindstrom, R. W., and Wolf, K. E. Prevalence of at-Risk Drinking Among a National Sample of Medical Students.   
Rec #: 50909  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Alcohol Alcohol. 1993 Jan;28(1):33-42 (medline /8471085)  
COMMENTS: Cites: Addiction. 1993 Jun;88(6):791-804 (medline /8329970)  
COMMENTS: Cites: JAMA. 1991 Apr 24;265(16):2074-8 (medline /2013926)  
COMMENTS: Cites: Int J Addict. 1991 Nov;26(11):1173-85 (medline /1743817)  
COMMENTS: Cites: J Med Educ. 1988 Oct;63(10):747-58 (medline /3172154)  
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COMMENTS: Cites: Am J Psychiatry. 1987 Sep;144(9):1184-8 (medline /3631315)  
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COMMENTS: Cites: Psychosom Med. 1977 Nov-Dec;39(6):413-31 (medline /594286)  
COMMENTS: Cites: J Psychosom Res. 1967 Aug;11(2):213-8 (medline /6059863)  
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COMMENTS: Cites: J Am Coll Health. 2004 Jan-Feb;52(4):149-57 (medline /15018426)  
COMMENTS: Cites: JAMA. 2004 Mar 10;291(10):1238-45 (medline /15010446)  
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COMMENTS: Cites: Br Dent J. 2002 Jun 15;192(11):646-9 (medline /12108944)  
COMMENTS: Cites: Alcohol Alcohol. 2001 Nov-Dec;36(6):540-3 (medline /11704619)  
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COMMENTS: Cites: Med Educ. 2001 Jul;35(7):622-3 (medline /11437962)  
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COMMENTS: Cites: Acad Med. 2006 Apr;81(4):374-84 (medline /16565189)  
COMMENTS: Cites: Acad Med. 2006 Apr;81(4):354-73 (medline /16565188)  
COMMENTS: Cites: Prof Psychol Res Pr. 2003 Jun;34(3):301-8 (medline /16471011)  
COMMENTS: Cites: J Stud Alcohol. 2004 Sep;65(5):582-5 (medline /15536766)  
COMMENTS: Cites: Med Educ. 1999 Apr;33(4):243-50 (medline /10336754)  
COMMENTS: Cites: Alcohol Clin Exp Res. 1999 Jan;23(1):121-6 (medline /10029212)  
COMMENTS: Cites: Addiction. 1998 Sep;93(9):1341-9 (medline /9926540)  
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COMMENTS: Cites: Med Educ. 1995 Sep;29(5):337-41 (medline /8699970)  
COMMENTS: Cites: Acad Emerg Med. 1995 Sep;2(9):817-25 (medline /7584769)  
COMMENTS: Cites: Med Educ. 1995 May;29(3):187-92 (medline /7623710)  
COMMENTS: Cites: J Consult Clin Psychol. 1993 Feb;61(1):104-12 (medline /8450095)  
ABSTRACT: As limited research exists on medical students' substance use patterns, including over-consumption of alcohol, the objective of this study was to determine prevalence and correlates of at-risk drinking among a national sample of medical students, using a cross-sectional, anonymous, Web-based survey. A total of 2710 medical students from 36 U.S. medical schools (1st to 4th year) completed the survey. Included in the instruments was a 10-item scale (AUDIT) to assess at-risk drinking behaviors within the last 12 months. Over 15% of the subjects (n = 412) scored positive for at-risk drinking (>/= 8). Multivariate analysis of the data revealed the following independent predictors were statistically significant (P < /= 0.05) for at-risk drinking: being of younger age, male, unmarried, using illicit drugs, smoking tobacco products within the last 30 days, having low perception of risk, showing impulsive behavior, being depressed, and having gambling problems. Findings from this study provides initial data for investigating further associations between risky drinking behavior, lifestyle, and psychosocial factors, as well as effectiveness of curriculum or campus-wide policy interventions to reduce over-consumption of drinking among this population.  
MESH HEADINGS: Adult  
MESH HEADINGS: Alcohol Drinking/\*epidemiology/psychology  
MESH HEADINGS: Alcoholism/\*epidemiology/psychology  
MESH HEADINGS: Attitude to Health  
MESH HEADINGS: Comorbidity  
MESH HEADINGS: Cross-Sectional Studies  
MESH HEADINGS: Depression/epidemiology/psychology  
MESH HEADINGS: Female  
MESH HEADINGS: Gambling/psychology  
MESH HEADINGS: Humans  
MESH HEADINGS: Impulsive Behavior/epidemiology/psychology  
MESH HEADINGS: Male  
MESH HEADINGS: Risk  
MESH HEADINGS: Risk-Taking  
MESH HEADINGS: Smoking/epidemiology  
MESH HEADINGS: Street Drugs  
MESH HEADINGS: Students, Medical/psychology/\*statistics &amp  
MESH HEADINGS: numerical data  
MESH HEADINGS: Substance-Related Disorders/epidemiology/psychology  
MESH HEADINGS: Young Adult eng

1217. Shailaja, S.; Mohan, S. V.; Krishna, M. R., and Sarma, P. N. Degradation of di-ethylhexyl phthalate (DEHP) in bioslurry phase reactor and identification of metabolites by HPLC and MS. 2008; 62, (2): 143-152.   
Rec #: 68619  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Di-ethylhexyl phthalate (DEHP) belongs to the class of phthalate esters and is used as an additive in many products including plastics, paints and inks or as a solvent in industrial formulations. However, it is used mostly for its plasticizing ability in polyvinyl chloride (PVC) products, in which it is often added in concentrations exceeding 40% by mass. DEHP is one of the more recalcitrant phthalate esters, which has xeno-estrogenic, carcinogenic and mutagenic effects. Five different bioslurry reactors were operated under different conditions to study the degradation of DEHP (1 mg g(-1) soil) in soil. The process performance was assessed by monitoring DEHP concentration periodically using high performance liquid chromatography (HPLC). The ongoing biological process was monitored by analyzing pH, oxidation-reduction potential (ORP), dissolved oxygen (DO), oxygen uptake rate (OUR) and colony forming units (CFU) for every 24 h. More than 90% degradation was observed within 12 days of the cycle period in the augmented reactors. Metabolites formed during the degradation of DEHP in the slurry phase reactor were identified and the pathway was also established. The degradation process was found to follow zero-order kinetic model. (C) 2008 Elsevier Ltd. All rights reserved.  
Keywords: phthalate, bioaugmentation, kinetics, metabolites, soil bioremediation  
ISI Document Delivery No.: 349XP

1218. Shankaran, S.; Bann, C. M.; Bauer, C. R.; Lester, B. M.; Bada, H. S.; Das, A.; Higgins, R. D.; Poole, W. K.; Lagasse, L. L.; Hammond, J., and Woldt, E. Prenatal Cocaine Exposure and Bmi and Blood Pressure at 9 Years of Age.   
Rec #: 51549  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: BMJ. 2000 Apr 8;320(7240):967-71 (medline /10753147)  
COMMENTS: Cites: Arch Pediatr Adolesc Med. 2000 Sep;154(9):918-22 (medline /10980796)  
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COMMENTS: Cites: Paediatr Perinat Epidemiol. 2003 Apr;17(2):171-9 (medline /12675784)  
COMMENTS: Cites: Pediatrics. 2004 Jan;113(1 Pt 1):112-8 (medline /14702458)  
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ABSTRACT: BACKGROUND: Prenatal cocaine exposure has been linked to intrauterine growth retardation and poor birth outcomes; little is known about the effects on longer-term medical outcomes, such as overweight status and hypertension in childhood. Our objective was to examine the association between prenatal cocaine exposure and BMI and blood pressure at 9 years of age among children followed prospectively in a multisite longitudinal study evaluating the impact of maternal lifestyle during pregnancy on childhood outcome.  
ABSTRACT: DESIGN/METHODS: This analysis includes 880 children (277 cocaine exposed and 603 with no cocaine exposure) with blood pressure, height, and weight measurements at 9 years of age. Regression analyses were conducted to explore the relationship between prenatal cocaine exposure and BMI and blood pressure at 9 years of age after controlling for demographics, other drug exposure, birthweight, maternal weight, infant postnatal weight gain, and childhood television viewing, exercise, and dietary habits at 9 years. Path analyses were used to further explore these relationships.  
ABSTRACT: RESULTS: At 9 years of age, 15% of the children were prehypertensive and 19% were hypertensive; 16% were at risk for overweight status and 21% were overweight. A small percentage of women were exposed to high levels of prenatal cocaine throughout pregnancy. A higher BMI was noted in children born to these women. Path analysis suggested that high cocaine exposure has an indirect effect on systolic and diastolic blood pressures that is mediated through its effect on BMI.  
ABSTRACT: CONCLUSION: High levels of in-utero cocaine exposure are a marker for elevated BMI and blood pressure among children born full term.  
MESH HEADINGS: \*Blood Pressure  
MESH HEADINGS: \*Body Mass Index  
MESH HEADINGS: Child  
MESH HEADINGS: Cocaine/\*administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Energy Intake  
MESH HEADINGS: Exercise  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: Longitudinal Studies  
MESH HEADINGS: Male  
MESH HEADINGS: Pregnancy  
MESH HEADINGS: \*Prenatal Exposure Delayed Effects eng

1219. Sharma, G. and Vijayaraghavan, S. Nicotinic Receptors Containing the Alpha7 Subunit: a Model for Rational Drug Design.   
Rec #: 51029  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Neurochem. 2004 Apr;89(2):337-43 (medline /15056277)  
COMMENTS: Cites: Drug Metab Dispos. 2004 Jan;32(1):89-97 (medline /14709625)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 1997 Jan 21;94(2):587-92 (medline /9012828)  
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COMMENTS: Cites: Neuropharmacology. 2007 Dec;53(7):863-9 (medline /17920082)  
COMMENTS: Cites: Front Biosci. 2008;13:492-504 (medline /17981563)  
COMMENTS: Cites: Biochem Pharmacol. 2007 Oct 15;74(8):1235-46 (medline /17825262)  
COMMENTS: Cites: Mol Pharmacol. 2007 Jul;72(1):52-61 (medline /17409284)  
COMMENTS: Cites: J Physiol. 2007 Mar 15;579(Pt 3):753-63 (medline /17204496)  
COMMENTS: Cites: Neurosci Biobehav Rev. 2007;31(3):287-314 (medline /17141870)  
COMMENTS: Cites: Mol Pharmacol. 2007 Mar;71(3):777-86 (medline /17132684)  
COMMENTS: Cites: J Med Chem. 2006 Dec 28;49(26):7661-74 (medline /17181149)  
COMMENTS: Cites: J Med Chem. 2006 Nov 30;49(24):6987-7001 (medline /17125252)  
COMMENTS: Cites: J Neurosci. 2006 Nov 1;26(44):11295-303 (medline /17079657)  
COMMENTS: Cites: Mol Pharmacol. 2006 Sep;70(3):801-5 (medline /16766716)  
COMMENTS: Cites: J Physiol Paris. 2006 Mar-May;99(2-3):172-9 (medline /16448808)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2006 Mar 14;103(11):4264-9 (medline /16537519)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2005 Dec 13;102(50):18207-12 (medline /16319224)  
COMMENTS: Cites: J Physiol. 2005 Nov 1;568(Pt 3):881-9 (medline /16141265)  
COMMENTS: Cites: Drug Metab Pharmacokinet. 2005 Aug;20(4):227-35 (medline /16141602)  
ABSTRACT: The neuronal nicotinic receptor has gained considerable recognition as a target, not just for combating drug addiction but also for treating a number of illnesses ranging from neurodegenerative diseases to psychotic disorders like schizophrenia. This recognition has led to a burgeoning field examining the receptor at all levels. A class of nicotinic receptors that contains the alpha7 gene product, apparently as a homomer, illustrates this multidisciplinary approach. Here, we review recent progress in our understanding of this class of receptors based on data from molecular, structural, physiological and patho-physiological studies. These studies have set the stage for rational drug design to combat disorders of the central nervous system. The studies also exemplify the cautious approach needed in developing CNS therapies and the importance of physiology in tempering drug design.  
MESH HEADINGS: Allosteric Site  
MESH HEADINGS: Animals  
MESH HEADINGS: Central Nervous System Diseases/\*drug therapy  
MESH HEADINGS: Chemistry, Pharmaceutical/\*methods  
MESH HEADINGS: Cytochrome P-450 Enzyme System/chemistry  
MESH HEADINGS: \*Drug Design  
MESH HEADINGS: Humans  
MESH HEADINGS: Ligands  
MESH HEADINGS: Models, Biological  
MESH HEADINGS: Models, Chemical  
MESH HEADINGS: Mutagenesis, Site-Directed  
MESH HEADINGS: Protein Binding  
MESH HEADINGS: Receptors, Nicotinic/\*chemistry/\*genetics/\*physiology  
MESH HEADINGS: Signal Transduction  
MESH HEADINGS: Smoking eng

1220. Sharma, N; Prakash, a, and Sharma, N. Determination of Persistent Pesticide Residues Water of Agra Region Using Solid Phase Gas Chromatography. 2008; 5, (1): 91-94.   
Rec #: 49809  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Water samples collected from ground water of Agra region were analyzed for pesticide residues using solid phase extraction and gas chromatographic techniques, organochlorine and organophosphorous pesticides viz., malathion, chloropyriphos, gamma -HC alpha -HCH, endosulfan ( alpha and beta isomers) and isomers of DDT (p'-DDE and p'-DDT) were in concentrations much above the prescribed limits. Seasonal variations were observed level of pesticide residues.  
Keywords: Organochlorine compounds  
Keywords: Water sampling  
Keywords: Pesticide residues  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: SW 3030:Effects of pollution  
Keywords: Pollution Abstracts; Water Resources Abstracts  
Keywords: Pesticide Residues  
Keywords: Solids  
Keywords: Malathion  
Keywords: Endosulfan  
Keywords: Agra  
Keywords: Agricultural Chemicals  
Keywords: Insecticides  
Keywords: Analytical Methods  
Keywords: Gas chromatography  
Keywords: DDT  
Keywords: Pesticides  
Keywords: Organic Compounds  
Keywords: Groundwater  
Keywords: Seasonal variations  
Keywords: India, Uttar Pradesh, Agra Dist., Agra  
Date revised - 2009-05-01  
Language of summary - English  
Location - India, Uttar Pradesh, Agra Dist., Agra  
Pages - 91-94  
ProQuest ID - 20260367  
SubjectsTermNotLitGenreText - Organochlorine compounds; Insecticides; Water sampling; Gas chromatography; Pesticide residues; DDT; Groundwater; Seasonal variations; Malathion; Endosulfan; Agricultural Chemicals; Analytical Methods; Pesticides; Pesticide Residues; Solids; Organic Compounds; Agra; India, Uttar Pradesh, Agra Dist., Agra  
Last updated - 2011-12-14  
British nursing index edition - Asian Journal of Water, Environment and Pollution [Asian J. Water Environ. Pollut.]. Vol. 5, no. 1, pp. 91-94. 2008.  
Corporate institution author - Sharma, N; Prakash, A  
DOI - MD-0009229769; 8899407; 0972-9860 English

1221. Sheffield, S. R. Lethal and Sublethal Effects of the OP Insecticide Chlorpyrifos in Larval Amphibians. 2000: (ABS).   
Rec #: 2380  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

1222. Sheftall, William II. New Information on Pesticides in Aquatic Systems. 2008; 32, (10): 3-4.   
Rec #: 54309  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: Internet resource  
Includes references 1022983745

1223. Shelton, J. F.; Hertz-Picciotto, I., and Pessah, I. N. Tipping the Balance of Autism Risk: Potential Mechanisms Linking Pesticides and Autism. 2012; 120, (7): 944-951.   
Rec #: 68699  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: Autism spectrum disorders (ASDs) have been increasing in many parts of the world and a portion of cases are attributable to environmental exposures. Conclusive replicated findings have yet to appear on any specific exposure; however, mounting evidence suggests gestational pesticides exposures are strong candidates. Because multiple developmental processes are implicated in ASDs during gestation and early life, biological plausibility is more likely if these agents can be shown to affect core pathophysiological features. OBJECTIVES: Our objectives were to examine shared mechanisms between autism pathophysiology and the effects of pesticide exposures, focusing on neuroexcitability, oxidative stress, and immune functions and to outline the biological correlates between pesticide exposure and autism risk. METHODS: We review and discuss previous research related to autism risk, developmental effects of early pesticide exposure, and basic biological mechanisms by which pesticides may induce or exacerbate pathophysiological features of autism. DISCUSSION: On the basis of experimental and observational research, certain pesticides may be capable of inducing core features of autism, but little is known about the timing or dose, or which of various mechanisms is sufficient to induce this condition. CONCLUSIONS: In animal studies, we encourage more research on gene x environment interactions, as well as experimental exposure to mixtures of compounds. Similarly, epidemiologic studies in humans with exceptionally high exposures can identify which pesticide classes are of greatest concern, and studies focused on gene x environment are needed to determine if there are susceptible subpopulations at greater risk from pesticide exposures.  
Keywords: autism spectrum disorders, carbamate, gene-environment interaction,  
ISI Document Delivery No.: 969DG

1224. Shen, Yu-jia; Lu, Pen; Mei, Huan; Yu, Hao-jie; Hong, Qing, and Li, Shun-peng. Isolation of a methyl parathion-degrading strain Stenotrophomonas sp. SMSP-1 and cloning of the ophc2 gene. 2010; 21, (5): 785-792.   
Rec #: 54319  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A rod-shaped, gram-negative bacterium Stenotrophomonas sp. SMSP-1 was isolated from the sludge of a wastewater treating system of a pesticide manufacturer. Strain SMSP-1 could hydrolyze methyl parathion to p-nitrophenol (PNP) and dimethyl phosphorothioate but could not degrade PNP further. Strain SMSP-1 was able to hydrolyze other organophosphate pesticides, including fenitrothion, ethyl parathion, fenthion, and phoxim, but not chlorpyrifos. A 4395-bp DNA fragment, including an organophosphorus hydrolase encoding gene ophc2, was cloned from the chromosome of strain SMSP-1 using the shotgun technique. Its sequence analysis showed that ophc2 was associated with a typical mobile element ISPpu12 consisting of tnpA (encoding a transposase), lspA (encoding a lipoprotein signal peptidase), and orf1 (encoding a CDF family heavy metal/HĂ˘ÂÂş antiporter). The ophc2 gene was effectively expressed in E. coli. This is the second report of cloning the ophc2 gene and the first report of this gene from the genus of Stenotrophomonas.  
Keywords: ophc2  
Dordrecht : Springer Netherlands

1225. Shenouda, J; Green, P; Sultatos, L, and Shenouda, J. An Evaluation of the Inhibition of Human Butyrylcholinesterase and Acetylcholinesterase by the Organophosphate Chlorpyrifos Oxon. 2009 Dec 1; 241, (2): 135-142.   
Rec #: 40909  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Acetylcholinesterase (EC 3.1.1.7) and butyrylcholinesterase (EC 3.1.1.8) are enzymes that belong to the superfamily of a /b-hydrolase fold proteins. While they share many characteristics, they also possess many important differences. For example, whereas they have about 54% amino acid sequence identity, the active site gorge of acetylcholinesterase is considerably smaller than that of butyrylcholinesterase. Moreover, both have been shown to display simple and complex kinetic mechanisms, depending on the particular substrate examined, the substrate concentration, and incubation conditions. In the current study, incubation of butyrylthiocholine in a concentration range of 0.005-3.0 mM, with 317 pM human butyrylcholinesterase in vitro, resulted in rates of production of thiocholine that were accurately described by simple Michaelis-Menten kinetics, with a K sub(m) of 0.10 mM. Similarly, the inhibition of butyrylcholinesterase in vitro by the organophosphate chlorpyrifos oxon was described by simple Michaelis-Menten kinetics, with a k sub(i) of 3048 nM super(-) super(1) h super(-) super(1), and a K sub(D) of 2.02 nM. In contrast to inhibition of butyrylcholinesterase, inhibition of human acetylcholinesterase by chlorpyrifos oxon in vitro followed concentration-dependent inhibition kinetics, with the k sub(i) increasing as the inhibitor concentration decreased. Chlorpyrifos oxon concentrations of 10 and 0.3 nM gave k sub(i)s of 1.2 and 19.3 nM super(-) super(1) h super(-) super(1), respectively. Although the mechanism of concentration-dependent inhibition kinetics is not known, the much smaller, more restrictive active site gorge of acetylcholinesterase almost certainly plays a role. Similarly, the much larger active site gorge of butyrylcholinesterase likely contributes to its much greater reactivity towards chlorpyrifos oxon, compared to acetylcholinesterase.  
Keywords: Chlorpyrifos  
Keywords: Acetylcholinesterase  
Keywords: Kinetics  
Keywords: Enzymes  
Keywords: organophosphates  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Amino acid sequence  
Date revised - 2009-11-01  
Language of summary - English  
Pages - 135-142  
ProQuest ID - 21215283  
SubjectsTermNotLitGenreText - Chlorpyrifos; Acetylcholinesterase; Kinetics; Enzymes; organophosphates; Amino acid sequence  
Last updated - 2012-03-29  
British nursing index edition - Toxicology and Applied Pharmacology [Toxicol. Appl. Pharmacol.]. Vol. 241, no. 2, pp. 135-142. 1 Dec 2009.  
Corporate institution author - Shenouda, J; Green, P; Sultatos, L  
DOI - MD-0010938349; 11187275; 0041-008X English

1226. Shi, Rongguang; Lv, Jungang; Feng, Jimin, and Lv, Jungang. Assessment of Pesticide Pollution in Suburban Soil in South Shenyang, China. 2011 Nov; 87, (5): 567-573.   
Rec #: 47039  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In this study, 35 representative farmland soil samples from suburban areas in south Shenyang, the capital city in Liaoning province, China, were collected to evaluate the pollution of 114 pesticides. Surface soil samples were air-dried and sieved. Ultrasonic extraction was used for pesticides preparation prior to analysis with gas chromatography-mass spectrometry. The total concentrations of tested pesticides in the area ranged in 0-51.32 ng/g and the average of concentrations was 6.86 ng/g. Six pesticides, including butachlor(with detect frequency 71.4%), p,p'-DDE (88.6%), p,p'-DDT (77.1%), o,p'-DDD (82.9%), hexachlorobenzene (88.6%) and delta -HCB (77.1%), were detected most frequently. It indicated that DDTs (N.D.-40.25 ng/g) and HCHs (N.D.-42.79 ng/g) were the predominant pesticide pollutants in soil because of their long term persistence. On the contrary, most of organophosphorus pesticides, pyrethroids and carbamates were not detected. Spatial variation of six pesticides with high detection frequency (>70%) in soil was illustrated. Pollution levels, characteristics and the possible sources were also discussed. The data were helpful to figure out the pollution of the pesticides and could be further used to evaluate the health risk associated with food safety.  
Keywords: Risk assessment  
Keywords: P 5000:LAND POLLUTION  
Keywords: Food  
Keywords: Mass spectroscopy  
Keywords: Pollution Abstracts; Environment Abstracts; Toxicology Abstracts  
Keywords: Environmental Studies  
Keywords: Soil  
Keywords: spatial distribution  
Keywords: spatial variations  
Keywords: Pollutants  
Keywords: Gas chromatography  
Keywords: Pesticide pollution  
Keywords: Pyrethroids  
Keywords: X 24330:Agrochemicals  
Keywords: Pesticides (organophosphorus)  
Keywords: pollution levels  
Keywords: Data processing  
Keywords: Pollution levels  
Keywords: agricultural land  
Keywords: Pesticides (carbamates)  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Spectrometry  
Keywords: Ultrasonics  
Keywords: Pesticides  
Keywords: hexachlorocyclohexane  
Keywords: DDT  
Keywords: China, People's Rep., Liaoning Prov.  
Keywords: Hexachlorobenzene  
Date revised - 2012-01-01  
Language of summary - English  
Location - China, People's Rep., Liaoning Prov.  
Pages - 567-573  
ProQuest ID - 908843631  
SubjectsTermNotLitGenreText - Pesticides (organophosphorus); Data processing; Food; Pollution levels; Pesticides (carbamates); Mass spectroscopy; Soil; spatial variations; Pollutants; Ultrasonics; Gas chromatography; Pesticide pollution; DDT; Pyrethroids; Hexachlorobenzene; Risk assessment; spatial distribution; pollution levels; hexachlorocyclohexane; Pesticides; agricultural land; Spectrometry; China, People's Rep., Liaoning Prov.  
Last updated - 2012-01-26  
Corporate institution author - Shi, Rongguang; Lv, Jungang; Feng, Jimin  
DOI - OB-37556e2d-92e7-4b8e-9a0fmfgefd107; 15838306; 0007-4861; 1432-0800 English

1227. Shim, J. C.; Yoon, Y. H.; Kim, C. L.; Lee, W. J.; Lee, B. I., and Kim, S. C. Integrated Control of Vector Mosquitoes in Rice Fields. 1987; 17, (2): 83-91(KOR) (ENG ABS).   
Rec #: 1320  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

1228. Shim, J. Y.; Kim, Y. A.; Lee, E. H.; Lee, Y. T., and Lee, H. S. Development of Enzyme-Linked Immunosorbent Assays for the Organophosphorus Insecticide EPN. 2008; 56, (24): 11551-11559.   
Rec #: 68739  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Competitive enzyme-linked immunosorbent assays (ELISAs) in indirect and direct format were developed for the quantitative detection of the organophosphorus insecticide EPN. Five EPN derivatives (haptens) were synthesized and coupled to carrier proteins to use as an immunogen or as a competitor. Rabbits were immunized with two of the five haptens coupled to KLH for production of polyclonal antibodies, and the sera were screened against one of the haptens coupled to ovalbumin (OVA). Using the serum with the highest specificity and a coating antigen (hapten-OVA conjugate), an indirect (antigen-coated) ELISA was developed, which showed an IC(50) of 5.6 ng/mL with a detection limit of 0.2 ng/mL (20% inhibition). A direct (anti body-coated) ELISA using an enzyme tracer (hapten-enzyme conjugate) was also developed, which showed an IC(50) of 8.4 ng/mL with a detection limit of 0.9 ng/mL (20% inhibition). The antibodies showed negligible cross-reactivity with other organophosphorus pesticides except with the insecticide parathion-ethyl only in the direct ELISA. The recoveries of EPN from spiked samples determined by the indirect ELISAs were between 37 and 164%.  
Keywords: EPN, insecticide, immunoassay, enzyme-linked immunosorbent assay, ELISA  
ISI Document Delivery No.: 385GJ

1229. Shin, H. M.; McKone, T. E., and Bennett, D. H. Intake Fraction for the Indoor Environment: A Tool for Prioritizing Indoor Chemical Sources. 2012; 46, (18): 10063-10072.   
Rec #: 68759  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Reliable exposure-based chemical characterization tools are needed to evaluate and prioritize in a rapid and efficient manner the more than tens of thousands of chemicals in current use. This study applies intake fraction (iF), the integrated incremental intake of a chemical per unit of emission, for a suite of indoor released compounds. A fugacity-based indoor mass-balance model was used to simulate the fate and transport of chemicals for three release scenarios: direct emissions to room air and surface applications to carpet and vinyl. Exposure through inhalation, dermal uptake, and nondietary ingestion was estimated. To compute iF, cumulative intake was summed from all exposure pathways for 20 years based on a scenario with two adults and a 1-year-old child who ages through the simulation. Overall iFs vary by application modes: air release (3.1 x 10(-3) to 6.3 x 10(-3)), carpet application (3.8 x 10(-5) to 6.2 x 10(-3)), and vinyl application (9.0 x 10(-5) to 1.8 x 10(-2)). These iF values serve as initial estimates that offer important insights on variations among chemicals and the potential relative contribution of each pathway over a suite of compounds. The approach from this study is intended for exposure-based prioritization of chemicals released inside homes.  
Keywords: CHILDRENS RESIDENTIAL EXPOSURE, RISK-ASSESSMENT, YOUNG-CHILDREN,  
ISI Document Delivery No.: 005ZD

1230. Shoenfelt, J.; Mitkus, R. J.; Zeisler, R.; Spatz, R. O.; Powell, J.; Fenton, M. J.; Squibb, K. A., and Medvedev, A. E. Involvement of Tlr2 and Tlr4 in Inflammatory Immune Responses Induced by Fine and Coarse Ambient Air Particulate Matter.   
Rec #: 50769  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Toxicol Sci. 2002 Nov;70(1):73-85 (medline /12388837)  
COMMENTS: Cites: Am J Respir Cell Mol Biol. 2002 Nov;27(5):611-8 (medline /12397021)  
COMMENTS: Cites: Science. 2002 Nov 1;298(5595):1025-9 (medline /12411706)  
COMMENTS: Cites: J Endotoxin Res. 2003;9(1):60-4 (medline /12691621)  
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COMMENTS: Cites: Science. 2003 Aug 1;301(5633):640-3 (medline /12855817)  
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COMMENTS: Cites: Science. 2004 Mar 5;303(5663):1526-9 (medline /14976262)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 2004 Aug 3;101(31):11416-21 (medline /15272082)  
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COMMENTS: Cites: J Biol Chem. 2006 Apr 7;281(14):9049-57 (medline /16455646)  
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COMMENTS: Cites: J Allergy Clin Immunol. 2006 May;117(5):979-87; quiz 988 (medline /16675322)  
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COMMENTS: Cites: J Endotoxin Res. 2006;12(3):133-50 (medline /16719986)  
COMMENTS: Cites: Cell. 2006 Jun 2;125(5):943-55 (medline /16751103)  
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COMMENTS: Cites: Mol Cell Biol. 2002 Oct;22(20):7158-67 (medline /12242293)  
COMMENTS: Cites: J Immunol. 2002 Oct 15;169(8):4531-41 (medline /12370390)  
ABSTRACT: Induction of proinflammatory mediators by alveolar macrophages exposed to ambient air particulate matter has been suggested to be a key factor in the pathogenesis of inflammatory and allergic diseases in the lungs. However, receptors and mechanisms underlying these responses have not been fully elucidated. In this study, we examined whether TLR2, TLR4, and the key adaptor protein, MyD88, mediate the expression of proinflammatory cytokines and chemokines by mouse peritoneal macrophages exposed to fine and coarse PM. TLR2 deficiency blunted macrophage TNF-alpha and IL-6 expression in response to fine (PM2.5), while not affecting cytokine-inducing ability of coarse NIST Standard Reference Material (SRM 1648) particles. In contrast, TLR4(-/-) macrophages showed inhibited cytokine expression upon stimulation with NIST SRM 1648 but exhibited normal responses to PM2.5. Preincubation with polymyxin B markedly suppressed the capacity of NIST SRM 1648 to elicit TNF-alpha and IL-6, indicating endotoxin as a principal inducer of cytokine responses. Overexpression of TLR2 in TLR2/4-deficient human embryonic kidney 293 cells imparted PM2.5 sensitivity, as judged by IL-8 gene expression, whereas NIST SRM 1648, but not PM2.5 elicited IL-8 expression in 293/TLR4/MD-2 transfectants. Engagement of TLR4 by NIST SRM 1648 induced MyD88-independent expression of the chemokine RANTES, while TLR2-reactive NIST IRM PM2.5 failed to up-regulate this response. Consistent with the shared use of MyD88 by TLR2 and TLR4, cytokine responses of MyD88(-/-) macrophages to both types of air PM were significantly reduced. These data indicate differential utilization of TLR2 and TLR4 but shared use of MyD88 by fine and coarse air pollution particles.  
MESH HEADINGS: Animals  
MESH HEADINGS: Anti-Bacterial Agents/pharmacology  
MESH HEADINGS: Cell Line  
MESH HEADINGS: Cells, Cultured  
MESH HEADINGS: Chemokine CCL5/metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Hypersensitivity/immunology/physiopathology  
MESH HEADINGS: Inflammation Mediators/metabolism  
MESH HEADINGS: Interleukin-6/metabolism/secretion  
MESH HEADINGS: Interleukin-8/metabolism  
MESH HEADINGS: Macrophages/\*immunology  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Knockout  
MESH HEADINGS: Myeloid Differentiation Factor 88/genetics/\*metabolism  
MESH HEADINGS: Particulate Matter/\*adverse effects  
MESH HEADINGS: Pneumonia/genetics/\*immunology/physiopathology  
MESH HEADINGS: Polymyxin B/pharmacology  
MESH HEADINGS: Signal Transduction/immunology  
MESH HEADINGS: Toll-Like Receptor 2/genetics/\*metabolism  
MESH HEADINGS: Toll-Like Receptor 4/genetics/\*metabolism  
MESH HEADINGS: Tumor Necrosis Factor-alpha/metabolism/secretion eng

1231. Sidiropoulou, E.; Sachana, M.; Flaskos, J.; Harris, W.; Hargreaves, A. J., and Woldehiwet, Z. Diazinon oxon affects the differentiation of mouse N2a neuroblastoma cells. 2009; 83, (4): 373-380.   
Rec #: 68789  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The aim of this study was to assess the neurotoxicity of **diazinon oxon (DZO)**, a major in vivo metabolite of the phosphorothionate insecticide diazinon (DZ), o**n differentiating mouse N2a neuroblastoma cells.** When used at concentrations of 1, 5 and 10 mu M, DZO did not cause cell death but it impaired the outgrowth of axon-like processes after 24 h. Densitometric scanning of Western blots of lysates of N2a cells revealed that exposure to 5 or 10 mu M DZO for 24 h increased the expression of phosphorylated neurofilament heavy chain (NFH) compared to controls, while there was no significant change in total NFH. By contrast, treatment of N2a cells with 1-10 mu M DZO resulted in marked reductions in the expression of the axon growth-associated protein GAP-43. DZO-treated cells also showed an increased expression of the heat shock protein HSP-70 compared to controls. The above biochemical changes were not temporally related to inhibition of acetylcholinesterase (AChE). These data suggest that biologically relevant, subcytotoxic levels of DZO may exert neurotoxic effects on differentiating cells and that the mechanisms involved are different from those attributed to its parent compound.  
Keywords: Diazinon oxon, N2a neuroblastoma cells, Neurite outgrowth, NFII, GAP-43,  
ISI Document Delivery No.: 428WW

1232. ---. Diazinon oxon interferes with differentiation of rat C6 glioma cells. 2009; 23, (8): 1548-1552.   
Rec #: 68799  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The purpose of this study was to evaluate the **toxicity of diazinon oxon (DZO)**, a major in vivo metabolite of the organophosphate insecticide diazinon (DZ), **on differentiating rat C6 glioma cells.** At concentrations shown to be non-cytotoxic by both the MTT and the Kenacid blue dye binding assays (1, 5 and 10 mu M), DZO caused after 24 h a reduction in the number of extensions developed from C6 cells induced to differentiate by serum withdrawal and addition of sodium butyrate. Densitometric scanning of Western blots of extracts of C6 cells demonstrated that, at all concentrations used, DZO decreased after 24 h the expression of glial fibrillary acidic protein (GFAP) compared to controls. In addition, exposure to 10 mu M DZO for 24 h reduced the levels of tubulin and microtubule associated protein 1B (MAP1B). On the other hand, levels of MAP2c were not affected by DZO treatment. In contrast to our previous data on DZ, the above findings suggest that its oxon metabolite, DZO, may, at biologically relevant, subcytotoxic concentrations, interfere with glial cell differentiation. (C) 2009 Elsevier Ltd. All rights reserved.  
Keywords: C6 cells, Diazinon oxon, Differentiation, GFAP, Microtubule proteins  
ISI Document Delivery No.: 526GV

1233. ---. Fipronil interferes with the differentiation of mouse N2a neuroblastoma cells. 2011; 201, (1): 86-91.   
Rec #: 68809  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The purpose of this study was to evaluate the neurotoxic potential of the pesticide **fipronil** (FIP) towards the differentiation of **mouse N2a neuroblastoma cells**. At concentrations of 1, 5 and 10 mu M that were not cytotoxic, as shown by two different cell viability assays, FIP impaired potently after 24 h the development of axon-like processes, with a concentration of 1 mu M causing 50% inhibition. Densitometric analysis of immunoblots of extracts of N2a cells exposed to FIP demonstrated that the axon-inhibitory action of the pesticide was not accompanied by significant changes in the levels of total and phosphorylated neurofilament heavy chain (NFH). FIP also induced no alteration in the levels of total and tyrosinated alpha-tubulin. On the other hand, this pesticide caused severe disruption of the developmentally important ERK 1/2-MAP kinase signal transduction pathway, as evidenced by significant reductions in the activation state of MAPK kinase (MEK 1/2) and, particularly, ERK 1/2. The above data seem to justify very recent concerns that HP has the capacity to induce developmental neurotoxicity in mammals. (C) 2010 Elsevier Ireland Ltd. All rights reserved.  
Keywords: Fipronil, Mouse N2a neuroblastoma cells, Neurite outgrowth, NFH,  
ISI Document Delivery No.: 729NK

1234. Siervo, M.; Jackson, S. J., and Bluck, L. J. In-Vivo Nitric Oxide Synthesis Is Reduced in Obese Patients With Metabolic Syndrome: Application of a Novel Stable Isotopic Method.   
Rec #: 50139  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: OBJECTIVES: Nitric oxide synthesis is declined in cardiovascular and metabolic diseases associated with endothelial dysfunction such as type 2 diabetes, hypertension or congestive heart failure. The objectives were to validate a novel stable isotopic method for the determination of in-vivo nitric oxide synthesis and to evaluate differences in nitric oxide synthesis in obese patients with and without metabolic syndrome (MetSyn).  
ABSTRACT: METHODS: The new method, called oral nitrate test (ONT), measured the decay in saliva or urine samples of an oral dose of labelled sodium nitrate. The ONT method was compared to a validated method (frequent sampling arginine test, FSAT method) in 10 healthy adult volunteers (BMI range&#8202;=&#8202;20.8-27.3&#8202;kg/m). The accuracy of the saliva ONT method was then tested by measuring nitric oxide synthesis in seven healthy, normal weight individuals, seven obese patients without MetSyn and seven obese patients with MetSyn.  
ABSTRACT: RESULTS: The estimated rate of nitric oxide synthesis was 0.63&#8202;&plusmn;&#8202;0.20&#8202;&mu;mol/h per kg from the data obtained from saliva, and 0.50&#8202;&plusmn;&#8202;0.14&#8202;&mu;mol/h per kg from urine. The agreement of the saliva ONT method with the FSAT method (&Delta;&#8202;=&#8202;+0.02&#8202;&plusmn;&#8202;0.24; P&#8202;=&#8202;0.79) was superior to the urine ONT method (&Delta;&#8202;=&#8202;-0.11&#8202;&plusmn;&#8202;0.20; P&#8202;=&#8202;0.13). Obese patients with MetSyn had a significantly lower nitric oxide production rate (0.21&#8202;&plusmn;&#8202;0.13&#8202;&mu;mol/h per kg; P&#8202;=&#8202;0.009) than healthy normal weight individuals (0.63&#8202;&plusmn;&#8202;0.30&#8202;&mu;mol/h per kg), whereas nitric oxide production rate was intermediate in obese patients without MetSyn (0.49&#8202;&plusmn;&#8202;0.22&#8202;&mu;mol/h per kg; P&#8202;=&#8202;0.33).  
ABSTRACT: CONCLUSION: The advantages of the new saliva ONT method are its accuracy, sensitivity and lack of invasiveness, which could make it a reference method for the assessment of in-vivo rates of whole-body nitric oxide synthesis.  
MESH HEADINGS: Adult  
MESH HEADINGS: Case-Control Studies  
MESH HEADINGS: Comorbidity  
MESH HEADINGS: Diabetes Mellitus, Type 2/diagnosis/etiology/metabolism  
MESH HEADINGS: Diagnostic Tests, Routine/\*methods  
MESH HEADINGS: Female  
MESH HEADINGS: Heart Failure/diagnosis/etiology/metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Hypertension/diagnosis/etiology/metabolism  
MESH HEADINGS: Isotopes  
MESH HEADINGS: Male  
MESH HEADINGS: Metabolic Syndrome X/complications/epidemiology/\*metabolism  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: Models, Theoretical  
MESH HEADINGS: Nitrates/\*metabolism  
MESH HEADINGS: Nitric Oxide/\*metabolism  
MESH HEADINGS: Obesity/complications/epidemiology/\*metabolism  
MESH HEADINGS: Reproducibility of Results  
MESH HEADINGS: Saliva/\*metabolism  
MESH HEADINGS: Sensitivity and Specificity eng

1235. Sijm, D. T. H. M.; Flenner, C. K., and Opperhuizen, A. The Influence of Biochemical Species Differences on Acute Fish Toxicity of Organic Chemicals. D.T.H.M.Sijm, Res. Inst. Toxicol., Univ. Utrecht, NL-3508 TD Utrecht, Neth//: 1991; 100, (1-2): 33-35.   
Rec #: 1330  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (CBL,CPY), NO REVIEW (CBL,CPY)  
Notes: Chemical of Concern: CBL,CPY

1236. Sikka, P.; Walker, R.; Cockayne, R.; Wood, M. J.; Harrison, P. J., and Burnet, P. W. D-Serine Metabolism in C6 Glioma Cells: Involvement of Alanine-Serine-Cysteine Transporter (Asct2) and Serine Racemase (Srr) but Not D-Amino Acid Oxidase (Dao).   
Rec #: 50579  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Neuron Glia Biol. 2004 Aug;1(3):275-81 (medline /16543946)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1999 Nov 9;96(23):13409-14 (medline /10557334)  
COMMENTS: Cites: Biol Psychiatry. 2009 Jun 15;65(12):1103-6 (medline /19217074)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2009 May 5;106(18):7589-94 (medline /19380732)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2009 Feb 24;106(8):2921-6 (medline /19193859)  
COMMENTS: Cites: Learn Mem. 2009 Jan;16(1):28-37 (medline /19117914)  
COMMENTS: Cites: Cereb Cortex. 2008 Oct;18(10):2391-401 (medline /18281302)  
COMMENTS: Cites: J Comp Neurol. 2008 Oct 20;510(6):641-54 (medline /18698599)  
COMMENTS: Cites: Glia. 2008 Sep;56(12):1271-84 (medline /18615566)  
COMMENTS: Cites: Mol Psychiatry. 2008 Jul;13(7):658-60 (medline /18560437)  
COMMENTS: Cites: Neuropsychopharmacology. 2008 Apr;33(5):1004-18 (medline /17625504)  
COMMENTS: Cites: Eur J Neurosci. 2007 Sep;26(6):1657-69 (medline /17880399)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2007 Feb 20;104(8):2950-5 (medline /17293453)  
COMMENTS: Cites: Schizophr Res. 2007 Feb;90(1-3):41-51 (medline /17156977)  
COMMENTS: Cites: Trends Neurosci. 2006 Aug;29(8):481-91 (medline /16806506)  
COMMENTS: Cites: J Biol Chem. 2006 Jul 21;281(29):20291-302 (medline /16714286)  
COMMENTS: Cites: J Biol Chem. 2006 May 19;281(20):14151-62 (medline /16551623)  
COMMENTS: Cites: J Biochem. 2006 Feb;139(2):295-304 (medline /16452318)  
COMMENTS: Cites: Neurosci Lett. 2006 Feb 20;394(3):163-7 (medline /16298487)  
COMMENTS: Cites: Neurosci Lett. 2006 Jan 9;392(1-2):75-8 (medline /16182447)  
COMMENTS: Cites: Biochemistry. 2005 Oct 4;44(39):13091-100 (medline /16185077)  
COMMENTS: Cites: Prog Neuropsychopharmacol Biol Psychiatry. 2005 Jun;29(5):767-9 (medline /15939521)  
COMMENTS: Cites: J Biol Chem. 2005 Jan 21;280(3):1754-63 (medline /15536068)  
COMMENTS: Cites: Mol Psychiatry. 2005 Jan;10(1):40-68; image 5 (medline /15263907)  
COMMENTS: Cites: Schizophr Res. 2005 Jan 1;72(2-3):225-34 (medline /15560967)  
COMMENTS: Cites: Neurosci Lett. 1997 Dec 19;239(2-3):85-8 (medline /9469662)  
COMMENTS: Cites: J Neurosci. 1997 Mar 1;17(5):1604-15 (medline /9030620)  
COMMENTS: Cites: Arch Gen Psychiatry. 1995 Dec;52(12):998-1007 (medline /7492260)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1995 Apr 25;92(9):3948-52 (medline /7732010)  
COMMENTS: Cites: Brain Res. 1994 Aug 1;652(2):297-303 (medline /7953743)  
COMMENTS: Cites: Comp Biochem Physiol B. 1991;99(2):345-50 (medline /1684928)  
COMMENTS: Cites: J Neurosci Res. 1980;5(4):271-80 (medline /6776288)  
COMMENTS: Cites: Psychopharmacology (Berl). 2004 Jun;174(1):32-8 (medline /15205876)  
COMMENTS: Cites: Ann N Y Acad Sci. 2003 Nov;1003:318-27 (medline /14684455)  
COMMENTS: Cites: Acta Pharmacol Sin. 2003 Oct;24(10):965-74 (medline /14531937)  
COMMENTS: Cites: FEBS Lett. 2003 Jan 30;535(1-3):44-8 (medline /12560076)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2002 Oct 29;99(22):14542-7 (medline /12393813)  
COMMENTS: Cites: J Neurosci Res. 2001 Dec 1;66(5):959-66 (medline /11746424)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2001 Apr 24;98(9):5294-9 (medline /11309496)  
COMMENTS: Cites: Neurochem Res. 2000 May;25(5):553-60 (medline /10905615)  
COMMENTS: Cites: J Neurocytol. 1999 Mar;28(3):169-85 (medline /10617900)  
COMMENTS: Cites: J Neurosci Res. 2009 Aug 15;87(11):2520-30 (medline /19382234)  
ABSTRACT: D-serine is an endogenous N-methyl-D-aspartate (NMDA) receptor coagonist. It is synthesized from L-serine by serine racemase (SRR), but many aspects of its metabolism remain unclear, especially in the forebrain, which lacks active D-amino acid oxidase (DAO), the major D-serine degradative enzyme. Candidate mechanisms include SRR operating in alpha,beta-eliminase mode (converting D-serine to pyruvate) and regulation by serine transport, in which the alanine-serine-cysteine transporter ASCT2 is implicated. Here we report studies in C6 glioma cells, which &quot;simulate&quot; the forebrain, in that the cells express SRR and ASCT2 but lack DAO activity. We measured D-serine, ASCT2, SRR, and DAO expression and DAO activity in two situations: after incubation of cells for 48 hr with serine isomers and after increased or decreased SRR expression by transfection and RNA interference, respectively. Incubation with serine enantiomers decreased [(3)H]D-serine uptake and ASCT2 mRNA and increased SRR immunoreactivity but did not alter DAO immunoreactivity, and DAO activity remained undetectable. SRR overexpression increased D-serine and pyruvate and decreased [(3)H]D-serine uptake and ASCT2 mRNA but did not affect DAO. SRR knockdown did not alter any of the parameters. Our data suggest that D-serine transport mediated by ASCT2 contributes prominently to D-serine homeostasis when DAO activity is absent. The factors regulating D-serine are important for understanding normal NMDA receptor function and because D-serine, along with DAO and SRR, is implicated in the pathogenesis and treatment of schizophrenia.  
MESH HEADINGS: Amino Acid Transport System ASC/genetics/\*metabolism  
MESH HEADINGS: Animals  
MESH HEADINGS: Cell Line, Tumor  
MESH HEADINGS: D-Amino-Acid Oxidase/genetics/\*metabolism  
MESH HEADINGS: Dose-Response Relationship, Drug  
MESH HEADINGS: Gene Expression Regulation, Neoplastic/drug effects/physiology  
MESH HEADINGS: Glioma/\*metabolism  
MESH HEADINGS: Proline/pharmacology  
MESH HEADINGS: Pyruvic Acid/metabolism  
MESH HEADINGS: RNA Interference/physiology  
MESH HEADINGS: RNA, Messenger/metabolism  
MESH HEADINGS: Racemases and Epimerases/genetics/\*metabolism  
MESH HEADINGS: Rats  
MESH HEADINGS: Serine/\*metabolism/pharmacology  
MESH HEADINGS: Tritium/metabolism eng

1237. Silva, Emilia; Mendes, Maria Paula; Ribeiro, Luis; Cerejeira, Maria Jose, and Silva, Emilia. Exposure Assessment of Pesticides in a Shallow Groundwater of the Tagus Vulnerable Zone (Portugal): a Multivariate Statistical Approach (Jca). 2011 Aug; 19, (7): 2667-2680.   
Rec #: 47179  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Purpose: To assess groundwater exposure to pesticides, in agricultural areas of 'Ribatejo' region (Portugal), and the influence of some key factors in that exposure, field, laboratory and modelling studies were carried out. Methods: The study was performed in maize, potato, sugar beet, tomato and vegetables agricultural areas, located in a shallow aquifer, with pesticides use and, in most cases, with irrigation practices. Pesticides used in the studied agricultural areas and having leaching potential were selected, being considered also other pesticides included in priority lists, defined in Europe. Evaluation of groundwater exposure to pesticides was carried out by successively: (1) groundwater sampling in seven campaigns over the period 2004-2006; (2) pesticide analysis [including isolation and concentration from the groundwater samples and further determination by gas chromatography-mass spectrometry (GC-MS) of 14 herbicides, four insecticides and two metabolites]; and (3) analysis and discussion of the results by applying joint correspondence analysis (JCA). Results: From the 20 pesticides and metabolites selected for the study, 11 were found in groundwater. Pesticides and metabolites most frequently detected were atrazine, alachlor, metolachlor, desethylatrazine, ethofumesate, alpha -endosulfan, metribuzine, lindane and beta -endosulfan. The results showed that groundwater exposure to pesticides is influenced by local factors-either environmental or agricultural, as precipitation, soil, geology, crops and irrigation practices. Spring and autumn were more associated with the detection of pesticides being more likely to observe mixtures of these compounds in a groundwater sample in these transition seasons. Conclusions: This work evidences the importance of models, which evaluate pesticides environmental behaviour, namely their water contamination potential (as Mackay multicompartimental fugacity model) and, specially, groundwater contamination potential (as GUS and Bacci and Gaggi leaching indices), in pesticide selection. Moreover, it reveals the importance to adapt proper statistical methods according to level of left-censored data. Using JCA was still possible to establish relations between pesticides and their temporal trend in a case study where there were more than 80% of data censored. This study will contribute to the Tagus river basin management plan with information on the patterns of pesticide occurrence in the alluvial aquifer system.  
Keywords: Aquifers  
Keywords: Portugal  
Keywords: M2 556.38:Groundwater Basins (556.38)  
Keywords: Statistical analysis  
Keywords: Metabolites  
Keywords: Europe  
Keywords: Lycopersicon esculentum  
Keywords: Pollution Abstracts; Meteorological & Geoastrophysical Abstracts; Environment Abstracts  
Keywords: Australia, Queensland, Mackay  
Keywords: Zea mays  
Keywords: Environmental Studies--Pollution  
Keywords: Solanum tuberosum  
Keywords: Seasonal variability  
Keywords: Leaching  
Keywords: Sugar beet  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Irrigation  
Keywords: Alachlor  
Keywords: Herbicides  
Keywords: Precipitation  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Spectrometry  
Keywords: Pesticides  
Keywords: Pesticides in river water  
Keywords: Groundwater pollution  
Keywords: Groundwater  
Date revised - 2012-11-01  
Language of summary - English  
Location - Portugal; Australia, Queensland, Mackay; Europe  
Pages - 2667-2680  
ProQuest ID - 1222841701  
SubjectsTermNotLitGenreText - Aquifers; Sugar beet; Leaching; Irrigation; Pesticides in river water; Statistical analysis; Seasonal variability; Precipitation; Spectrometry; Pesticides; Alachlor; Groundwater pollution; Herbicides; Metabolites; Groundwater; Lycopersicon esculentum; Zea mays; Solanum tuberosum; Portugal; Australia, Queensland, Mackay; Europe  
Last updated - 2012-12-06  
Corporate institution author - Silva, Emilia; Mendes, Maria Paula; Ribeiro, Luis; Cerejeira, Maria Jose  
DOI - OB-991905e4-9d76-45a7-bddamfgefd107; 17024744; 0944-1344; 1614-7499 English

1238. Silva, Emă Lia; Batista, Sofia; Caetano, Lia; Cerejeira, Maria Josă; Chaves, Manuela, and Jacobsen, Sven-Erik. Integrated Approach for the Quality Assessment of Freshwater Resources in a Vineyard Area (South Portugal). 2011 May; 176, (1-4): 331-41.   
Rec #: 43379  
Keywords: MIXTURE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An integrated chemical and biological approach for th**e quality assessment of freshwater resources in a vineyard area of the 'Alentejo' region (South Portugal) is presented. This includes analysis to 11 pesticide compounds and whole toxicity testing on algae and crustaceans. Simazine, terbuthylazine, terbutryn, desethylatrazine and chlorpyrifos were the most frequently detected pesticides in water collected** from wells and drainage channels. Mixtures of up to three compounds in different qualitative combinations were also found. The quality standards for individual pesticides (0.1 ÎĽg L^sup -1^) and pesticides-total (0.5 ÎĽg L^sup -1^) were exceeded in some samples. However, their maximum concentrations were lower than the WHO guidelines, the USEPA health advisory values and the environmental quality standards for priority substances applicable to surface water. In five samples, the herbicides terbuthylazine and terbutryn and the insecticide chlorpyrifos did not pass the toxicity exposure ratio (TER) trigger values specified for aquatic organisms (algae, Daphnia and fish). Maximum toxic effects on Daphnia magna (100%) and Pseudokirchneriella subcapitata (82.56%) were determined in groundwater samples, while in surface water, no toxicity was observed. Concerning effects on Heterocypris incongruens in sediment samples collected at the drainage channels, mortality and growth inhibition values were below 38%. Pro-active management of the use of pesticides is recommended for implementing at the farm and catchment level to reduce inputs into ground- and surface water.[PUBLICATION ABSTRACT]  
Keywords: Agriculture  
Keywords: Portugal  
Keywords: Pesticides -- analysis  
Keywords: Geologic Sediments -- chemistry  
Keywords: Animals  
Keywords: Fresh Water -- chemistry  
Keywords: Daphnia -- drug effects  
Keywords: 9175:Western Europe  
Keywords: Water Pollutants, Chemical -- analysis  
Keywords: Water Pollutants, Chemical -- toxicity  
Keywords: Vitis  
Keywords: 9130:Experimental/theoretical  
Keywords: Pesticides -- toxicity  
Keywords: Environmental Studies  
Keywords: 1540:Pollution control  
Keywords: Fresh Water -- analysis  
Keywords: Geologic Sediments -- analysis  
Keywords: Fishes  
Keywords: Pesticides  
Keywords: Water Pollutants, Chemical  
Keywords: Environmental Monitoring -- methods  
Copyright - Springer Science+Business Media B.V. 2011  
Language of summary - English  
Location - Portugal  
Pages - 331-41  
ProQuest ID - 860404228  
Document feature - References  
SubjectsTermNotLitGenreText - Portugal  
Last updated - 2012-03-08  
Place of publication - Dordrecht  
Corporate institution author - Silva, EmĂ­lia; Batista, Sofia; Caetano, Lia; Cerejeira, Maria JosĂ©; Chaves, Manuela; Jacobsen, Sven-erik  
DOI - 2312896881; 60037201; 108264; EVMT; 20625821; SPVLEVMT106611761-41586  
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Cerejeira, M.J., E. Silva, S. Batista, A. Trancoso, M.S.L. Centeno, and A. Silva- Fernandes. 2000. Simazine, metribuzine and nitrates in ground water of agricultural areas of Portugal. Toxicol. Environ. Chem. 75(3-4):245-253. doi:10.1080/02772240009358908  
Cerejeira, M. J., Silva-Fernandes, A., Viana, P., & Bacci,E. (1995a). Atrazine and nitrate levels in the ground water of irrigation wells in the agricultural area of Chamusca (Portugal). Toxicology and Environmental Chemistry, 49, 123128.  
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Abstract: Abstract: Water-sediment quality was assessed in an agricultural zone of a protected area within the Tagus River basin district (central Portugal) combining chemical analysis to 12 pesticide compounds and whole toxicity testing using the bacterium Vibrio fischeri, the algae Pseudokirchneriella subcapitata, the crustacean Daphnia magna, and the midge Chironomus riparius. The herbicides alachlor, atrazine ethofumesate, metolachlor, terbuthylazine, the insecticides chlorfenvinphos and chlorpyrifos, and the metabolite 3,4-dichloroaniline were detected in surface water samples at four sites and in groundwater samples from six wells, during four sampling occasions. Measured concentrations were compared with parametric values for human consumption, groundwater quality standards, and environmental quality standards applicable to surface water established in European Union legislation. Most severe adverse effects were noted on the growth of P. subcapitata and lethality of D. magna in nondiluted water samples. Taking into account the values calculated by the method of toxic unit summation for pesticide mixtures, it was not possible to link the pesticides found to the toxicity detected in the water samples. Conducting this study with chemical analyses and biotests provided a more comprehensive quality assessment and realistic picture of the environmental samples analyzed, although additional studies are needed to evaluate the performance of mixture models for predicting mixture toxicity. This study underlines the importance of chemical analysis and whole toxicity testing as tools for assessing the impact of human activity on the status of water, mainly in protected zones. [PUBLICATION ABSTRACT]  
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1240. Silva, Kaline Catiely Campos; Assis, Caio Rodrigo Dias; Oliveira, Vagne Melo; Carvalho, Luiz Bezerra; Bezerra, Ranilson Souza, and Silva, Kaline Catiely Campos. Kinetic and Physicochemical Properties of Brain Acetylcholinesterase From the Peacock Bass (Cichla Ocellaris) and in Vitro Effect of Pesticides and Metal Ions. 2013 Jan 15; 126, 191-197.   
Rec #: 42379  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Brain acetylcholinesterase (AChE; EC 3.1.1.7) from peacock bass (Cichla ocellaris) was characterized and the effect of organophosphorus and carbamate pesticides as well as ions and heavy metals was evaluated. The kinetic parameters Kmand Vmaxwere determined as 0.769mM and 0.189U/mg of protein respectively. Optimal pH and temperature were found to be 8.0 and 45 degree C. The enzyme retained approximately half of the activity after incubation at 50 degree C for 30min. Total cholinesterase activity on brain of this species can be ascribed to AChE according to selective inhibitors analysis (neostigmine, eserine and BW284c5 reduced its activity whereas no effect was noticed for Iso-OMPA). Seven pesticides (five organophosphates: dichlorvos, diazinon, chlorpyrifos, temephos, tetraethyl pyrophosphate - TEPP and two carbamates: carbaryl and carbofuran) showed inhibitory effects on C. ocellaris AChE. However, the strongest effect was observed with carbofuran (IC50=0.21 mu M and Ki=2.5710-3 mu M). The following ions (1mM) showed to inhibit its activity (decrescent order): Hg2+>As3+>Cu2+>Zn2+. EDTA2- did not affect enzyme activity. The present study provides assay conditions and data to suggest this enzyme as in vitro biomarker of organophosphorus and carbamate pesticides in routine environmental screening programs.  
Keywords: neostigmine  
Keywords: Cichla ocellaris  
Keywords: Heavy metals  
Keywords: Acetylcholinesterase  
Keywords: Carbaryl  
Keywords: Biomarkers  
Keywords: Q5 01502:Methods and instruments  
Keywords: Environmental factors  
Keywords: X 24330:Agrochemicals  
Keywords: pH effects  
Keywords: Toxicology  
Keywords: pyrophosphates  
Keywords: Temperature effects  
Keywords: Screening  
Keywords: Ions  
Keywords: Data processing  
Keywords: Metal ions  
Keywords: Carbofuran  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Physicochemical properties  
Keywords: Brain  
Keywords: Environment Abstracts; Toxicology Abstracts; Pollution Abstracts; Water Resources Abstracts; Aqualine Abstracts; ASFA 1: Biological Sciences & Living Resources; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Temperature  
Keywords: Enzymes  
Keywords: carbofuran  
Keywords: Q1 01485:Species interactions: pests and control  
Keywords: Pesticides (carbamates)  
Keywords: biomarkers  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Kinetics  
Keywords: Pesticides  
Keywords: Diazinon  
Date revised - 2013-01-01  
Language of summary - English  
Pages - 191-197  
ProQuest ID - 1268651576  
SubjectsTermNotLitGenreText - Screening; Metal ions; Heavy metals; Physicochemical properties; Pesticides; Brain; Biomarkers; Environmental factors; Toxicology; Temperature effects; Ions; neostigmine; Data processing; Carbofuran; Acetylcholinesterase; Enzymes; Carbaryl; Pesticides (carbamates); biomarkers; Chlorpyrifos; Kinetics; pH effects; Diazinon; pyrophosphates; Temperature; carbofuran; Cichla ocellaris  
Last updated - 2013-02-08  
British nursing index edition - Aquatic Toxicology [Aquat. Toxicol.]. Vol. 126, pp. 191-197. 15 Jan 2013.  
Corporate institution author - Oliveira, Vagne Melo; Carvalho, Luiz Bezerra; Bezerra, Ranilson Souza  
DOI - 442984a8-56ec-4414-85d4csamfg201; 17497625; 0166-445X English

1241. Silva, L. D.; Omoto, C.; Bleicher, E., and Dourado, P. M. [Monitoring the Susceptibility to Insecticides in Bemisia Tabaci (Gennadius) (Hemiptera: Aleyrodidae) Populations From Brazil].   
Rec #: 507  
Keywords: NON-ENGLISH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Monitoring the susceptibility of a pest population to pesticides is essential for resistance management programs. The objective of this research was to evaluate the genetic variability in pesticide susceptibility in populations of Bemisia tabaci (Gennadius) collected from different Brazilian agricultural regions through the use of two different tests. Four whitefly populations, two from Goi&aacute;s state (GO-1 and GO-2) e two from Bahia state (BA-1 and BA-2), were tested against a susceptible reference one (SusIAC). A residual contact bioassay was used to evaluate the pesticide susceptibility of each population by using diagnostic concentration bioassays and by estimating the baseline susceptibility data to each one of the tested insecticides, acetamiprid, imidacloprid, thiamethoxam, chlorpyrifos and endosulfan. Adult insects of unknown age and sex were tested. Evaluations were performed after 24h for endosulfan and 48 h for the other chemicals. Both procedures showed significant differences in the susceptibility to the pesticides among B. tabaci populations. However, the discrimination among B. tabaci populations was more evident with the use of diagnosis tests. The population GO-2 was significantly less susceptible to the tested pesticides than SusIAC, mainly to neonicotinoids. The most critical resistance situation of B. tabaci was detected to thiamethoxam, followed by imidacloprid.  
MESH HEADINGS: Animals  
MESH HEADINGS: Brazil  
MESH HEADINGS: Hemiptera/\*drug effects/\*genetics  
MESH HEADINGS: Insecticides/\*pharmacology  
TITLE ABBREVIATION: Neotrop Entomol por. Monitoramento da suscetibilidade a inseticidas em popula&ccedil;&otilde;es de Bemisia tabaci (Gennadius) (Hemiptera: Aleyrodidae) no Brasil.

1242. Simon, S.; Defrance, H., and Sauphanor, B. Effect of Codling Moth Management on Orchard Arthropods. 2007; 122, (3): 340-348.   
Rec #: 2160  
Keywords: MIXTURE  
Call Number: NO MIXTURE (24D,24DXY,ACP,ALSV,AZ,CPY,CYF,Captan,Cu,DMT,DOD,DU,FRM,GFSNH,GYP,IMC,MOIL,MP,MZB,OXD,PRB,QZFE,RTN,SFR,SZ,TDF,THM)  
Notes: Chemical of Concern: 24D,24DXY,ACP,ALSV,AMTL,AZ,CPY,CYF,Captan,Cu,DMT,DOD,DU,FRM,GFSNH,GYP,HCZ,IMC,MOIL,MP,MZB,OXD,PHSL,PRB,QZFE,RTN,SFR,SZ,TDF,THM,TPM,TYF

1243. Sinegre, G.; Babinot, M.; Vigo, G., and Tourenq, J. N. Sensitiveness of Three Chironomus (Diptera) Species to Eight Larvicides Used for Mosquito Control (Sensibilite de Trois Especes de Chironomus (Diptera) a huit Insecticides Utilises en Demoustication). 1990; 26, (1): 65-71(FRE) (ENG ABS).   
Rec #: 1340  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

1244. Singh, B; Dogra, T D, and Singh, B. Rapid Method for the Determination of Some Organophosphorus Insecticides in a Small Amount of Serum in Emergency and Occupational Toxicology Cases. 2009 Aug; 13, (2): 84-87.   
Rec #: 44689  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A simple and rapid method is described for the estimation of some organophosphorus insecticides in the serum of occupationally exposed persons. The compounds are extracted with a mixture of acetone and diethyl ether (1:1 v/v) in acidic medium and the extraction residue is analyzed by gas chromatography with nitrogen phosphorus detection method. Linearity was acceptable over concentrations from 0.25 to 4.0 kg/mL. The method percentile recovery for the six different organophosphorus insecticides was 86.3% for phorate, 78.3% for dimethoate, 82.3% for malathion, 79.4% for chlorpyrifos, 80.2% for diazinon, and 68.5% for ethion at the kg/mL level. Serum samples of nine workers who had been occupationally exposed to malathion in an insecticide manufacturing factory, were analyzed and malathion was found at low levels in all the samples.  
Keywords: acetone  
Keywords: Organophosphorus compounds  
Keywords: Residues  
Keywords: phorate  
Keywords: Phosphorus  
Keywords: H 1000:Occupational Safety and Health  
Keywords: Malathion  
Keywords: Chlorpyrifos  
Keywords: Toxicology Abstracts; Health & Safety Science Abstracts  
Keywords: Factories  
Keywords: Insecticides  
Keywords: Gas chromatography  
Keywords: Pesticides  
Keywords: Dimethoate  
Keywords: Acetone  
Keywords: Phosphorus compounds  
Keywords: Ethers  
Keywords: X 24330:Agrochemicals  
Keywords: Diazinon  
Keywords: dimethoate  
Keywords: Toxicology  
Keywords: Occupational exposure  
Keywords: Nitrogen  
Date revised - 2009-11-01  
Language of summary - English  
Pages - 84-87  
ProQuest ID - 21218536  
SubjectsTermNotLitGenreText - Chlorpyrifos; Insecticides; Gas chromatography; phorate; Phosphorus; Dimethoate; Acetone; Ethers; Diazinon; Malathion; Nitrogen; acetone; Organophosphorus compounds; Residues; Factories; Pesticides; Phosphorus compounds; dimethoate; Occupational exposure; Toxicology  
Last updated - 2012-03-29  
British nursing index edition - Indian Journal of Occupational & Environmental Medicine [Indian J. Occup. Environ. Med.]. Vol. 13, no. 2, pp. 84-87. May-Aug 2009.  
Corporate institution author - Singh, B; Dogra, T D  
DOI - MD-0010891971; 11148548; 0973-2284 English

1245. Singh, L. P.; Gill, S. S., and Tuteja, N. Unraveling the Role of Fungal Symbionts in Plant Abiotic Stress Tolerance.   
Rec #: 50219  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Fungal symbionts have been found associated with every plant studied in natural ecosystem, where they colonize and reside entirely in the internal tissues of their host plant or partially. Fungal endophytes can express/form a range of different lifestyle/relationships with different host including symbiotic, mutualistic, commensalistic and parasitic in response to host genotype and environmental factors. In mutualistic association fungal endophyte can enhance growth, increase reproductive success and confer biotic and abiotic stress tolerance to its host plant. Since abiotic stress such as, drought, high soil salinity, heat, cold, oxidative stress, heavy metal toxicity is the common adverse environmental conditions that affect and limit crop productivity worldwide. It may be a promising alternative strategy to exploit fungal endophytes to overcome the limitations to crop production brought by abiotic stress. There is increasing interest in developing the potential biotechnological applications of fungal endophytes for improving plant stress tolerance and sustainable production of food crops. **Here we have described the fungal symbioses, fungal symbionts and their role in abiotic stress tolerance. A putative mechanism of stress tolerance by symbionts has also been covered.**   
MESH HEADINGS: \*Adaptation, Physiological  
MESH HEADINGS: Mycorrhizae/\*physiology  
MESH HEADINGS: Plants/metabolism/\*microbiology  
MESH HEADINGS: \*Stress, Physiological  
MESH HEADINGS: \*Symbiosis eng

1246. Singh, N; Srivastava, a; Srivastava, P C; Srivastava, N, and Singh, N. Adsorption-Desorption Kinetics of Chlorpyrifos Insecticide in Mollisols. 2011; 20, (4): 847-852.   
Rec #: 40099  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The kinetics of adsorption and desorption of chlorpyrifos in soils of Himalayan tarai (mollisols) were studied using the miscible displacement technique under the laboratory conditions. The adsorption data of chlorpyrifos conformed to the first order kinetics and the computed values of adsorption rate constant (k sub(ads.)) increased with depth and had a significant negative correlation with soil E.C.. The desorption data of chlorpyrifos also fitted well to two phase first order kinetics. However, no soil property individually showed any significant simple correlation with the desorption rate constant of chlorpyrifos (k sub(1 des.)). Adsorption rate constant (kads. could be successfully predicted on the basis of soil sand; clay; organic C; and free iron oxide contents contents and soil E.C.. The faster desorption rate constant (k sub(1 des.)) of chlorpyrifos could be predicted on the basis of soil sand; clay; and organic C contents and soil pH and E.C. while the slower desorption rate constant (k sub(2 des.)) could be estimated using sand; organic C; and free iron oxide contents and soil pH and E.C.  
Keywords: Soil  
Keywords: Chlorpyrifos  
Keywords: sandy soils  
Keywords: Desorption  
Keywords: Kinetics  
Keywords: Pesticides  
Keywords: Adsorption  
Keywords: Environment Abstracts  
Keywords: ENA 15:Renewable Resources-Terrestrial  
Keywords: Iron  
Keywords: pH  
Date revised - 2011-07-01  
Language of summary - English  
Pages - 847-852  
ProQuest ID - 886171765  
SubjectsTermNotLitGenreText - Soil; Chlorpyrifos; sandy soils; Desorption; Kinetics; Pesticides; Adsorption; Iron; pH  
Last updated - 2012-08-02  
Corporate institution author - Singh, N; Srivastava, A; Srivastava, P C; Srivastava, N  
DOI - OB-MD-0016020667; 14806208; 1018-4619 English

1247. Singh, P. B.; Sharma, S.; Saini, H. S., and Chadha, B. S. Biosurfactant production by Pseudomonas sp. and its role in aqueous phase partitioning and biodegradation of chlorpyrifos. 2009; 49, (3): 378-383.   
Rec #: 54379  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: To study the effect of biosurfactant on aqueous phase solubility and biodegradation of chlorpyrifos. A Pseudomonas sp. (ChlD), isolated from agricultural soil by enrichment culture technique in the presence of chlorpyrifos, was capable of producing biosurfactant (rhamnolipids) and degrading chlorpyrifos (0Ă‚Â·01 g lĂ˘ÂÂ»Ă‚Âą). The partially purified rhamnolipid biosurfactant preparation, having a CMC of 0Ă‚Â·2 g lĂ˘ÂÂ»Ă‚Âą, was evaluated for its ability to enhance aqueous phase partitioning and degradation of chlorpyrifos (0Ă‚Â·01 g lĂ˘ÂÂ»Ă‚Âą) by ChlD strain. The best degradation efficiency was observed at 0Ă‚Â·1 g lĂ˘ÂÂ»Ă‚Âą supplement of biosurfactant, as validated by GC and HPLC studies. The addition of biosurfactant at 0Ă‚Â·1 g lĂ˘ÂÂ»Ă‚Âą resulted in more than 98% degradation of chlorpyrifos when compared to 84% in the absence of biosurfactant after 120-h incubation. This first report, to the best of our knowledge, on enhanced degradation of chlorpyrifos in the presence of biosurfactant(s), would help in developing bioremediation protocols to counter accumulation of organophosphates to toxic/carcinogenic levels in environment.  
Keywords: aqueous phase partitioning  
Oxford, UK : Blackwell Publishing Ltd

1248. Singh, S.; Kumar, V.; Singh, P.; Banerjee, B. D.; Rautela, R. S.; Grover, S. S.; Rawat, D. S.; Pasha, S. T.; Jain, S. K., and Rai, A. Influence of CYP2C9, GSTM1, GSTT1 and NAT2 genetic polymorphisms on DNA damage in workers occupationally exposed to organophosphate pesticides. 2012; 741, (1-2): 101-108.   
Rec #: 69009  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Previous studies have revealed that organophosphate pesticides (OPs) are primarily metabolized by xenobiotic metabolizing enzymes (XMEs). Very few studies have explored genetic polymorphisms of XMEs and their association with DNA damage in pesticides-exposed workers. Present study was designed to determine the influence of CYP2C9, GSTM1, GSTT1 and NAT2 genetic polymorphisms on DNA damage in workers occupationally exposed to OPs. We examined 268 subjects including 134 workers occupationally exposed to OPs and an equal number of normal healthy controls. The DNA damage was evaluated using alkaline comet assay and genotyping was done using individual polymerase chain reaction (PCR) or polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP). Acetylcholinesterase and paraoxonase activity were found to be significantly lowered in workers as compared to control subjects which were analyzed as biomarkers of toxicity due to OPs exposure (p < 0.001). Workers showed significantly higher DNA tail moment (TM) compared to control subjects (14.32 +/- 2.17 vs. 6.24 +/- 1.37 tail % DNA, p < 0.001). GSTM1 null genotype was found to influence DNA TM in workers (p < 0.05). DNA TM was also found to be increased with concomitant presence of NAT2 slow acetylation and CYP2C9\*3/\*3 or GSTM1 null genotypes (p < 0.05). DNA TM was found increased in NAT2 slow acetylators with mild and heavy smoking habits in control subjects and workers, respectively (p < 0.05). The results of this study suggest that GSTM1 null genotypes, and an association of NAT2 slow acetylation genotypes with CYP2C9\*3/\*3 or GSTM1 null genotypes may modulate DNA damage in workers occupationally exposed to OPs. (C) 2011 Elsevier B.V. All rights reserved.  
Keywords: Organophosphates, Cytochrome P-450s, Glutathione 5-transferases, NAT2,  
ISI Document Delivery No.: 898MP

1249. Singh, S.; Kumar, V.; Singh, P.; Thakur, S.; Banerjee, B. D.; Rautela, R. S.; Grover, S. S.; Rawat, D. S.; Pasha, S. T.; Jain, S. K., and Rai, A. Genetic polymorphisms of GSTM1, GSTT1 and GSTP1 and susceptibility to DNA damage in workers occupationally exposed to organophosphate pesticides. 2011; 725, (1-2): 36-42.   
Rec #: 69019  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: GSTM1, T1 and P1 are important enzymes of glutathione S-transferases (GSTs), involved in the metabolism of many endogenous and exogenous compounds. Individual genetic variation in these metabolizing enzymes may influence the metabolism of their substrates. The present study was designed to determine the genotoxic effects using DNA damage and its association with GSTM1, GSTT1, and GSTP1 (Ile105Val) genetic polymorphisms in workers occupationally exposed to organophosphate pesticides (OPs). We examined 230 subjects including 115 workers occupationally exposed to OPs and an equal number of normal healthy controls. The DNA damage was evaluated using the alkaline comet assay and genotyping was done using individual PCR or PCR-RFLP. Significantly higher DNA tail moment (TM) was observed in workers as compared to control subjects (14.41 +/- 2.25 vs. 6.36 +/- 1.41 tail % DNA, p < 0.001). The results revealed significantly higher DNA TM in workers with GSTM1 null genotype than those with GSTM1 positive (15.18 vs. 14.15 tail % DNA, p = 0.03). A significantly higher DNA TM was also observed in workers with homozygous Ile-Ile GSTP1 genotype than heterozygous (Ile-Val) and mutant (Val-Val) GSTP1 genotype (p = 0.02). In conclusion, the results show that null deletion of GSTM1 and homozygote wild GSTP1 genotype could be related to inter-individual differences in DNA damage arises from the gene-environment interactions in workers occupationally exposed to OPs. (C) 2011 Elsevier B.V. All rights reserved.  
Keywords: Organophosphate pesticides, DNA damage, Genetic polymorphisms,  
ISI Document Delivery No.: 827NT

1250. Singh, S. B.; Mukherjee, I.; Maisnam, J.; Kumar, P.; Gopal, M., and Kulshrestha, G. Determination of Pesticide Residues in Integrated Pest Management and Nonintegrated Pest Management Samples of Apple (Malus pumila Mill.). 2009; 57, (23): 11277-11283.   
Rec #: 69049  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Studies were undertaken to analyze the residues of commonly used pesticides viz. chlorpyrifos, endosulfan, dicofol, cypermethrin, fenvalerate, propargite, malathion, phorate, carbendazim, carbosulfan, thiamethoxam, and mancozeb in apple of integrated pest management (IPM) and non-IPM samples collected from the IPM and non-IPM fields of Shimla. We also present a method for the determination of these pesticides in apple samples. Residues of chlorpyrifos, endosulfan, dicofol, cypermethrin, fenvalerate, and propargite were analyzed by gas chromatography, while residues of carbendazim, carbosulfan, and thiamethoxam were analyzed by high-performance liquid chromatography. Residues of mancozeb were determined by a colorimetric method. Recoveries of all of the pesticides ranged from 61.30 to 95.46% at 0.1, 0.2, and 1.0 mu g g(-1) levels of fortification with relative standard deviations ranging between 0.8 and 8.7. Apples from IPM and non-IPM orchards were analyzed for these pesticides using a developed method. Except for carbendazim and chlorpyrifos, the residues of all of the pesticides analyzed were below detectable limits. Although residues of carbendazim and chlorpyrifos were below the prescribed limits of maximum residue levels in both IPM and non-IPM orchards, residues were lower in apples from IPM orchards.  
Keywords: Apple, IPM, non-IPM, pesticide residues, MRL  
ISI Document Delivery No.: 525BO

1251. Singh, Satyender; Kumar, Vivek; Thakur, Sachin; Banerjee, Basu Dev; Chandna, Sudhir; Rautela, Rajender Singh; Grover, Shyam Sunder; Rawat, Devendra Singh; Pasha, Syed Tazeen; Jain, Sudhir Kumar; Ichhpujani, Rattan Lal; Rai, Arvind, and Jain, Sudhir Kumar. Dna Damage and Cholinesterase Activity in Occupational Workers Exposed to Pesticides. 2011 Mar; 31, (2): 278-285.   
Rec #: 43529  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The present study was designed to evaluate genotoxicity, acetyl cholinesterase (AChE) activity, hepatic and renal toxicity in occupational workers exposed to mixture of pesticides (n =70) with same number of healthy subjects as controls. The mean comet tail DNA % (TD %) and tail moment (TM) were used to measure DNA damage, while AChE activity and other biochemical parameters such as markers of nephrotoxicity (urea and creatinine) and hepatotoxicity (AST, ALT and ALP) were measured as biomarkers for toxicity due to exposure of pesticides. The occupational workers were continuously exposed to mixture of pirimiphos methyl, chlorpyrifos, temephos and malathion on a regular interval as per usage and activity. The comet assay using lymphocytes of exposed workers showed significantly higher TD percentage value (60.43% vs. 31.86%, p <0.001) and TM value (14.48 mu m vs. 6.42 mu m, p <0.001) in occupational workers as compared to controls. AChE activity in erythrocytes was found to be decreased (3.45KAU/L vs. 9.55KAU/L in controls, p <0.001) and associated with the duration of exposure to pesticides used by the workers. Enzyme levels for hepatic and renal functions were also found significantly different in occupational workers than healthy controls (p <0.001). These results suggest that the exposure to mixture of pirimiphos methyl, chlorpyrifos, temephos and malathion may induce DNA damage, decrease in AChE activity, hepatotoxicity as well as nephrotoxicity. Periodic biomonitoring of these biomarkers along with imparting education and training to occupational workers for safe application of pesticides is recommended for its potential hazards.  
Keywords: Erythrocytes  
Keywords: Urea  
Keywords: Lymphocytes  
Keywords: Cholinesterase  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Malathion  
Keywords: Workers  
Keywords: Renal function  
Keywords: biomonitoring  
Keywords: X 24330:Agrochemicals  
Keywords: Occupational exposure  
Keywords: Bioindicators  
Keywords: Tails  
Keywords: Genotoxicity  
Keywords: N 14820:DNA Metabolism & Structure  
Keywords: Enzymes  
Keywords: H 1000:Occupational Safety and Health  
Keywords: Toxicity  
Keywords: biomarkers  
Keywords: hepatotoxicity  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Toxicology Abstracts; Biochemistry Abstracts 2: Nucleic Acids; Environment Abstracts; Health & Safety Science Abstracts; Pollution Abstracts  
Keywords: Chlorpyrifos  
Keywords: DNA damage  
Keywords: Creatinine  
Keywords: Pesticides  
Keywords: DNA  
Keywords: Liver  
Keywords: Comet assay  
Date revised - 2011-05-01  
Language of summary - English  
Pages - 278-285  
ProQuest ID - 864962338  
SubjectsTermNotLitGenreText - Tails; Genotoxicity; Erythrocytes; Enzymes; Urea; Lymphocytes; Cholinesterase; biomarkers; Malathion; hepatotoxicity; Chlorpyrifos; DNA damage; Workers; Creatinine; Renal function; Pesticides; Liver; biomonitoring; Comet assay; Occupational exposure; Bioindicators; DNA; Toxicity  
Last updated - 2012-03-29  
British nursing index edition - Environmental Toxicology and Pharmacology [Environ. Toxicol. Pharmacol.]. Vol. 31, no. 2, pp. 278-285. Mar 2011.  
Corporate institution author - Singh, Satyender; Kumar, Vivek; Thakur, Sachin; Banerjee, Basu Dev; Chandna, Sudhir; Rautela, Rajender Singh; Grover, Shyam Sunder; Rawat, Devendra Singh; Pasha, Syed Tazeen; Jain, Sudhir Kumar; Ichhpujani, Rattan Lal; Rai, Arvind  
DOI - 3e6d152b-1374-40d7-8942csamfg201; 14514014; 1382-6689 English

1252. Sinha, S. N.; Rao, M. V. V., and Vasudev, K. Distribution of pesticides in different commonly used vegetables from Hyderabad, India. 2012; 45, (1): 161-169.   
Rec #: 69069  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In this study, we assessed the exposure of urban populations to different classes of organophosphate pesticides due to the consumption of different types of vegetables. Liquid chromatography-mass spectrometry was used for quantification, while the quick, easy, cheap, effective, rugged and safe extraction method was used to isolate eighteen organophosphate pesticides found in vegetable samples (eggplant, ladyfinger, cauliflower, cabbage, tomato and chili) at concentration of mu g/kg. This method was accurate (>= 99.5%) and possessed a limit of detection and quantification in the range of 0.002-0.099 and 0.009-0.337 mu g/kg respectively. The coefficients of variation (>= 0.9999) were less than 2% at the low end of the linear range of the method. The mean recovery ranged between 94 and 103%, and the % relative standard deviation (RSD) was generally below 10%. These results demonstrate that the methodology is both highly efficient and robust. The proposed method was successfully applied to the analysis of vegetable samples collected from different government farmer markets and street shops in urban areas. The mean concentration of chlorpyrifos in eggplant (24.02 mu g/kg), cabbage (10.55 mu g/kg), cauliflower (2.85 mu g/kg), tomato (178.87 mu g/kg) and ladyfinger (2.49 mu g/kg) differed significantly ( p < 0.002). Similarly, the mean concentration of triazophos in eggplant (0.863 mu g/kg), cabbage (2.21 mu g/kg), cauliflower (0.491 mu g/kg), tomato (3.01 mu g/kg) and ladyfinger (2.49 mu g/kg) differed significantly (p < 0.007). A similar trend was observed for acephate, fenitrothion and phosalone. This study may be helpful in developing a regional exposure database and in facilitating assessment of health risks from pesticide exposure in our day-to-day lives. (C) 2011 Elsevier Ltd. All rights reserved.  
Keywords: Pesticides, Liquid chromatography mass spectrometry, Vegetables,  
ISI Document Delivery No.: 898ME

1253. Sinha, Sukesh Narayan; Bhatnagar, V. K.; Doctor, Pankaj; Toteja, G. S.; Agnihotri, N. P., and Kalra, R. L. A novel method for pesticide analysis in refined sugar samples using a gas chromatography-mass spectrometer (GC-MS/MS) and simple solvent extraction method. 2011; 126, (1): 379-386.   
Rec #: 54399  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A sensitive method for the quantification of 11 pesticides in sugar samples to the ĂŽÂĽgkgĂ˘ÂÂ»Ă‚Âą level has been developed. These pesticides are often used in an agricultural context. A simple solvent extraction followed by selective analysis using a gas chromatography-mass spectrometric method was used. This method was accurate (Ă˘Â©Âľ99%) as it possesses limits of detection in the 0.1-ĂŽÂĽgkgĂ˘ÂÂ»Ă‚Âą range, and the coefficients of variations are less than 15% at the low ĂŽÂĽgkgĂ˘ÂÂ»Ă‚Âą end of the method's linear range. The percent recovery of all the pesticides at the lowest levels of detection ranges from 82% to 104%. This method was used for the quantification of pesticides in sugar samples collected from different factory outlets from different parts of India. In this study, 27 refined sugar samples were analysed in which one sample showed a detectable level of the chlorpyrifos pesticide. This study showed that Indian sugar is free from the commonly-used pesticides at the low ĂŽÂĽgkgĂ˘ÂÂ»Ă‚Âą levels.  
Keywords: simple solvent extraction method  
[Amsterdam]: Elsevier Science

1254. Sirisha, K.; Mallipattu, S., and Reddy, S. R. J. Differential pulse adsorptive stripping voltammetric determination of chlorpyrifos at a sepiolite modified carbon paste electrode. 2007; 40, (10): 1939-1950.   
Rec #: 69079  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An adsorptive stripping voltammetric (AdSV) method for the determination of organophosphorus insecticide chlorpyrifos at a bare carbon paste electrode (CPE) and clay modified carbon paste electrode (CMCPE) was developed. A systematic study of various experimental conditions, such as the pH, accumulation variables and composition of a modifier on the adsorptive stripping response, were examined by using differential pulse voltammetry. A significant improvement was observed in the sensitivity by using the present method with CMCPE. When CMCPE was used, a linear response was obtained over the concentration range 0.0001-2.0 ppm with lower detection limit of 0.00008 ppm, at an accumulation time of 80 s. The interference from other herbicides and ions on the stripping signal of the compound was also evaluated. The described method was applied to estimate the chlorpyrifos in environmental samples.  
Keywords: chlorpyrifos, DPAdSV, carbon paste electrode, clay modified carbon paste  
ISI Document Delivery No.: 201WR

1255. Slager, R. E.; Simpson, S. L.; LeVan, T. D.; Poole, J. A.; Sandler, D. P., and Hoppin, J. A. Rhinitis Associated with Pesticide Use Among Private Pesticide Applicators in the Agricultural Health Study. 2010; 73, (20): 1382-1393.   
Rec #: 69099  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Farmers commonly experience rhinitis but the risk factors are not well characterized. The aim of this study was to analyze cross-sectional data on rhinitis in the past year and pesticide use from 21,958 Iowa and North Carolina farmers in the Agricultural Health Study, enrolled 1993-1997, to evaluate pesticide predictors of rhinitis. Polytomous and logistic regression models were used to assess association between pesticide use and rhinitis while controlling for demographics and farm-related exposures. Sixty-seven percent of farmers reported current rhinitis and 39% reported 3 or more rhinitis episodes. The herbicides glyphosate [odds ratio (OR) = 1.09, 95% confidence interval (95% CI) = 1.05-1.13] and petroleum oil (OR = 1.12, 95% CI = 1.05-1.19) were associated with current rhinitis and increased rhinitis episodes. Of the insecticides, four organophosphates (chlorpyrifos, diazinon, dichlorvos, and malathion), carbaryl, and use of permethrin on animals were predictors of current rhinitis. Diazinon was significant in the overall polytomous model and was associated with an elevated OR of 13+ rhinitis episodes (13+ episodes OR = 1.23, 95% CI = 1.09-1.38). The fungicide captan was also a significant predictor of rhinitis. Use of petroleum oil, use of malathion, use of permethrin, and use of the herbicide metolachlor were significant in exposure-response polytomous models. Specific pesticides may contribute to rhinitis in farmers; agricultural activities did not explain these findings.  
Keywords: RESPIRATORY SYMPTOMS, ALLERGIC RHINITIS, OCCUPATIONAL RHINITIS, ANIMAL  
ISI Document Delivery No.: 647GM

1256. Sledge, D.; Yen, J.; Morton, T.; Dishaw, L.; Shuler, K.; Donerly, S.; Linney, E., and Levin, E. A Zebrafish Model of the Persisting Neurobehavioral Impairment Caused by Developmental Chlorpyrifos Exposure. 2009; 31, (4): 242-(ABS) (NBTS21).   
Rec #: 1350  
Keywords: ABSTRACT  
Call Number: NO ABSTRACT (CPY)  
Notes: Chemical of Concern: CPY

1257. Sledge, Damiyon; Petro, Ann; Yen, Jerry; Donerly, Susan; Linney, Elwood, and Levin, Edward. Early developmental chlorpyrifos causes persisting behavioral and neurochemical changes in zebrafish. 2010; 32, (4): 498.   
Rec #: 2450  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

1258. Slotkin, T. A. Developmental Cholinotoxicants: Nicotine and Chlorpyrifos. 1999; 107, (1): 71-80.   
Rec #: 2900  
Keywords: IN VITRO  
Call Number: NO IN VITRO (CPY,NCTN)  
Notes: Chemical of Concern: CPY,NCTN

1259. ---. Does Early-Life Exposure to Organophosphate Insecticides Lead to Prediabetes and Obesity? Department of Pharmacology and Cancer Biology, Box 3813 DUMC, Duke University Medical Center, Room C162 LSRC Bldg., Research Drive, Durham, NC 27710, USA, Elsevier Science, Box 882 New York NY 10159 USA//: 2011; 31, (3): 297-301.   
Rec #: 2710  
Keywords: HUMAN HEALTH  
Call Number: NO HUMAN HEALTH (CPY,DZ)  
Notes: Chemical of Concern: CPY,DZ,EPRN,PRN

1260. Slotkin, T. A.; Seidler, F. J., and Fumagalli, F. Unrelated developmental neurotoxicants elicit similar transcriptional profiles for effects on neurotrophic factors and their receptors in an in vitro model. 2010; 32, (1 ): 42-51.   
Rec #: 69409  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Diverse developmental neurotoxicants can often produce similar functional and behavioral outcomes. We examined an organophosphate pesticide (diazinon), an organochlorine pesticide (dieldrin) and a metal (Ni(2+)) for effects on the expression of neurotrophic factors and their receptors and modulators in differentiating PC12 cells, an in vitro model of neuronal development. Each agent was introduced at 30 mu M for 24 or 72 h, treatments devoid of cytotoxicity. Using microarrays, we examined the mRNAs encoding members of the fibroblast growth factor (fgf) family, the neurotrophins (ntfs), brain-derived neurotrophic factor (bdnf), nerve growth factor (ngf), the wnt and fzd gene families, and the receptors and modulators for each class. All three agents evoked highly concordant patterns of effects on genes encoding the fgf family, whereas the correlations were poor for the group comprising bdnf, ngf and their respective receptors. For wnt, fzd and their receptors/modulators, the relationships between diazinon and dieldrin were highly concordant, whereas the effect of Ni(2+) was less similar, albeit still significantly correlated with the others. Our results show that otherwise disparate developmental neurotoxicants converge on common sets of neurotrophic pathways known to control neuronal differentiation, likely contributing to similarities in functional outcomes. Further, cell culture models can provide a useful initial screen to identify members of a given class of compounds that may be greater or lesser risks for developmental neurotoxicity, or to provide an indication of agents in different classes that might produce similar effects. (C) 2008 Elsevier Inc. All rights reserved.  
Keywords: Brain-derived neurotrophic factor, Diazinon, Dieldrin, Fibroblast growth  
ISI Document Delivery No.: 560DF

1261. Slotkin, T a; Seidler, F J, and Slotkin, T A. Developmental Neurotoxicants Target Neurodifferentiation Into the Serotonin Phenotype: Chlorpyrifos, Diazinon, Dieldrin and Divalent Nickel. 2008 Dec 1; 233, (2): 211-219.   
Rec #: 41809  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Developmental exposure to organophosphates (OP) produces long-term changes in serotonin (5HT) synaptic function and associated behaviors, but there are disparities among the different OPs. We contrasted effects of chlorpyrifos and diazinon, as well as non-OP neurotoxicants (dieldrin, Ni super(2) super(+)) using undifferentiated and differentiating PC12 cells, a well-established neurodevelopmental model. Agents were introduced at 30 mu M for 24 or 72 h, treatments devoid of cytotoxicity, and we evaluated the mRNAs encoding the proteins for 5HT biosynthesis, storage and degradation, as well as 5HT receptors. Chlorpyrifos and diazinon both induced tryptophan hydroxylase, the rate-limiting enzyme for 5HT biosynthesis, but chlorpyrifos had a greater effect, and both agents suppressed expression of 5HT transporter genes, effects that would tend to augment extracellular 5HT. However, whereas chlorpyrifos enhanced the expression of most 5HT receptor subtypes, diazinon evoked overall suppression. Dieldrin evoked even stronger induction of tryptophan hydroxylase, and displayed a pattern of receptor effects similar to that of diazinon, even though they come from different pesticide classes. In contrast, Ni super(2) super(+) had completely distinct actions, suppressing tryptophan hydroxylase and enhancing the vesicular monoamine transporter, while also reducing 5HT receptor gene expression, effects that would tend to lower net 5HT function. Our findings provide some of the first evidence connecting the direct, initial mechanisms of developmental neurotoxicant action on specific transmitter pathways with their long-term effects on synaptic function and behavior, while also providing support for in vitro test systems as tools for establishing mechanisms and outcomes of related and unrelated neurotoxicants.  
Keywords: CSA Neurosciences Abstracts; Toxicology Abstracts  
Keywords: Receptor mechanisms  
Keywords: N3 11003:Developmental neuroscience  
Keywords: Nickel  
Keywords: Dieldrin  
Keywords: tryptophan hydroxylase  
Keywords: Enzymes  
Keywords: organophosphates  
Keywords: Serotonin  
Keywords: Long-term effects  
Keywords: Chlorpyrifos  
Keywords: Cytotoxicity  
Keywords: Vesicular amine transporter  
Keywords: Pheochromocytoma cells  
Keywords: Pesticides  
Keywords: X 24330:Agrochemicals  
Keywords: Diazinon  
Date revised - 2008-12-01  
Language of summary - English  
Pages - 211-219  
ProQuest ID - 19564152  
SubjectsTermNotLitGenreText - Serotonin; Chlorpyrifos; Diazinon; tryptophan hydroxylase; Dieldrin; Receptor mechanisms; Nickel; organophosphates; Vesicular amine transporter; Pheochromocytoma cells; Pesticides; Enzymes; Long-term effects; Cytotoxicity  
Last updated - 2011-12-14  
British nursing index edition - Toxicology and Applied Pharmacology [Toxicol. Appl. Pharmacol.]. Vol. 233, no. 2, pp. 211-219. 1 Dec 2008.  
Corporate institution author - Slotkin, T A; Seidler, F J  
DOI - MD-0009001220; 8800546; 0041-008X English

1262. Slotkin, T a; Seidler, F J; Wu, C; Mackillop, E a; Linden, K G, and Slotkin, T A. Ultraviolet Photolysis of Chlorpyrifos: Developmental Neurotoxicity Modeled in Pc12 Cells. 2009 Mar; 117, (3): 338-343.   
Rec #: 41389  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: Ultraviolet photodegradation products from pesticides form both in the field and during water treatment. OBJECTIVES: We evaluated the photolytic breakdown of the organophosphate pesticide chlorpyrifos (CPF) in terms of both the chemical entities generated by low-pressure ultraviolet C irradiation and their potential as developmental neurotoxicants. METHODS: We separated by-products using high-performance liquid chromatography and characterized them by gas chtomatography/mass spectrometry. We assessed neurotoxicity in neuronotypic PC12 cells, both in the undifferentiated state and during differentiation. RESULTS: Photodegradation of CPF in methanol solution generated CPF oxon and trichloro-pyridinol, products known to retain developmental neurotoxicant actions, as well as a series of related organophosphate and phosphorothionate derivatives. Exposure conditions that led to 50% degradation of CPF thus did not reduce developmental neurotoxicity. The degradation mixture inhibited DNA synthesis in undifferentiated cells to the same extent as native CPF. In differentiating cells, the products likewise retained the full ability to elicit shortfalls in cell number and corresponding effects on cell growth and neurite formation. When the exposure was prolonged to the point where 70% of the CPF was degraded, the adverse effects on PC12 cells were no longer evident; however, these conditions were sufficiently severe to generate toxic products from the methanol vehicle. CONCLUSIONS: Our results indicate that field conditions or remediation treatments that degrade a significant proportion of the CPF do not necessarily produce inactive products and, indeed, may elicit formation of even more toxic chemicals that are more water soluble and thus have greater field mobility than CPF itself.  
Keywords: High-performance liquid chromatography  
Keywords: Bioremediation  
Keywords: Degradation  
Keywords: Mobility  
Keywords: Toxicology Abstracts; Environment Abstracts; CSA Neurosciences Abstracts; Pollution Abstracts  
Keywords: Organophosphates  
Keywords: Methanol  
Keywords: Byproducts  
Keywords: Mass spectrometry  
Keywords: Mass spectroscopy  
Keywords: Differentiation  
Keywords: U.V. radiation  
Keywords: Pheochromocytoma cells  
Keywords: Water treatment  
Keywords: Axonogenesis  
Keywords: X 24330:Agrochemicals  
Keywords: Photolysis  
Keywords: Pesticides (organophosphorus)  
Keywords: DNA biosynthesis  
Keywords: Cell number  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: organophosphates  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Photodegradation  
Keywords: Liquid chromatography  
Keywords: Irradiation  
Keywords: Pesticides  
Keywords: Neurotoxicity  
Keywords: DNA  
Keywords: Side effects  
Date revised - 2009-03-01  
Language of summary - English  
Pages - 338-343  
ProQuest ID - 20417556  
SubjectsTermNotLitGenreText - High-performance liquid chromatography; Photolysis; Pesticides (organophosphorus); DNA biosynthesis; Cell number; Mobility; Methanol; organophosphates; Mass spectroscopy; Chlorpyrifos; Differentiation; U.V. radiation; Pheochromocytoma cells; Water treatment; Photodegradation; Neurotoxicity; Axonogenesis; Side effects; Bioremediation; Degradation; Organophosphates; Byproducts; Mass spectrometry; Liquid chromatography; Irradiation; Pesticides; DNA  
Last updated - 2011-12-14  
British nursing index edition - Environmental Health Perspectives [Environ. Health Perspect.]. Vol. 117, no. 3, pp. 338-343. Mar 2009.  
Corporate institution author - Slotkin, T A; Seidler, F J; MacKillop, E A; Linden, K G  
DOI - MD-0009439445; 9089313; 0091-6765 English

1263. Slotkin, Theodore and Seidler, Frederic. Transcriptional Profiles Reveal Similarities and Differences in the Effects of Developmental Neurotoxicants on Differentiation Into Neurotransmitter Phenotypes in Pc12 Cells. 2009 Mar 16; 78, (4-5): 211-225.   
Rec #: 44939  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Unrelated developmental neurotoxicants nevertheless converge on common functional and behavioral outcomes. We used PC12 cells, a model of neuronal development, to explore similarities and differences for organophosphate pesticides (chlorpyrifos, diazinon), an organochlorine pesticide (dieldrin) and a metal (Ni(2+)), focusing on transcriptional profiles related to differentiation into acetylcholine, dopamine and norepinephrine phenotypes. Agents were introduced at 30 microM for 24 or 72 h, treatments devoid of cytotoxicity. Using microarrays, we examined the mRNAs encoding the proteins involved in neurotransmitter biosynthesis, storage, and degradation, along with the complete panoply of receptors for each transmitter. All three pesticides evoked concordant patterns of effects on genes involved in neural growth and neurite extension, with a distinctly different pattern for Ni(2+). All four toxicants promoted differentiation into the dopamine phenotype at the expense of the acetylcholine phenotype, involving separable effects of each agent on the various gene families; however, there were major differences in the ability of each to promote or repress the norepinephrine phenotype. Chlorpyrifos and diazinon, although displaying many similarities in their transcriptional profiles, also showed major disparities in keeping with their known differences in synaptic and behavioral outcomes after neonatal exposures to these agents in vivo. Surprisingly, there were closer similarities among diazinon, dieldrin and Ni(2+) than for each agent to chlorpyrifos. Our results illustrate how cell culture systems, combined with microarray technology, can screen for developmental neurotoxicants, serving as a model for alternative approaches to the detection and characterization of the impact of exogenous chemicals on brain development.  
Keywords: 2921-88-2  
Keywords: 51-41-2  
Keywords: Animals  
Keywords: Neurotransmitter Agents  
Keywords: Analysis of Variance  
Keywords: Transcription, Genetic -- drug effects  
Keywords: Oligonucleotide Array Sequence Analysis  
Keywords: Neurons -- drug effects  
Keywords: Nickel  
Keywords: RNA, Messenger -- genetics  
Keywords: 60-57-1  
Keywords: Rats  
Keywords: Acetylcholine -- metabolism  
Keywords: Organophosphorus Compounds  
Keywords: Neurotransmitter Agents -- metabolism  
Keywords: Insecticides  
Keywords: Norepinephrine -- metabolism  
Keywords: Dieldrin -- toxicity  
Keywords: Trace Elements -- toxicity  
Keywords: 333-41-5  
Keywords: 7440-02-0  
Keywords: Cell Differentiation -- drug effects  
Keywords: Gene Expression Regulation, Developmental -- drug effects  
Keywords: 51-84-3  
Keywords: Insecticides -- toxicity  
Keywords: Neurons -- metabolism  
Keywords: Diazinon -- toxicity  
Keywords: Dieldrin  
Keywords: Dopamine -- metabolism  
Keywords: Trace Elements  
Keywords: Chlorpyrifos  
Keywords: RNA, Messenger  
Keywords: Gene Expression Profiling  
Keywords: 0  
Keywords: Cell Differentiation -- physiology  
Keywords: Chlorpyrifos -- toxicity  
Keywords: RNA, Messenger -- metabolism  
Keywords: Neurons -- cytology  
Keywords: Norepinephrine  
Keywords: Organophosphorus Compounds -- toxicity  
Keywords: Nickel -- toxicity  
Keywords: Acetylcholine  
Keywords: Diazinon  
Keywords: PC12 Cells  
Date completed - 2009-03-06  
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Date revised - 2012-12-20  
Language of summary - English  
Pages - 211-225  
ProQuest ID - 66850831  
SuppNotes - Cites: Environ Health Perspect. 2007 Jan;115(1):93-101[17366826]; Cites: Brain Res Bull. 2007 May 30;72(4-6):232-74[17452286]; Cites: Environ Health Perspect. 2007 Jun;115(6):924-31[17589601]; Cites: Toxicol Sci. 2007 Dec;100(2):445-55[17893397]; Cites: Neurotoxicol Teratol. 2008 Jan-Feb;30(1):38-45[18096363]; Cites: Brain Res Bull. 2008 Jan 31;75(1):166-72[18158111]; Cites: Brain Res Bull. 2008 Mar 28;75(5):640-7[18355640]; Cites: J Neurochem. 1979 May;32(5):1487-94[438818]; Cites: Neuroscience. 1992 Aug;49(3):497-528[1501763]; Cites: Am J Vet Res. 1972 Mar;33(3):579-83[5014466]; Cites: J Neurosci. 1994 Sep;14(9):5429-36[8083746]; Cites: Toxicology. 1995 Dec 15;104(1-3):129-40[8560491]; Cites: Cell Calcium. 1996 Nov;20(5):441-6[8955559]; Cites: Dev Neurosci. 1998;20(1):34-41[9600388]; Cites: Teratology. 1998 Aug;58(2):25-6[9787401]; Cites: Brain Res Dev Brain Res. 1999 Aug 5;116(1):9-20[10446342]; Cites: J Neurosci. 2000 Feb 15;20(4):1495-504[10662839]; Cites: Brain Res Dev Brain Res. 2000 Jun 30;121(2):189-95[10876031]; Cites: Environ Health Perspect. 2001 Sep;109(9):909-13[11673119]; Cites: Brain Res Dev Brain Res. 2002 Feb 28;133(2):163-73[11882346]; Cites: Neuroscience. 2003;119(4):945-64[12831855]; Cites: Brain Res Dev Brain Res. 2003 Dec 30;147(1-2):183-90[14741763]; Cites: Environ Health Perspect. 2004 Mar;112(3):295-301[14998743]; Cites: Chem Res Toxicol. 2004 Aug;17(8):983-98[15310231]; Cites: Toxicol Appl Pharmacol. 2005 Aug 1;206(1):17-26[15963341]; Cites: Environ Health Perspect. 2005 Aug;113(8):1027-31[16079074]; Cites: Clin Chim Acta. 2006 Apr;366(1-2):1-13[16337171]; Cites: Environ Health Perspect. 2006 May;114(5):746-51[16675431]; Cites: Proc Natl Acad Sci U S A. 2007 Jan 2;104(1):335-40[17190810]; Cites: Environ Health Perspect. 2007 Jan;115(1):65-70[17366821]; Cites: Environ Health Perspect. 2007 Jun;115(6):909-16[17589599]; Cites: Environ Health Perspect. 2007 Sep;115(9):1306-13[17805420]; Cites: Toxicol Appl Pharmacol. 2008 Apr 1;228(1):32-41[18076960]; Cites: Environ Health Perspect. 2008 Mar;116(3):340-8[18335101]; Cites: Brain Res Bull. 2008 Jul 1;76(4):424-38[18502319]; Cites: Br J Nutr. 1978 May;39(3):639-46[638131]; Cites: J Neurosci Res. 1992 Apr;31(4):591-9[1374475]; Cites: Environ Health Perspect. 1989 Mar;80:127-42[2647474]; Cites: Science. 1984 Sep 21;225(4668):1266-70[6147894]; Cites: J Neurosci. 1994 Sep;14(9):5417-28[8083745]; Cites: Toxicol Lett. 1994 Jan;70(1):71-6[8310459]; Cites: Toxicology. 1996 Aug 1;112(1):57-68[8792849]; Cites: Brain Res. 1997 Sep 26;769(2):211-8[9374188]; Cites: Environ Health Perspect. 1998 Apr;106 Suppl 2:505-10[9599699]; Cites: Toxicol Appl Pharmacol. 1998 Jul;151(1):182-91[9705902]; Cites: Toxicol Lett. 1998 Sep 15;98(3):139-46[9788582]; Cites: Environ Health Perspect. 1999 Feb;107 Suppl 1:71-80[10229709]; Cites: Toxicol Appl Pharmacol. 1999 Nov 1;160(3):217-30[10544056]; Cites: Brain Res. 2000 Feb 28;857(1-2):87-98[10700556]; Cites: Brain Res. 2001 Jun 1;902(2):229-43[11384617]; Cites: Brain Res Dev Brain Res. 2001 Sep 23;130(1):83-9[11557096]; Cites: Free Radic Biol Med. 2001 Dec 1;31(11):1473-85[11728820]; Cites: Environ Health Perspect. 2002 May;110(5):507-14[12003754]; Cites: Toxicology. 2003 Mar 14;185(1-2):67-78[12505446]; Cites: Environ Health Perspect. 2003 Nov;111(14):1736-43[14594624]; Cites: Environ Health Perspect. 2004 Feb;112(2):148-55[14754568]; Cites: Neurotoxicology. 2004 Jun;25(4):631-40[15183016]; Cites: Toxicol Appl Pharmacol. 2004 Jul 15;198(2):132-51[15236950]; Cites: Environ Health Perspect. 2005 May;113(5):527-31[15866758]; Cites: Brain Res Dev Brain Res. 2005 Aug 8;158(1-2):115-9[16024092]; Cites: J Neurosci. 2005 Jul 27;25(30):6939-46[16049169]; Cites: Toxicol Appl Pharmacol. 2005 Sep 1;207(2):112-24[16102564]; Cites: Environ Health Perspect. 2006 May;114(5):667-72[16675418]; Cites: Toxicol Sci. 2006 Aug;92(2):500-6[16675515]; Cites: Environ Health Perspect. 2006 Oct;114(10):1542-6[17035140]; Cites: Reprod Toxicol. 2007 Apr-May;23(3):421-7[17267174]  
Last updated - 2013-01-19  
British nursing index edition - Brain research bulletin, March 16, 2009, 78(4-5):211-225  
Corporate institution author - Slotkin, Theodore; Seidler, Frederic  
DOI - MEDL-18812211; 18812211; NIHMS95214; PMC2649705; 1873-2747 eng

1264. Slotkin, Theodore A.; Card, Jennifer; Infante, Alice, and Seidler, Frederic J. BDE99 (2,2,4,4,5-pentabromodiphenyl ether) suppresses differentiation into neurotransmitter phenotypes in PC12 cells. (0).  
Rec #: 3820  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract Acetylcholine/ BDE99/ Brominated flame retardants/ Dopamine/ Neurodifferentiation/ PC12 cells

1265. ---. Prenatal dexamethasone augments the sex-selective developmental neurotoxicity of chlorpyrifos: Implications for vulnerability after pharmacotherapy for preterm labor . (0).  
Rec #: 1520  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract Chlorpyrifos/ Cholinergic neurotransmission/ Dexamethasone/ Glucocorticoids/ Organophosphate pesticides/ Preterm delivery

1266. Slotkin, Theodore a; Card, Jennifer; Seidler, Frederic J, and Slotkin, Theodore A. Chlorpyrifos Developmental Neurotoxicity: Interaction With Glucocorticoids in Pc12 Cells. 2012 Sep; 34, (5): 505-512.   
Rec #: 38579  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Prenatal coexposures to glucocorticoids and organophosphate pesticides are widespread. Glucocorticoids are elevated by maternal stress and are commonly given in preterm labor; organophosphate exposures are virtually ubiquitous. We used PC12 cells undergoing neurodifferentiation in order to assess whether dexamethasone enhances the developmental neurotoxicity of chlorpyrifos, focusing on models relevant to human exposures. By themselves, each agent reduced the number of cells and the combined exposure elicited a correspondingly greater effect than with either agent alone. There was no general cytotoxicity, as cell growth was actually enhanced, and again, the combined treatment evoked greater cellular hypertrophy than with the individual compounds. The effects on neurodifferentiation were more complex. Chlorpyrifos alone had a promotional effect on neuritogenesis whereas dexamethasone impaired it; combined treatment showed an overall impairment greater than that seen with dexamethasone alone. The effect of chlorpyrifos on differentiation into specific neurotransmitter phenotypes was shifted by dexamethasone. Either agent alone promoted differentiation into the dopaminergic phenotype at the expense of the cholinergic phenotype. However, in dexamethasone-primed cells, chlorpyrifos actually enhanced cholinergic neurodifferentiation instead of suppressing this phenotype. Our results indicate that developmental exposure to glucocorticoids, either in the context of stress or the therapy of preterm labor, could enhance the developmental neurotoxicity of organophosphates and potentially of other neurotoxicants, as well as producing neurobehavioral outcomes distinct from those seen with either individual agent.  
Keywords: CSA Neurosciences Abstracts; Toxicology Abstracts  
Keywords: Dexamethasone  
Keywords: Pesticides (organophosphorus)  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: Stress  
Keywords: organophosphates  
Keywords: Glucocorticoids  
Keywords: Chlorpyrifos  
Keywords: Differentiation  
Keywords: Cytotoxicity  
Keywords: Hypertrophy  
Keywords: Dopamine  
Keywords: Pheochromocytoma cells  
Keywords: Neurotoxicity  
Keywords: Axonogenesis  
Keywords: Neurotransmitters  
Keywords: X 24330:Agrochemicals  
Date revised - 2012-10-01  
Language of summary - English  
Pages - 505-512  
ProQuest ID - 1113218854  
SubjectsTermNotLitGenreText - Dexamethasone; Pesticides (organophosphorus); Stress; organophosphates; Glucocorticoids; Chlorpyrifos; Differentiation; Hypertrophy; Cytotoxicity; Pheochromocytoma cells; Dopamine; Neurotoxicity; Axonogenesis; Neurotransmitters  
Last updated - 2012-11-20  
British nursing index edition - Neurotoxicology and Teratology [Neurotoxicol. Teratol.]. Vol. 34, no. 5, pp. 505-512. Sep 2012.  
Corporate institution author - Slotkin, Theodore A; Card, Jennifer; Seidler, Frederic J  
DOI - 6baee330-fc51-4c1b-a4d0csamfg201; 17214098; 0892-0362 English

1267. Slotkin, Theodore a; Lobner, Doug, and Seidler, Frederic J. Transcriptional Profiles for Glutamate Transporters Reveal Differences Between Organophosphates but Similarities With Unrelated Neurotoxicants. 2010 Aug 30; 83, (1-2): 76-83.   
Rec #: 43899  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The developmental neurotoxicity of organophosphates involves mechanisms other than their shared property as cholinesterase inhibitors, among which are excitotoxicity and oxidative stress. **We used PC12 cells as a neurodevelopmental model to compare the effects of chlorpyrifos and diazinon on the expression of genes encoding glutamate transporters.** Chlorpyrifos had a greater effect in cells undergoing nerve growth factor-induced neurodifferentiation as compared to undifferentiated PC12 cells, with peak sensitivity at the initiation of differentiation, reflecting a global upregulation of all the glutamate transporter genes expressed in this cell line. In differentiating cells, chlorpyrifos had a significantly greater effect than did diazinon and concordance analysis indicated no resemblance in their expression patterns. At the same time, the smaller effects of diazinon were highly concordant with those of an organochlorine pesticide (dieldrin) and a metal (divalent nickel). We also performed similar evaluations for the cystine/glutamate exchanger, which provides protection against oxidative stress by moving cystine into the cell; again, chlorpyrifos had the greatest effect, in this case reducing expression in undifferentiated and differentiating cells. Our results point to excitotoxicity and oxidative stress as major contributors to the noncholinesterase mechanisms that distinguish the neurodevelopmental outcomes between different organophosphates while providing a means whereby apparently unrelated neurotoxicants may produce similar outcomes. 2010 Elsevier Inc. All rights reserved.  
Keywords: 2921-88-2  
Keywords: Cholinesterase Inhibitors -- pharmacology  
Keywords: Animals  
Keywords: Analysis of Variance  
Keywords: Organophosphates  
Keywords: Glutamic Acid  
Keywords: Amino Acid Transport System X-AG -- metabolism  
Keywords: Oligonucleotide Array Sequence Analysis -- methods  
Keywords: Neurotoxins -- pharmacology  
Keywords: Chlorpyrifos -- pharmacology  
Keywords: Nerve Growth Factor -- pharmacology  
Keywords: Cystine -- metabolism  
Keywords: Amino Acid Transport System X-AG  
Keywords: Rats  
Keywords: Organophosphates -- pharmacology  
Keywords: 56-89-3  
Keywords: Cystine  
Keywords: Gene Expression Regulation -- drug effects  
Keywords: 333-41-5  
Keywords: Cell Differentiation -- drug effects  
Keywords: Diazinon -- pharmacology  
Keywords: Time Factors  
Keywords: Glutamic Acid -- metabolism  
Keywords: 9061-61-4  
Keywords: PC12 Cells -- drug effects  
Keywords: 56-86-0  
Keywords: Nerve Growth Factor  
Keywords: Gene Expression Profiling -- methods  
Keywords: Chlorpyrifos  
Keywords: Cholinesterase Inhibitors  
Keywords: 0  
Keywords: Maximum Tolerated Dose  
Keywords: Statistics as Topic  
Keywords: Neurotoxins  
Keywords: Amino Acid Transport System X-AG -- genetics  
Keywords: Diazinon  
Date completed - 2011-02-14  
Date created - 2010-08-16  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 76-83  
ProQuest ID - 748974134  
SuppNotes - Cites: Environ Health Perspect. 1999 Feb;107 Suppl 1:71-80[10229709]; Cites: Br J Nutr. 1978 May;39(3):639-46[638131]; Cites: Toxicol Appl Pharmacol. 1999 Nov 1;160(3):217-30[10544056]; Cites: Brain Res. 2000 Feb 28;857(1-2):87-98[10700556]; Cites: Proc Natl Acad Sci U S A. 2002 Oct 29;99(22):14488-93[12388773]; Cites: Neuroscience. 2003;119(4):945-64[12831855]; Cites: Arch Biochem Biophys. 2004 Apr 1;424(1):89-96[15019840]; Cites: Life Sci. 2005 May 6;76(25):2933-44[15820504]; Cites: Clin Chim Acta. 2006 Apr;366(1-2):1-13[16337171]; Cites: Environ Health Perspect. 2006 Jan;114(1):10-7[16393651]; Cites: Environ Health Perspect. 2006 May;114(5):667-72[16675418]; Cites: EMBO J. 2006 Jul 26;25(14):3411-21[16858406]; Cites: Environ Health Perspect. 2006 Oct;114(10):1542-6[17035140]; Cites: Toxicol Appl Pharmacol. 2007 Mar;219(2-3):181-9[17084875]; Cites: Environ Health Perspect. 2007 Jan;115(1):65-70[17366821]; Cites: Environ Health Perspect. 2007 Jan;115(1):93-101[17366826]; Cites: Brain Res Bull. 2007 May 30;72(4-6):232-74[17452286]; Cites: Rev Environ Health. 2007 Jan-Mar;22(1):57-73[17508698]; Cites: Environ Health Perspect. 2007 Jun;115(6):909-16[17589599]; Cites: Environ Health Perspect. 2007 Sep;115(9):1306-13[17805420]; Cites: Neurotoxicol Teratol. 2008 Jan-Feb;30(1):38-45[18096363]; Cites: Brain Res Bull. 2008 Jan 31;75(1):166-72[18158111]; Cites: Environ Health Perspect. 2008 Mar;116(3):340-8[18335101]; Cites: Brain Res Bull. 2008 Mar 28;75(5):640-7[18355640]; Cites: Brain Res Bull. 2008 Jul 1;76(4):424-38[18502319]; Cites: Free Radic Res. 2008 Jul;42(7):674-87[18654882]; Cites: Crit Rev Toxicol. 2008;38 Suppl 2:1-125[18726789]; Cites: Brain Res Bull. 2009 Mar 16;78(4-5):211-25[18812211]; Cites: Toxicol Appl Pharmacol. 2008 Dec 1;233(2):211-9[18835401]; Cites: Environ Health Perspect. 2008 Dec;116(12):1713-9[19079725]; Cites: Neurotoxicol Teratol. 2010 Jan-Feb;32(1):42-51[19130878]; Cites: Brain Res. 2009 Mar 31;1263:23-32[19368821]; Cites: Environ Health Perspect. 2009 Apr;117(4):587-96[19440498]; Cites: Brain Res. 2010 Feb 26;1316:1-16[20026089]; Cites: Pediatrics. 2010 Jun;125(6):e1270-7[20478945]; Cites: Toxicology. 1995 Dec 15;104(1-3):129-40[8560491]; Cites: Toxicology. 1996 Aug 1;112(1):57-68[8792849]; Cites: Cell Calcium. 1996 Nov;20(5):441-6[8955559]; Cites: Brain Res. 1997 Sep 26;769(2):211-8[9374188]; Cites: Toxicol Sci. 1998 Jan;41(1):8-20[9520337]; Cites: Dev Neurosci. 1998;20(1):34-41[9600388]; Cites: Dev Neurosci. 1998;20(1):83-92[9600394]; Cites: Toxicol Appl Pharmacol. 1998 Jul;151(1):182-91[9705902]; Cites: Toxicol Lett. 1998 Sep 15;98(3):139-46[9788582]; Cites: Toxicol Lett. 1994 Jan;70(1):71-6[8310459]; Cites: Brain Res Dev Brain Res. 2000 Jun 30;121(2):189-95[10876031]; Cites: J Neurochem. 2001 Mar;76(6):1935-48[11259512]; Cites: Environ Health Perspect. 2001 Sep;109(9):909-13[11673119]; Cites: Free Radic Biol Med. 2001 Dec 1;31(11):1473-85[11728820]; Cites: Brain Res Dev Brain Res. 2003 Dec 30;147(1-2):183-90[14741763]; Cites: Toxicol Appl Pharmacol. 2004 Jul 15;198(2):132-51[15236950]; Cites: Chem Res Toxicol. 2004 Aug;17(8):983-98[15310231]; Cites: Brain Res. 2005 Jul 5;1049(1):80-8[15932749]; Cites: Toxicol Appl Pharmacol. 2005 Aug 1;206(1):17-26[15963341]; Cites: Neurotoxicol Teratol. 2010 Mar-Apr;32(2):124-31[20004241]; Cites: Neuroscience. 2010 Mar 31;166(3):899-906[20096330]; Cites: Environ Health Perspect. 1989 Mar;80:127-42[2647474]; Cites: Sci Am. 1986 Apr;254(4):100-7[3961465]; Cites: Am J Vet Res. 1972 Mar;33(3):579-83[5014466]; Cites: Glia. 1999 Nov;28(2):85-96[10533053]  
Last updated - 2013-01-19  
British nursing index edition - Brain research bulletin, August 30, 2010, 83(1-2):76-83  
Corporate institution author - Slotkin, Theodore A; Lobner, Doug; Seidler, Frederic J  
DOI - MEDL-20600679; 20600679; NIHMS224299; PMC2922476; 1873-2747 eng

1268. Slotkin, Theodore a and Seidler, Frederic J. Benzo[a]Pyrene Impairs Neurodifferentiation in Pc12 Cells. 2009 Aug 28; 80, (1-2): 17-21.   
Rec #: 44669  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Animal studies indicate neurobehavioral anomalies after prenatal exposure to benzo[a]pyrene (BaP). In order to determine if BaP directly affects neurodevelopment, we compared its effects to those of the organophosphate insecticide, chlorpyrifos (CPF), in undifferentiated and differentiating neuronotypic PC12 cells, evaluating indices of cell replication, cell number, neurite outgrowth and phenotypic differentiation. Unlike CPF, BaP did not inhibit DNA synthesis in undifferentiated cells. In cells undergoing nerve growth factor-induced differentiation, CPF reduced cell numbers (assessed by DNA content) whereas BaP increased them, suggesting a delay in the transition between cell replication and differentiation. Indices of cell enlargement (total protein/DNA) and neurite outgrowth (membrane protein/DNA) also showed opposite effects of CPF (increases) and BaP (decreases). We directly confirmed BaP impairment of neurodifferentiation by measuring markers for the two neurotransmitter phenotypes expressed by PC12 cells: tyrosine hydroxylase (dopamine phenotype) and choline acetyltransferase (acetylcholine phenotype). BaP significantly reduced both markers in differentiating cells, with a preferentially greater effect on the acetylcholine phenotype. Our results indicate that low, non-toxic levels of BaP can impair neurodifferentiation, resulting in excess cell numbers at the expense of the emergence of neurotransmitter phenotypes. BaP thus has direct actions on developing neuronal cells that could contribute to the adverse neurodevelopmental effects seen with in vivo exposures.  
Keywords: Benzo(a)pyrene -- pharmacology  
Keywords: 2921-88-2  
Keywords: Cholinesterase Inhibitors -- pharmacology  
Keywords: Animals  
Keywords: Tyrosine 3-Monooxygenase -- metabolism  
Keywords: Dose-Response Relationship, Drug  
Keywords: Humans  
Keywords: PC12 Cells -- drug effects  
Keywords: EC 1.14.16.2  
Keywords: Chlorpyrifos -- pharmacology  
Keywords: Tyrosine 3-Monooxygenase  
Keywords: Choline O-Acetyltransferase -- metabolism  
Keywords: Chlorpyrifos  
Keywords: Rats  
Keywords: Cholinesterase Inhibitors  
Keywords: 0  
Keywords: Insecticides  
Keywords: PC12 Cells -- physiology  
Keywords: Benzo(a)pyrene  
Keywords: 50-32-8  
Keywords: Cell Differentiation -- drug effects  
Keywords: Insecticides -- pharmacology  
Keywords: Choline O-Acetyltransferase  
Keywords: EC 2.3.1.6  
Date completed - 2009-11-02  
Date created - 2009-07-27  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 17-21  
ProQuest ID - 67517136  
SuppNotes - Cites: Neuroscience. 1986 Feb;17(2):399-407[2422585]; Cites: Brain Res Bull. 2009 Mar 30;78(6):313-22[18977280]; Cites: Pediatr Res. 1988 Nov;24(5):583-7[2905035]; Cites: Anal Biochem. 1971 Oct;43(2):588-600[4400965]; Cites: Dev Biol. 1965 Dec;12(3):451-66[5884354]; Cites: Teratology. 1984 Oct;30(2):211-24[6208628]; Cites: Toxicol Lett. 1994 Jan;70(1):71-6[8310459]; Cites: Toxicology. 1995 Dec 15;104(1-3):129-40[8560491]; Cites: Toxicology. 1996 Aug 1;112(1):57-68[8792849]; Cites: Cell Calcium. 1996 Nov;20(5):441-6[8955559]; Cites: Brain Res. 1997 Sep 26;769(2):211-8[9374188]; Cites: Toxicol Appl Pharmacol. 1998 Jul;151(1):182-91[9705902]; Cites: Toxicol Lett. 1998 Sep 15;98(3):139-46[9788582]; Cites: Toxicol Lett. 1998 Nov 12;99(3):207-21[9862287]; Cites: Toxicol Appl Pharmacol. 1999 Nov 1;160(3):217-30[10544056]; Cites: Brain Res. 2000 Feb 28;857(1-2):87-98[10700556]; Cites: Brain Res. 2000 Jun 9;867(1-2):29-39[10837795]; Cites: Brain Res Dev Brain Res. 2000 Jun 30;121(2):189-95[10876031]; Cites: Inhal Toxicol. 2000 Jun;12(6):511-35[10880142]; Cites: Toxicol Appl Pharmacol. 2000 Sep 15;167(3):246-52[10986016]; Cites: Neurotoxicology. 2001 Feb;22(1):49-62[11307851]; Cites: Environ Health Perspect. 2001 Sep;109(9):909-13[11673119]; Cites: Toxicol Lett. 2002 Mar 24;129(1-2):33-45[11879972]; Cites: Environ Health Perspect. 2003 Feb;111(2):201-5[12573906]; Cites: Brain Res Dev Brain Res. 2003 Mar 14;141(1-2):71-81[12644250]; Cites: Brain Res Dev Brain Res. 2003 Dec 30;147(1-2):183-90[14741763]; Cites: Toxicol Appl Pharmacol. 2004 May 15;197(1):49-65[15126074]; Cites: Toxicol Appl Pharmacol. 2004 Jul 15;198(2):132-51[15236950]; Cites: Cell Mol Biol (Noisy-le-grand). 2004 Sep;50(6):715-21[15641162]; Cites: Brain Res Dev Brain Res. 2005 Feb 8;154(2):239-46[15707677]; Cites: Toxicol Appl Pharmacol. 2005 Aug 1;206(1):17-26[15963341]; Cites: Neuropsychopharmacology. 2006 Aug;31(8):1647-58[16319912]; Cites: Environ Health Perspect. 2006 May;114(5):667-72[16675418]; Cites: Environ Health Perspect. 2006 Aug;114(8):1287-92[16882541]; Cites: Lancet. 2006 Dec 16;368(9553):2167-78[17174709]; Cites: Environ Health Perspect. 2007 Jan;115(1):93-101[17366826]; Cites: Neurotoxicology. 2007 Sep;28(5):965-78[17606297]; Cites: Environ Health Perspect. 2007 Sep;115(9):1306-13[17805420]; Cites: Environ Health Perspect. 2008 Jun;116(6):716-22[18560525]; Cites: Brain Res Bull. 2009 Mar 16;78(4-5):211-25[18812211]; Cites: Toxicol Appl Pharmacol. 2008 Dec 1;233(2):211-9[18835401]; Cites: Environ Health Perspect. 1989 Mar;80:127-42[2647474]  
Last updated - 2013-01-19  
British nursing index edition - Brain research bulletin, August 28, 2009, 80(1-2):17-21  
Corporate institution author - Slotkin, Theodore A; Seidler, Frederic J  
DOI - MEDL-19539729; 19539729; NIHMS125016; PMC2717353; 1873-2747 eng

1269. ---. Oxidative and Excitatory Mechanisms of Developmental Neurotoxicity: Transcriptional Profiles for Chlorpyrifos, Diazinon, Dieldrin, and Divalent Nickel in Pc12 Cells. 2009 Apr; 117, (4): 587-96.   
Rec #: 41249  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Oxidative stress and excitotoxicity underlie the developmental neurotoxicity of numerous chemicals. **We compared the effects of organophosphates (chlorpyrifos and diazinon), an organo-chlorine (dieldrin), and a metal [divalent nickel (Ni2+)] to determine how these mechanisms contribute to similar or dissimilar neurotoxic outcomes.**  **We used PC12 cells as a model of developing neurons and evaluated transcriptional profiles for genes for oxidative stress responses and glutamate receptors.** Chlorpyrifos had a greater effect on oxidative-stress-related genes in differentiating cells compared with the undifferentiated state. Chlorpyrifos and diazinon showed significant concordance in their effects on glutathione-related genes, but they were negatively correlated for effects on catalase and superoxide dismutase isoforms and had no concordance for effects on ionotropic glutamate receptors. Surprisingly, the correlations were stronger between diazinon and dieldrin than between the two organophosphates. The effects of Ni2+ were the least similar for genes related to oxidative stress but had significant concordance with dieldrin for effects on glutamate receptors. Our results point to underlying mechanisms by which different organophosphates produce disparate neurotoxic outcomes despite their shared property as cholinesterase inhibitors. Further, apparently unrelated neurotoxicants may produce similar outcomes because of convergence on oxidative stress and excitotoxicity. The combined use of cell cultures and microarrays points to specific end points that can distinguish similarities and disparities in the effects of diverse developmental neurotoxicants.  
Keywords: Animals  
Keywords: Superoxide Dismutase  
Keywords: Transcription, Genetic -- drug effects  
Keywords: Neurons -- drug effects  
Keywords: Nickel  
Keywords: Glutathione Transferase  
Keywords: Receptors, Glutamate  
Keywords: Receptors, Glutamate -- metabolism  
Keywords: Cations, Divalent -- toxicity  
Keywords: Superoxide Dismutase -- metabolism  
Keywords: Organothiophosphorus Compounds -- toxicity  
Keywords: Environmental Studies  
Keywords: Rats  
Keywords: Insecticides  
Keywords: Dieldrin -- toxicity  
Keywords: Cations, Divalent  
Keywords: Gene Expression Regulation, Developmental -- drug effects  
Keywords: Insecticides -- toxicity  
Keywords: Organothiophosphorus Compounds  
Keywords: Diazinon -- toxicity  
Keywords: Dieldrin  
Keywords: Glutathione Transferase -- metabolism  
Keywords: Cell Differentiation  
Keywords: Neurogenesis -- drug effects  
Keywords: Catalase  
Keywords: Chlorpyrifos  
Keywords: Catalase -- metabolism  
Keywords: Gene Expression Profiling  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Nickel -- toxicity  
Keywords: Diazinon  
Keywords: PC12 Cells  
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Language of summary - English  
Pages - 587-96  
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Place of publication - Research Triangle Park  
Corporate institution author - Slotkin, Theodore A; Seidler, Frederic J  
DOI - 1705216811; 43121971; 67001; ENHP; 19440498; INODENHP0005615445  
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1270. ---. Protein Kinase C Is a Target for Diverse Developmental Neurotoxicants: Transcriptional Responses to Chlorpyrifos, Diazinon, Dieldrin and Divalent Nickel in Pc12 Cells. 2009 Mar 31; 1263, 23-32.   
Rec #: 41319  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Unrelated developmental neurotoxicants can elicit similar functional outcomes, whereas agents in the same class may differ. We compared two organophosphate insecticides (chlorpyrifos, diazinon) with an organochlorine (dieldrin) and a metal (Ni(2+)) for similarities and differences in their effects on gene expression encoding subtypes of protein kinase C and their modulators, a cell signaling cascade that integrates the actions of neurotrophic factors involved in brain development. We conducted evaluations in PC12 cells, a model for neuronal development, with each agent introduced at 30 microM for 24 or 72 h, treatments devoid of cytotoxicity. Chlorpyrifos evoked by far the largest effect, with widespread upregulation of multiple genes; the effects were greater during neurodifferentiation than when cells were exposed prior to differentiation. Diazinon had smaller and less widespread effects, consistent with its lesser long-term impact on synaptic function and behavior **noted for in vivo exposures in developing rats**. Surprisingly, the effects of diazinon, dieldrin and Ni(2+) showed basic similarities despite the fact that all three come from different classes of toxicants. Our findings provide some of the first evidence for a specific mechanistic cascade contributing to the cholinesterase-independent developmental neurotoxicant actions of chlorpyrifos and its differences from diazinon, while at the same time identifying mechanistic convergence between otherwise unrelated toxicants that provides predictions about common neurodevelopmental outcomes. These results further show how combined use of cell cultures and microarray technology can guide future in vivo work on diverse developmental neurotoxicants.  
Keywords: 2921-88-2  
Keywords: Animals  
Keywords: Analysis of Variance  
Keywords: Transcription, Genetic -- drug effects  
Keywords: Neurons -- drug effects  
Keywords: Protein Kinase C -- genetics  
Keywords: Nickel  
Keywords: Cations, Divalent -- toxicity  
Keywords: 60-57-1  
Keywords: Rats  
Keywords: Dieldrin -- toxicity  
Keywords: Microarray Analysis  
Keywords: Cations, Divalent  
Keywords: 333-41-5  
Keywords: 7440-02-0  
Keywords: Protein Kinase C  
Keywords: Neurons -- metabolism  
Keywords: Diazinon -- toxicity  
Keywords: Dieldrin  
Keywords: EC 2.7.11.13  
Keywords: Neurogenesis -- drug effects  
Keywords: Neurotoxins -- toxicity  
Keywords: Protein Kinase C -- metabolism  
Keywords: Chlorpyrifos  
Keywords: Neurogenesis -- physiology  
Keywords: 0  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Neurons -- cytology  
Keywords: Nickel -- toxicity  
Keywords: Neurotoxins  
Keywords: Diazinon  
Keywords: PC12 Cells  
Date completed - 2009-06-24  
Date created - 2009-04-20  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 23-32  
ProQuest ID - 67140744  
SuppNotes - Cites: Brain Res Bull. 2008 Jul 1;76(4):424-38[18502319]; Cites: Brain Res Bull. 2008 Mar 28;75(5):640-7[18355640]; Cites: Toxicol Appl Pharmacol. 2008 Dec 1;233(2):211-9[18835401]; Cites: Environ Health Perspect. 1989 Mar;80:127-42[2647474]; Cites: Environ Health Perspect. 1994 Jun;102 Suppl 2:117-20[7925181]; Cites: Toxicol Lett. 1994 Jan;70(1):71-6[8310459]; Cites: Toxicology. 1995 Dec 15;104(1-3):129-40[8560491]; Cites: Toxicology. 1996 Aug 1;112(1):57-68[8792849]; Cites: Toxicol Appl Pharmacol. 1997 Jul;145(1):158-74[9221834]; Cites: Neurotoxicology. 1997;18(3):719-26[9339819]; Cites: Brain Res. 1997 Sep 26;769(2):211-8[9374188]; Cites: Toxicol Appl Pharmacol. 1998 Jul;151(1):182-91[9705902]; Cites: Brain Res Dev Brain Res. 1998 Jul 1;109(1):33-49[9706389]; Cites: Toxicol Lett. 1998 Sep 15;98(3):139-46[9788582]; Cites: Environ Health Perspect. 1999 Feb;107 Suppl 1:71-80[10229709]; Cites: Environ Health Perspect. 1999 Jun;107 Suppl 3:431-7[10346991]; Cites: Toxicol Appl Pharmacol. 1999 Nov 1;160(3):217-30[10544056]; Cites: Brain Res. 2000 Feb 28;857(1-2):87-98[10700556]; Cites: Neurotoxicology. 2000 Feb-Apr;21(1-2):15-36[10794382]; Cites: Brain Res Dev Brain Res. 2000 Jun 30;121(2):189-95[10876031]; Cites: Brain Res Dev Brain Res. 2000 Dec 29;125(1-2):9-19[11154756]; Cites: Neurosci Lett. 2001 Mar 30;301(2):135-8[11248441]; Cites: Brain Res. 2001 Jun 1;902(2):229-43[11384617]; Cites: Cancer Lett. 2001 Aug 28;169(2):107-14[11431098]; Cites: Brain Res Dev Brain Res. 2001 Sep 23;130(1):83-9[11557096]; Cites: Environ Health Perspect. 2001 Sep;109(9):909-13[11673119]; Cites: J Biochem Mol Toxicol. 2001;15(5):263-9[11835623]; Cites: Ann N Y Acad Sci. 2002 Jun;965:473-8[12105122]; Cites: Neurotoxicology. 2002 Sep;23(3):329-39[12389578]; Cites: J Pharmacol Exp Ther. 2003 Jul;306(1):1-7[12682213]; Cites: Cell Tissue Res. 2003 Aug;313(2):139-57[12845521]; Cites: Brain Res Dev Brain Res. 2003 Dec 30;147(1-2):183-90[14741763]; Cites: Environ Health Perspect. 2004 Feb;112(2):148-55[14754568]; Cites: Environ Health Perspect. 2004 Mar;112(3):295-301[14998743]; Cites: Pediatrics. 2004 Apr;113(4 Suppl):1030-6[15060196]; Cites: Toxicol Appl Pharmacol. 2004 Jul 15;198(2):132-51[15236950]; Cites: Chem Res Toxicol. 2004 Aug;17(8):983-98[15310231]; Cites: J Neurosci Res. 2004 Nov 15;78(4):499-507[15470723]; Cites: Neuropsychopharmacology. 2005 Jan;30(1):156-65[15496940]; Cites: Ann N Y Acad Sci. 2004 Oct;1025:595-601[15542768]; Cites: Prog Histochem Cytochem. 2004;39(3):131-82[15580762]; Cites: Toxicol Appl Pharmacol. 2005 Mar 1;203(2):154-66[15710176]; Cites: Environ Health Perspect. 2005 May;113(5):527-31[15866758]; Cites: Toxicol Appl Pharmacol. 2005 Aug 1;206(1):17-26[15963341]; Cites: Brain Res Dev Brain Res. 2005 Aug 8;158(1-2):115-9[16024092]; Cites: Curr Neurovasc Res. 2005 Oct;2(4):331-40[16181124]; Cites: Environ Health Perspect. 2006 Jan;114(1):10-7[16393651]; Cites: Crit Rev Toxicol. 2005 Oct-Nov;35(8-9):703-11[16417037]; Cites: Environ Health Perspect. 2006 May;114(5):667-72[16675418]; Cites: Environ Health Perspect. 2006 May;114(5):746-51[16675431]; Cites: Environ Health Perspect. 2006 Jul;114(7):A412-8[16835042]; Cites: Lancet. 2006 Dec 16;368(9553):2167-78[17174709]; Cites: Environ Health Perspect. 2007 Jan;115(1):65-70[17366821]; Cites: Environ Health Perspect. 2007 Jan;115(1):93-101[17366826]; Cites: Brain Res Bull. 2007 May 30;72(4-6):232-74[17452286]; Cites: Environ Health Perspect. 2007 Jun;115(6):909-16[17589599]; Cites: Environ Health Perspect. 2007 Sep;115(9):1306-13[17805420]; Cites: Neurotoxicol Teratol. 2008 Jan-Feb;30(1):38-45[18096363]; Cites: Brain Res Bull. 2008 Jan 31;75(1):166-72[18158111]; Cites: Environ Health Perspect. 2008 Mar;116(3):340-8[18335101]; Cites: Brain Res Bull. 2009 Mar 16;78(4-5):211-25[18812211]  
Last updated - 2013-01-19  
British nursing index edition - Brain research, March 31, 2009, 1263:23-32  
Corporate institution author - Slotkin, Theodore A; Seidler, Frederic J  
DOI - MEDL-19368821; 19368821; NIHMS96229; PMC2670938; 1872-6240 eng

1271. Slotkin, Theodore a; Seidler, Frederic J, and Slotkin, Theodore A. Diverse Neurotoxicants Converge on Gene Expression for Neuropeptides and Their Receptors in an in Vitro Model of Neurodifferentiation: Effects of Chlorpyrifos, Diazinon, Dieldrin and Divalent Nickel in Pc12 Cells. 2010 Sep 24; 1353, 36-52.   
Rec #: 40329  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Unrelated developmental neurotoxicants can produce similar neurobehavioral outcomes. We examined whether disparate agents affect neuromodulators that control numerous neurotransmitters and circuits, employing PC12 cells to explore the targeting of neuroactive peptides by organophosphates (chlorpyrifos, diazinon), an organochlorine (dieldrin) and a metal (Ni2+); we utilized microarrays to profile gene expression for the peptides and their receptors. Chlorpyrifos evoked robust upregulation of cholecystokinin, corticotropin releasing hormone, galanin, neuropeptide Y, neurotensin, preproenkephalin and tachykinin 1; this involved a critical period at the commencement of neurodifferentiation, since the effects were much less notable in undifferentiated PC12 cells. Diazinon targeted a similar but smaller repertoire of neuropeptide genes and the magnitude of the effects was also generally less. Surprisingly, dieldrin shared many of the same neuropeptide targets as the organophosphates and concordance analysis showed significant overlap among all three pesticides. However, dieldrin had more notable effects on neuropeptide receptors, and overlap between diazinon and dieldrin for the receptors led to a stronger resemblance of these two agents than of chlorpyrifos and dieldrin. Ni2+ was unique, evoking upregulation of only one of the peptides affected by the other agents, while causing downregulation of several others. Nevertheless, there was still significant concordance between Ni2+ and either diazinon or dieldrin, reflecting similarities toward the receptors. Our results show that neuropeptides are likely to be a prominent target for the developmental neurotoxicity of organophosphates and other neurotoxicants, and further, that the convergence of disparate agents on the same genes and pathways may contribute to similar neurobehavioral outcomes.  
Keywords: Organochlorine compounds  
Keywords: Toxicants  
Keywords: Neuropeptide receptors  
Keywords: Heavy metals  
Keywords: Neuropeptide Y  
Keywords: Nickel  
Keywords: Toxicology Abstracts; CSA Neurosciences Abstracts  
Keywords: DNA microarrays  
Keywords: Hormones  
Keywords: Gene expression  
Keywords: Neuromodulation  
Keywords: Pheochromocytoma cells  
Keywords: Convergence  
Keywords: Neurotransmitters  
Keywords: X 24330:Agrochemicals  
Keywords: Pesticides (organophosphorus)  
Keywords: Neurotensin  
Keywords: Cholecystokinin  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: Dieldrin  
Keywords: Developmental stages  
Keywords: Circuits  
Keywords: organophosphates  
Keywords: Chlorpyrifos  
Keywords: Galanin  
Keywords: Neurotoxicity  
Keywords: Tachykinin  
Keywords: Critical period  
Keywords: Preproenkephalin  
Keywords: Diazinon  
Date revised - 2011-05-01  
Language of summary - English  
Pages - 36-52  
ProQuest ID - 867733631  
SubjectsTermNotLitGenreText - Organochlorine compounds; Toxicants; Neuropeptide receptors; Heavy metals; Neuropeptide Y; Nickel; DNA microarrays; Hormones; Gene expression; Neuromodulation; Pheochromocytoma cells; Convergence; Neurotransmitters; Pesticides (organophosphorus); Neurotensin; Cholecystokinin; Dieldrin; Developmental stages; Circuits; organophosphates; Galanin; Chlorpyrifos; Neurotoxicity; Tachykinin; Critical period; Preproenkephalin; Diazinon  
Last updated - 2012-03-29  
British nursing index edition - Brain Research [Brain Res.]. Vol. 1353, pp. 36-52. 24 Sep 2010.  
Corporate institution author - Slotkin, Theodore A; Seidler, Frederic J  
DOI - a1c186ea-a326-4ab5-bd58csaobj202; 13667789; 0006-8993 English

1272. ---. Oxidative Stress From Diverse Developmental Neurotoxicants: Antioxidants Protect Against Lipid Peroxidation Without Preventing Cell Loss. 2010 Mar; 32, (2): 124-131.   
Rec #: 44189  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Oxidative stress has been hypothesized to provide a mechanism by which apparently unrelated chemicals can nevertheless produce similar developmental neurotoxic outcomes. We used differentiating PC12 cells to compare the effects of agents from four different classes and then to evaluate antioxidant amelioration: fipronil, perfluorooctanesulfonamide (PFOSA), dieldrin and chlorpyrifos. The rank order for lipid peroxidation corresponded to the ability to evoke cell loss: fipronil>PFOSA>dieldrin>chlorpyrifos. The same sequence was found for an index of cell enlargement (protein/DNA ratio) but the effects on neurite outgrowth (membrane/total protein) diverged, with fipronil producing a decrease and PFOSA an increase. Cotreatment with antioxidants reduced (ascorbate) or eliminated (Vitamin E) lipid peroxidation caused by each of the agents but failed to protect against cell loss, with the sole exception of chlorpyrifos, for which we earlier showed partial protection by Vitamin E; addition of higher NGF concentrations protected neither against oxidative stress nor cell loss. Despite the failure to prevent cell loss, ascorbate protected the cells from the effects of PFOSA on neuritic outgrowth; NGF, and to a lesser extent, ascorbate, offset the effects of fipronil on both cell enlargement and neuritogenesis. At the same time, the ameliorant treatments also worsened some of the other toxicant effects. Our results point out the problems in concluding that, just because a neurotoxicant produces oxidative stress, antioxidant therapy will be effective in preventing damage. Instead, additional mechanisms for each agent may provide alternative routes to neurotoxicity, or may be additive or synergistic with oxidative stress.  
Keywords: Nerve growth factor  
Keywords: Antioxidants  
Keywords: Toxicants  
Keywords: Nucleotide sequence  
Keywords: Lipids  
Keywords: Membrane proteins  
Keywords: Toxicology Abstracts; Environment Abstracts; CSA Neurosciences Abstracts  
Keywords: Pheochromocytoma cells  
Keywords: Oxidative stress  
Keywords: Axonogenesis  
Keywords: X 24330:Agrochemicals  
Keywords: Dieldrin  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: peroxidation  
Keywords: oxidative stress  
Keywords: Lipid peroxidation  
Keywords: Ascorbic acid  
Keywords: Chlorpyrifos  
Keywords: Vitamin E  
Keywords: fipronil  
Keywords: Pesticides  
Keywords: Neurotoxicity  
Keywords: DNA  
Keywords: Proteins  
Keywords: ENA 07:General  
Date revised - 2010-06-01  
Language of summary - English  
Pages - 124-131  
ProQuest ID - 746074162  
SubjectsTermNotLitGenreText - Nerve growth factor; Antioxidants; Toxicants; Nucleotide sequence; Dieldrin; Membrane proteins; Lipid peroxidation; Ascorbic acid; Chlorpyrifos; Vitamin E; Pheochromocytoma cells; Oxidative stress; fipronil; Neurotoxicity; DNA; Axonogenesis; Lipids; Pesticides; Proteins; peroxidation; oxidative stress  
Last updated - 2012-11-20  
British nursing index edition - Neurotoxicology and Teratology [Neurotoxicol. Teratol.]. Vol. 32, no. 2, pp. 124-131. Mar 2010.  
Corporate institution author - Slotkin, Theodore A; Seidler, Frederic J  
DOI - 17a878d7-e4b6-4305-84c6csaobj201; 13022734; 0892-0362 English

1273. Smagin, V. N.; Lukashev, E. A.; Sheftel, V. O.; Kvitka, L. A., and Khiryaev, V. M. Technological Studies of Water Treatment from Pesticides by Common Plants ED-500 and KPV-1000. SOIL; 1992; 14, (10): 769-777(RUS) (ENG ABS).   
Rec #: 1360  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

1274. Smith, E. H. and Logan, D. T. Invertebrate Behavior as an Indicator of Contaminated Water and Sediments. 1993: 48-61.   
Rec #: 1370  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (CPY), NO REVIEW (CPY)  
Notes: Chemical of Concern: CPY

1275. Smith, J. N.; Timchalk, C.; Bartels, M. J., and Poet, T. S. In Vitro Age-Dependent Enzymatic Metabolism of Chlorpyrifos and Chlorpyrifos-Oxon in Human Hepatic Microsomes and Chlorpyrifos-Oxon in Plasma. 2011; 39, (8): 1353-1362.   
Rec #: 69469  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Age-dependent chlorpyrifos (CPF) metabolism was quantified by in vitro product formation in human hepatic microsomes (ages 13 days to 75 years) and plasma (ages 3 days to 43 years) with gas chromatography-mass spectrometry. Hepatic CPF cytochrome P450 desulfuration [CPF to chlorpyrifos-oxon (CPF-oxon)] and dearylation (CPF to 3,5,6-trichloro-2-pyridinol) V(max) values were 0.35 +/- 0.21 and 0.73 +/- 0.38 nmol . min(-1) . mg microsomal protein (-1) (mean +/- S. D.), respectively. The mean (+/- S.D.) hepatic CPF-oxon hydrolysis (chlorpyrifos-oxonase [CPFOase]) V(max) was 78 +/- 44 nmol . min(-1) . mg microsomal protein (-1). None of these hepatic measures demonstrated age-dependent relationships on a per microsomal protein basis using linear regression models. Ratios of CPF bioactivation to detoxification (CPF desulfuration to dearylation) V(max) values were consistent across ages. CPFOase in plasma demonstrated age-dependent increases on a volume of plasma basis, as did total plasma protein levels. Mean (+/- S.D.) CPF-oxon hydrolysis V(max) values for children <6 months of age and adults (>= 16 years) were 1900 +/- 660 and 6800 +/- 1600 nmol . min(-1) . ml(-1), respectively, and at environmental exposure levels, this high-capacity enzyme is likely to be sufficient even in infants. Plasma samples were phenotyped for paraoxonase status, and frequencies were 0.5, 0.4, and 0.1 for QQ, QR, and RR phenotypes, respectively. These results will be integrated into a physiologically based pharmacokinetic and pharmacodynamic model for CPF and, once integrated, will be useful for assessing biological response to CPF exposures across life stages.  
Keywords: HUMAN LIVER-MICROSOMES, ORGANOPHOSPHATE PESTICIDES, PARAOXONASE  
ISI Document Delivery No.: 793JJ

1276. Smith, K. E.; Putnam, R. A.; Phaneuf, C.; Lanza, G. R.; Dhankher, O. P., and Clark, J. M. Selection of Plants for Optimization of Vegetative Filter Strips Treating Runoff from Turfgrass. American Society of Agronomy, 677 South Segoe Rd Madison WI 53711 USA//: SOIL; 2008; 37, (5): 1855-1861.   
Rec #: 2220  
Keywords: FATE  
Call Number: NO FATE (CPY,CTN,PCZ,PDM,PPCP,PPCP2011)  
Notes: Chemical of Concern: CPY,CTN,PCZ,PDM,PPCP,PPCP2011

1277. Sobus, J. R.; Tan, Y. M.; Pleil, J. D., and Sheldon, L. S. A biomonitoring framework to support exposure and risk assessments. 2011; 409, (22): 4875-4884.   
Rec #: 69519  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Biomonitoring is used in exposure and risk assessments to reduce uncertainties along the source-to-outcome continuum. Specifically, biomarkers can help identify exposure sources, routes, and distributions, and reflect kinetic and dynamic processes following exposure events. A variety of computational models now utilize biomarkers to better understand exposures at the population, individual, and sub-individual (target) levels. However, guidance is needed to clarify biomonitoring use given available measurements and models. Objective: This article presents a biomonitoring research framework designed to improve biomarker use and interpretation in support of exposure and risk assessments. Discussion: The biomonitoring research framework is based on a modified source-to-outcome continuum. Five tiers of biomonitoring analyses are included in the framework, beginning with simple cross-sectional and longitudinal analyses, and ending with complex analyses using various empirical and mechanistic models. Measurements and model requirements of each tier are given, as well as considerations to enhance analyses. Simple theoretical examples are also given to demonstrate applications of the framework for observational exposure studies. Conclusion: This biomonitoring framework can be used as a guide for interpreting existing biomarker data, designing new studies to answer specific exposure- and risk-based questions, and integrating knowledge across scientific disciplines to better address human health risks. Published by Elsevier B.V.  
Keywords: Biomonitoring, Biomarkers, Exposure science, Exposure assessment, Risk  
ISI Document Delivery No.: 838QI

1278. Sogorb, M. A.; Gonzalez-Gonzalez, I.; Pamies, D., and Vilanova, E. An alternative in vitro method for detecting neuropathic compounds based on acetylcholinesterase inhibition and on inhibition and aging of neuropathy target esterase (NTE). 2010; 24, (3): 942-952.   
Rec #: 69549  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorus-induced delayed polyneuropathy (OPIDP) is a syndrome induced by certain organophosphorus compounds (OPs) through a mechanism based on the inhibition and further modification (aging) of neuropathy target esterase (NTE). OECD guidelines for testing the capability of OPs to trigger OPIDP include two in vivo tests with hens. Activities of acetylcholinesterase and NTE found in SH-SY5Y human neuroblastoma cells were inhibited by 10 different OPs with kinetics similar to those found with chicken brain enzymes (model system for in vivo and in vitro-ex vivo assays). NTE in SH-SY5Y cells inhibited by these OPs aged and reactivated similarly to that described for hen brain NTE ex vivo. In short, we have developed an alternative methodology for predicting the capability of OPs to induce OPIDP based on the inhibition kinetics of acetylcholinesterase and NTE and on the capability of OPs to age the inhibited NTE from SH-SY5Y cell line. The results obtained always agreed with the previously reported ex vivo results with hen brain. The developed methodology correctly predicted the neuropathic potential of the tested OPs in eight cases. The in vivo-in vitro discrepancies with two of the tested compounds can be explained on the basis of differences between in vivo and in vitro biotransformation. (C) 2010 Elsevier Ltd. All rights reserved.  
Keywords: NTE, Inhibition and aging, Neuroblastoma, Alternative method,  
ISI Document Delivery No.: 583IT

1279. Sogorb, Ma; Garcia-Arguelles, S; Carrera, V; Quesada, E; Vilanova, E, and Sogorb, MA. Human Serum Albumin Hydrolyzes the Organophosphorus Insecticides Paraoxon, Diazoxon, Chlorpyrifos-Oxon and O-Hexyl O-2,5-Dichlorophenyl Phosphoramidate. 2008 Oct 24; 180, 1-S29.   
Rec #: 41899  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: Insecticides  
Keywords: Pharmacy And Pharmacology  
Keywords: human serum albumin  
Keywords: Paraoxon  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Date revised - 2008-10-01  
Language of summary - English  
Pages - S29  
ProQuest ID - 290180370  
SubjectsTermNotLitGenreText - Paraoxon; human serum albumin; Insecticides  
Last updated - 2011-11-04  
Corporate institution author - Sogorb, MA; Garcia-Arguelles, S; Carrera, V; Quesada, E; Vilanova, E  
DOI - OB-MD-0008398319; 8417679; 0378-4274 English

1280. Sogorb, Miguel A.; Estevan, Carmen; Romero, Andrea C.; Pamies, David, and Vilanova, Eugenio. Chlorpyrifos and metabolites alter differentiation at non-cytotoxic concentrations. 2012 Jun 17-; 211, Supplement, (0 ): S106.   
Rec #: 2390  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

1281. Sogorb, Miguel A.; Garc+¡a-Arg++elles, Sara; Carrera, Victoria; Quesada, Encarnaci+ n, and Vilanova, Eugenio. Human serum albumin hydrolyzes the organophosphorus insecticides paraoxon, diazoxon, chlorpyrifos-oxon and O-hexyl O-2,5-dichlorophenyl phosphoramidate: Abstracts of the 45th Congress of the European Societies of Toxicology. 2008 Oct 5-; 180, Supplement, (0): S29.   
Rec #: 2510  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY

1282. Sogorb, Miguel a and Vilanova, Eugenio. Serum Albumins and Detoxication of Anti-Cholinesterase Agents. 2010 Sep 6; 187, (1-3): 325-329.   
Rec #: 47719  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Serum albumin displays an esterase activity that is capable of hydrolysing the anti-cholinesterase compounds carbaryl, paraoxon, chlorpyrifos-oxon, diazoxon and O-hexyl, O-2,5-dichlorphenyl phosphoramidate. The detoxication of all these anti-cholinesterase compounds takes place at significant rates with substrate concentrations in the same order of magnitude as expected during in vivo exposures, even when these substrate concentrations are between 15 and 1300 times lower than the recorded K(m) constants. Our data suggest that the efficacy of this detoxication system is based on the high concentration of albumin in plasma (and in the rest of the body), and not on the catalytic efficacy itself, which is low for albumin. We conclude the need for a structure-activity relationship study into the albumin-associated esterase activities because this protein is universally present in vertebrates and could compensate for reduced levels of other esterases, i.e., lipoprotein paraoxonase, in some species. It is also remarkable that the biotransformation of xenobiotics can be reliably studied in vitro, although conditions as similar as possible to in vivo situations are necessary. Copyright (c) 2010 Elsevier Ireland Ltd. All rights reserved.  
Keywords: Serum Albumin -- metabolism  
Keywords: Animals  
Keywords: Cholinesterases  
Keywords: Humans  
Keywords: Hydrolysis  
Keywords: Organophosphorus Compounds -- pharmacokinetics  
Keywords: Cholinesterases -- metabolism  
Keywords: Cholinesterase Inhibitors  
Keywords: Organophosphorus Compounds  
Keywords: Cattle  
Keywords: Cholinesterase Inhibitors -- toxicity  
Keywords: 0  
Keywords: Kinetics  
Keywords: Organophosphorus Compounds -- toxicity  
Keywords: Cholinesterase Inhibitors -- pharmacokinetics  
Keywords: EC 3.1.1.8  
Keywords: Metabolic Detoxication, Drug  
Keywords: Serum Albumin, Bovine  
Keywords: Serum Albumin, Bovine -- metabolism  
Keywords: Serum Albumin  
Date completed - 2010-09-01  
Date created - 2010-07-30  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 325-329  
ProQuest ID - 749028815  
Last updated - 2013-01-19  
British nursing index edition - Chemico-biological interactions, September 6, 2010, 187(1-3):325-329  
Corporate institution author - Sogorb, Miguel A; Vilanova, Eugenio  
DOI - MEDL-20211614; 20211614; 1872-7786 eng

1283. Soler, Carla; Girotti, Stefano; Ghini, Severino; Fini, Fabiana; Montoya, Angel; Manclus, Juan J; Manes, Jordi, and Soler, Carla. Analysis of Chlorpyrifos in Water, Fruit Juice, and Honeybee Extract by Chemiluminescent Elisa. 2008 Jan; 41, (14): 2539-2553.   
Rec #: 42309  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The suitability of competitive enzyme-linked immunosorbent assays (ELISAs) with chemiluminescent detection-based immobilized antigen (indirect assay) for rapid and accurate determination of chlorpyrifos in various food matrices was tested. The limit of detection (LOD) values were 1-1.75 ng mL-1, the standard curve midpoint (IC50) was 3.5 ng mL-1, and the assay duration was 1.5 h. Assay application to the analysis of honeybee extract resulted in chlorpyrifos recoveries varying between 62 and 83% in 5-15 ng mL-1 herbicide concentration range.  
Keywords: Testing Procedures  
Keywords: Enzyme-linked immunosorbent assay  
Keywords: Z 05300:General  
Keywords: Food  
Keywords: SW 3030:Effects of pollution  
Keywords: Apis mellifera  
Keywords: Herbicides  
Keywords: Chlorpyrifos  
Keywords: Fruit juices  
Keywords: Foods  
Keywords: Pesticides  
Keywords: Assay  
Keywords: Entomology Abstracts; Water Resources Abstracts  
Keywords: Standards  
Date revised - 2010-08-01  
Language of summary - English  
Pages - 2539-2553  
ProQuest ID - 753692151  
SubjectsTermNotLitGenreText - Chlorpyrifos; Fruit juices; Enzyme-linked immunosorbent assay; Food; Herbicides; Testing Procedures; Foods; Pesticides; Assay; Standards; Apis mellifera  
Last updated - 2012-03-29  
British nursing index edition - Analytical Letters [Anal. Lett.]. Vol. 41, no. 14, pp. 2539-2553. Jan 2008.  
Corporate institution author - Soler, Carla; Girotti, Stefano; Ghini, Severino; Fini, Fabiana; Montoya, Angel; Manclus, Juan J; Manes, Jordi  
DOI - 032ad848-7157-4ad8-8df5csamfg201; 13325540; 0003-2719; 1532-236X English

1284. Solokov, I. Fipronil Versus Chlorpyrifos: Which is Softer on Non-Target Organisms in Siberia? I. Sokolov, All-Russian Institute for Plant Protection, igor@os2897.spb.edu//: 2000: 18-19(ABS).   
Rec #: 2370  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY,FPN

1285. Solomon, K. R.; Anadon, A.; Brain, R. A.; Cerdeira, A. L.; Crossan, A. N.; Marshall, J.; Sanin, L. H., and Smith, L. Comparative Hazard Assessment of the Substances Used for Production and Control of Coca and Poppy in Colombia. Centre for Toxicology,University of Guelph,Guelph,ON,Can////: SOIL; 2007: 87-99.   
Rec #: 310  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (24D,24DXY,CBD,CBL,CPY,CYP,DZ,ES,GYP,LCYT,MOM,MTM,PDM,PFF,PQT), NO REVIEW (24D,24DXY,CBD,CBL,CPY,CYP,DZ,ES,GYP,LCYT,MOM,MTM,PDM,PFF,PQT)  
Notes: Chemical of Concern: 24D,24DXY,CBD,CBL,CPY,CYP,DZ,EPRN,ES,GYP,LCYT,MOM,MTM,PDM,PFF,PQT,PRN

1286. Somerset, V; Baker, P; Iwuoha, E, and Somerset, V. Mercaptobenzothiazole-on-Gold Organic Phase Biosensor Systems: 1. Enhanced Organosphosphate Pesticide Determination. 2009 Feb; 44, (2): 164-178.   
Rec #: 45069  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This paper reports the construction of the gold/mercaptobenzothiazole/polyaniline/acetylcholinesterase/polyvi nylacetat e (Au/ MBT/PANI/AChE/PVAc) thick-film biosensor for the determination of certain organophosphate pesticide solutions in selected aqueous organic solvent solutions. The Au/MBT/PANI/AChE/PVAc electrocatalytic biosensor device was constructed by encapsulating acetylcholinesterase (AChE) enzyme in the PANI polymer composite, followed by the coating of poly(vinyl acetate) (PVAc) on top to secure the biosensor film from disintegration in the organic solvents evaluated. The electroactive substrate called acetylthiocholine (ATCh) was employed to provide the movement of electrons in the amperometric biosensor. The voltammetric results have shown that the current shifts more anodically as the Au/MBT/PANI/AChE/PVAc biosensor responded to successive acetylthiocholine (ATCh) substrate addition under anaerobic conditions in 0.1 M phosphate buffer, KCl (pH 7.2) solution and aqueous organic solvent solutions. For the Au/MBT/PANI/AChE/PVAc biosensor, various performance and stability parameters were evaluated. These factors include the optimal enzyme loading, effect of pH, long-term stability of the biosensor, temperature stability of the biosensor, the effect of polar organic solvents, and the effect of non-polar organic solvents on the amperometric behavior of the biosensor. The biosensor was then applied to detect a series of 5 organophosphorous pesticides in aqueous organic solvents and the pesticides studied were parathion-methyl, malathion and chlorpyrifos. The results obtained have shown that the detection limit values for the individual pesticides were 1.332 nM (parathion-methyl), 0.189 nM (malathion), 0.018 nM (chlorpyrifos).  
Keywords: Biotechnology and Bioengineering Abstracts; Pollution Abstracts  
Keywords: Acetylcholinesterase  
Keywords: Organophosphates  
Keywords: Malathion  
Keywords: Biosensors  
Keywords: W 30955:Biosensors  
Keywords: Gold  
Keywords: pH effects  
Keywords: pH  
Keywords: Temperature effects  
Keywords: Pesticides (organophosphorus)  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Agricultural wastes  
Keywords: Solvents  
Keywords: Temperature  
Keywords: Enzymes  
Keywords: potassium chloride  
Keywords: Anaerobic conditions  
Keywords: Food contamination  
Keywords: Acetic acid  
Keywords: Chlorpyrifos  
Keywords: Phosphates  
Keywords: Phosphate  
Keywords: Pesticides  
Keywords: Construction industry wastes  
Keywords: Polymers  
Keywords: Coatings  
Date revised - 2009-03-01  
Language of summary - English  
Pages - 164-178  
ProQuest ID - 20421149  
SubjectsTermNotLitGenreText - Temperature effects; Pesticides (organophosphorus); Acetylcholinesterase; Agricultural wastes; Solvents; Enzymes; potassium chloride; Food contamination; Anaerobic conditions; Acetic acid; Malathion; Biosensors; Chlorpyrifos; Phosphate; Gold; pH effects; Coatings; Organophosphates; Temperature; Phosphates; Pesticides; Construction industry wastes; Polymers; pH  
Last updated - 2011-12-14  
British nursing index edition - Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants and Agricultural Wastes [J. Environ. Sci. Health, Pt. B: Pestic., Food Contam., Agric. Wastes]. Vol. 44, no. 2, pp. 164-178. Feb 2009.  
Corporate institution author - Somerset, V; Baker, P; Iwuoha, E  
DOI - MD-0009453425; 9094845; 0360-1234 English

1287. Songsasen, N. and Wildt, D. E. Oocyte Biology and Challenges in Developing in Vitro Maturation Systems in the Domestic Dog.   
Rec #: 51589  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Mol Reprod Dev. 2005 Aug;71(4):489-94 (medline /15858794)  
COMMENTS: Cites: Anim Reprod Sci. 2005 Jul;87(3-4):229-39 (medline /15911173)  
COMMENTS: Cites: Biol Reprod. 1992 May;46(5):853-8 (medline /1591340)  
COMMENTS: Cites: Mol Reprod Dev. 2005 Sep;72(1):113-9 (medline /15915515)  
COMMENTS: Cites: Theriogenology. 2005 Jul 1;64(1):1-11 (medline /15935838)  
COMMENTS: Cites: Reproduction. 2005 Aug;130(2):193-201 (medline /16049157)  
COMMENTS: Cites: Nature. 2005 Aug 4;436(7051):641 (medline /16079832)  
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COMMENTS: Cites: Development. 1990 Apr;108(4):525-42 (medline /2167196)  
COMMENTS: Cites: Acta Vet Scand. 1989;30(3):313-9 (medline /2516990)  
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COMMENTS: Cites: J Vet Med Sci. 2000 Jan;62(1):65-8 (medline /10676892)  
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COMMENTS: Cites: Mol Reprod Dev. 2002 Jul;62(3):407-15 (medline /12112606)  
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COMMENTS: Cites: Anat Rec. 1977 Nov;189(3):443-9 (medline /144445)  
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COMMENTS: Cites: Biol Reprod. 2005 Apr;72(4):862-71 (medline /15590903)  
COMMENTS: Cites: Theriogenology. 2005 Mar 15;63(5):1342-53 (medline /15725442)  
COMMENTS: Cites: Reprod Nutr Dev. 2004 Nov-Dec;44(6):631-7 (medline /15762307)  
ABSTRACT: The oocyte of the domestic dog is unique from that of other mammalian species studied to date. Ovulation occurs either once or twice per year, with the oocyte released at the germinal vesicle stage, and then completing nuclear and cytoplasmic maturation within the oviduct under the influence of rising circulating progesterone. In vivo meiotic maturation of the bitch oocyte is completed within 48-72 h after ovulation, which is longer than 12-36 h required for oocytes from most other mammalian species. Due to these inherently novel traits, in vitro culture systems developed for maturing oocytes of other species have been found inadequate for maturation of dog oocytes. On average, only 15-20% of ovarian oocytes achieve the metaphase II stage after 48-72 h of in vitro culture. Thus far, no offspring have been produced in the dog (or other canids) by transferring embryos derived from in vitro matured oocytes. This review addresses current knowledge about dog reproductive physiology, specifically those factors influencing in vitro developmental competence of the oocyte. This summary lays a foundation for identifying the next steps to understanding the mechanisms regulating meiotic maturation and developmental competence of the dog oocyte.  
MESH HEADINGS: Animals  
MESH HEADINGS: Cell Culture Techniques  
MESH HEADINGS: Cell Nucleus/physiology  
MESH HEADINGS: Culture Media  
MESH HEADINGS: Cytoplasm/physiology  
MESH HEADINGS: Dogs  
MESH HEADINGS: Female  
MESH HEADINGS: Fertilization in Vitro  
MESH HEADINGS: Hormones/pharmacology  
MESH HEADINGS: Mammals  
MESH HEADINGS: Oocytes/drug effects/\*physiology  
MESH HEADINGS: Ovulation  
MESH HEADINGS: Proteins/physiology  
MESH HEADINGS: Zona Pellucida/physiology eng

1288. Sonnenschein, C. and Soto, A. M. An Updated Review of Environmental Estrogen and Androgen Mimics and Antagonists. 1998; 65, (1-6): 143-150.   
Rec #: 1680  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (24D,24DXY,ACR,ATZ,CBF,CBL,CPY,CTN,DCF,DCPA,DZ,ES,ES1,ES2,HXZ,MEM,MLN,MTL,MTPN,Maneb,PPZ,RTN,SZ,TFN,THM,Ziram), NO REVIEW (24D,24DXY,ACR,ATZ,CBF,CBL,CPY,CTN,DCF,DCPA,DZ,ES,ES1,ES2,HXZ,MEM,MLN,MTL,MTPN,Maneb,PPZ,RTN,SZ,TFN,THM,Ziram)  
Notes: Chemical of Concern: 24D,24DXY,ACR,ATZ,BDC,CBF,CBL,CHD,CPY,CTN,CZE,DCF,DCPA,DDT,DLD,DZ,ES,ES1,ES2,HCCH,HPT,HXZ,MEM,MLN,MRX,MTL,MTPN,MXC,Maneb,PCB,PCL,PPCP,PPZ,PYN,RTN,SZ,TFN,THM,TXP,Zineb,Ziram

1289. Sormunen, Arto J; Tuikka, Anita I; Akkanen, Jarkko; Leppă¤Nen, Matti T; Kukkonen, Jussi V, and K. Predicting the Bioavailability of Sediment-Associated Spiked Compounds by Using the Polyoxymethylene Passive Sampling and Tenaxâ® Extraction Methods in Sediments From Three River Basins in Europe. 2010 Jul; 59, (1): 80-90.   
Rec #: 43989  
Keywords: SEDIMENT CONC  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study presents the bioavailability of four spiked compounds to Lumbriculus variegatus, in sediment samples from three river basins in Europe: the Elbe, the Llobregat, and the Scheldt. Twenty sediment samples differing in physical and chemical properties were spiked with chlorpyrifos, pyrene, tetrachloribiphenyl, and tetrabromo diphenyl ether. The main focus of this study was to compare the suitability of two chemical approaches--the rapidly desorbing fraction method based on the TenaxÂ® extraction and the freely dissolved chemical concentration method based on polyoxymethylene passive sampling--for predicting the bioavailability of sediment-associated hydrophobic compounds. It appears that accessible concentration estimated by Tenax extraction does not result in equal freely dissolved concentrations based on polyoxymethylene passive sampling results. The present data show that freely dissolved concentration in pore water mainly determines the uptake by organisms and, therefore, the polyoxymethylene passive sampling method was a successful approach to estimating the bioavailability of sediment-associated lipophilic contaminants (log octanol-water partitioning coefficient >6). The sediment characteristics or river basin differences had only a minor effect on the bioavailability estimates. Overall, passive samplers have not been tested to a sufficient extent in various chemicals or exposure matrixes. For this reason, bioassays are still needed in the risk assessment process in order to verify results based on passive sampling methods. [PUBLICATION ABSTRACT]  
Keywords: Geologic Sediments -- chemistry  
Keywords: Animals  
Keywords: Oligochaeta -- metabolism  
Keywords: Polybrominated Biphenyls -- metabolism  
Keywords: Polybrominated Biphenyls  
Keywords: Polybrominated Biphenyls -- chemistry  
Keywords: Resins, Synthetic  
Keywords: Polymers -- chemistry  
Keywords: Europe  
Keywords: Pyrenes  
Keywords: Soil Pollutants -- chemistry  
Keywords: Environmental Studies  
Keywords: 1540:Pollution control  
Keywords: Soil Pollutants  
Keywords: pyrene  
Keywords: Water Pollutants, Chemical  
Keywords: Rivers -- chemistry  
Keywords: Pyrenes -- chemistry  
Keywords: Water Pollutants, Chemical -- chemistry  
Keywords: 9175:Western Europe  
Keywords: Chlorpyrifos -- chemistry  
Keywords: Resins, Synthetic -- chemistry  
Keywords: Soil Pollutants -- metabolism  
Keywords: Pyrenes -- metabolism  
Keywords: 9130:Experimental/theoretical  
Keywords: Chlorpyrifos  
Keywords: delrin  
Keywords: tenax  
Keywords: Polymers  
Keywords: Environmental Monitoring -- methods  
Keywords: Water Pollutants, Chemical -- metabolism  
Keywords: Chlorpyrifos -- metabolism  
Copyright - Springer Science+Business Media, LLC 2010  
Language of summary - English  
Location - Europe  
Pages - 80-90  
ProQuest ID - 607992948  
Document feature - References; Tables; Equations  
SubjectsTermNotLitGenreText - Europe  
Last updated - 2012-03-05  
Place of publication - Heidelberg  
Corporate institution author - Sormunen, Arto J; Tuikka, Anita I; Akkanen, Jarkko; LeppĂ¤nen, Matti T; Kukkonen, Jussi V; K  
DOI - 2078932961; 53307071; 108161; AECT; 20058002; SPVLAECT2445919453 English

1290. Sosa Gomes, D. R.; Manzur, J., and Nasca, A. Influence of Some Pesticides on Three Varieties of Hirsutella thompsonii Fisher (Hyphomycetes: Moniliales). 1987; 16, (2): 399-408(POR).   
Rec #: 1380  
Keywords: NOT PURSUING,NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

1291. Soummer, A.; Megarbane, B.; Boroli, F.; Arbelot, C.; Saleh, M.; Moesch, C.; Fournier, E., and Rouby, J. J. Severe and prolonged neurologic toxicity following subcutaneous chlorpyrifos self-administration: A case report. 2011; 49, (2): 124-127.   
Rec #: 69659  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Introduction. Organophosphate poisoning by oral or inhalation routes is characterized by a typical time-course of clinical features. Case presentation. We report a case of subcutaneous chlorpyrifos self-injection leading to a delayed cholinergic phase, prolonged coma, and severe permanent neurologic injury with electrophysiological patterns suggestive of overlapping intermediate syndrome and distal peripheral neuropathy. Time-course and severity of clinical features were not altered by either atropine or pralidoxime administration. Due to prolonged and severe alteration in consciousness, we used brain multimodal nuclear magnetic imaging and auditory cognitive event-related potentials to assess the patient's potential for awakening. Electrophysiological testing used to monitor muscle weakness showed the coexistence of 20 Hz-decremental responses in proximal muscles and severe denervation in distal muscles. Red blood cell acetylcholinesterase activity progressively normalized on day 60, while plasma butyrylcholinesterase activity remained low until day 100. Chlorpyrifos was detectable in serum until day 30 and urine metabolites for up to three months, supporting the hypothesis of a continuous chlorpyrifos release despite repeated surgical debridement. We suggest that adipose and muscle tissues acted as a chlorpyrifos reservoir. At one-year follow-up, the patient exhibited significant neuromuscular sequelae. Conclusion. Subcutaneous chlorpyrifos self-injection may result in severe toxicity with prolonged neurologic injury, atypical overlapping electrophysiological patterns, and a poor final outcome.  
Keywords: Organophosphate, Oxime, Poisoning, Functional brain MRI, Neuropathy,  
ISI Document Delivery No.: 729RF

1292. South, D. B. and Zwolinski, J. B. Chemicals Used in Southern Forest Nurseries. SOIL; 1996; 20, (3): 127-135.   
Rec #: 320  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ACP,ACR,ATZ,BMY,BRA3,CLP,CPY,CTN,Captan,DCF,DMT,DZ,EFV,EP,EPTC,FNV,FSF,GYP,LCF,LQN,MLN,MLX,MTL,MZB,OXF,PMT,PSM,SFR,SMM,SXD,TDF,TFN,THM,Zn,Zn element), NO REVIEW (ACP,ACR,ATZ,BMY,BRA3,CLP,CPY,CTN,Captan,DCF,DMT,DZ,EFV,EP,EPTC,FNV,FSF,GYP,LCF,LQN,MLN,MLX,MTL,MZB,OXF,PMT,PSM,SFR,SMM,SXD,TDF,TFN,THM,Zn,Zn element)  
Notes: Chemical of Concern: ACP,ACR,ATZ,BMY,BORON,BRA3,CLP,CPY,CTN,Captan,DCF,DMT,DZ,EFV,EP,EPTC,FBM,FNV,FSF,GYP,HMN,LCF,LQN,MLN,MLX,MTL,MZB,NPP,ODZ,OXF,PMT,PSM,SFR,SMM,SXD,TDF,TFN,THM,TPM,Zn

1293. Sowik-Borowiec, Magdalena; Szpyrka, Ewa; Walorczyk, Stanisaw, and Sowik-Borowiec, Magdalena. Analysis of Pesticide Residues in Fresh Peppermint, Mentha Piperita L., Using the Quick Easy Cheap Effective Rugged and Safe Method (Quechers) Followed by Gas Chromatography With Electron Capture and Nitrogen Phosphorus Detection. 2012 Sep; 89, (3): 633-637.   
Rec #: 46509  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A new analytical method for the determination of 14 pesticide residues in fresh peppermint was developed based on the QuEChERS sample preparation technique followed by gas chromatography coupled to electron capture and nitrogen phosphorus detectors (GC/ECD/NPD). The validation study clearly demonstrated suitability of the method for its intended application. The overall recoveries of the pesticides from peppermint, at the three spiking levels of 0.01, 0.1 and 1.0 mg kg super(-1), were 100 % plus or minus 10 % with relative standard deviations of 6 % plus or minus 5 % on average. The limit of quantification was 0.01 mg kg super(-1) for all the pesticides. The expanded uncertainties were in the range between 7 % and 30 % (14 % on average), which was distinctively less than a maximum default value of plus or minus 50 %. Compared with our previous method, that entailed dichloromethane/acetone extraction and florisil column cleanup with collection of four fractions, the new method was more straightforward, less time and labour intensive as well as more sensitive, selective and accurate, simultaneously.  
Keywords: Pesticide residues  
Keywords: Phosphorus  
Keywords: Environment Abstracts; Pollution Abstracts; Toxicology Abstracts  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Firing pattern  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Standard deviation  
Keywords: Dichloromethane  
Keywords: Gas chromatography  
Keywords: Economics  
Keywords: Pesticides  
Keywords: Acetone  
Keywords: X 24330:Agrochemicals  
Keywords: Mentha piperita  
Keywords: Nitrogen  
Date revised - 2012-11-01  
Language of summary - English  
Pages - 633-637  
ProQuest ID - 1222928861  
SubjectsTermNotLitGenreText - Dichloromethane; Standard deviation; Gas chromatography; Pesticide residues; Pesticides; Phosphorus; Acetone; Firing pattern; Nitrogen; Economics; Mentha piperita  
Last updated - 2012-12-06  
Corporate institution author - Sowik-Borowiec, Magdalena; Szpyrka, Ewa; Walorczyk, Stanisaw  
DOI - OB-ce8d5a2f-08ea-400c-be3emfgefd101; 17134800; 0007-4861; 1432-0800 English

1294. Spearow, Jimmy L; Kota, Rama S; Ostrach, David J, and Spearow, Jimmy L. Environmental Contaminant Effects on Juvenile Striped Bass in the San Francisco Estuary, California, Usa. 2011 Feb 1; 30, (2): 393-402.   
Rec #: 47449  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The decline of pelagic organisms in the San Francisco Estuary (SFE) (California, USA) is attributed to several factors, including water diversions, invasive species, and exposure to environmental toxicants. The present study evaluated the effects of environmental contaminants on liver vitellogenin, metallothionein, 7-ethoxyresorufin-O-deethylase (EROD), and benzyloxyresorufin O-deethylase (BROD) activity in juvenile striped bass (Morone saxitilis) in the SFE. **Analysis of juvenile striped bass liver extracts revealed site-specific elevations of vitellogenin, metallothionein, and EROD biomarkers across the estuary.** Although some striped bass in the estuary showed EROD activity similar to unhandled hatchery controls, several sites in the estuary showed significantly higher EROD activity that was in the range of beta-naphthoflavone (BNF)-injected, positive controls. Overall, EROD activity averaged 283% higher in estuary fish than in hatchery controls. Chemical analyses of extracts from semipermeable membrane devices (SPMDs) deployed in the estuary for one month showed elevated polyaromatic hydrocarbon (PAH) levels. Semipermeable membrane devices extract injections-induced metallothionein and BROD in striped bass livers. These data show that environmental exposures are impacting EROD and other biomarkers in the SFE striped bass population. Previous studies in our laboratory have associated poor larval development with maternal transfer of environmental contaminants. Further studies are needed to monitor contaminant exposures by the use of biomarkers and to integrate them into a more effective pelagic species recovery plan in the SFE.  
Keywords: Bioindicators  
Keywords: Environment Abstracts; Toxicology Abstracts; Aqualine Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; ASFA Aquaculture Abstracts; ASFA 1: Biological Sciences & Living Resources  
Keywords: Membranes  
Keywords: Toxicants  
Keywords: Estuaries  
Keywords: ENA 12:Oceans & Estuaries  
Keywords: Environmental Studies  
Keywords: Morone saxatilis  
Keywords: metallothioneins  
Keywords: Liver  
Keywords: invasive species  
Keywords: Fish  
Keywords: Contaminants  
Keywords: Morone  
Keywords: INE, USA, California, San Francisco Estuary  
Date revised - 2011-05-01  
Language of summary - English  
Location - INE, USA, California, San Francisco Estuary  
Pages - 393-402  
ProQuest ID - 886642828  
SubjectsTermNotLitGenreText - Bioindicators; Membranes; Toxicants; metallothioneins; Estuaries; invasive species; Liver; Fish; Contaminants; Morone saxatilis; Morone; INE, USA, California, San Francisco Estuary  
Last updated - 2011-11-09  
Place of publication - Oxford  
Corporate institution author - Spearow, Jimmy L; Kota, Rama S; Ostrach, David J  
DOI - OB-128923ba-3f0f-403c-9ecacsamfg201; 14430327; 1552-8618 English

1295. Spierer, A.; Begeot, F.; Spierer, P., and Delattre, M. Su(Var)3-7 Links Heterochromatin and Dosage Compensation in Drosophila.   
Rec #: 51279  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Genetics. 2003 Jun;164(2):565-74 (medline /12807777)  
COMMENTS: Cites: Bioessays. 1992 Sep;14(9):605-12 (medline /1365916)  
COMMENTS: Cites: Chromosoma. 2003 Oct;112(3):103-15 (medline /14579126)  
COMMENTS: Cites: Genes Dev. 2003 Nov 15;17(22):2825-38 (medline /14630943)  
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COMMENTS: Cites: Nat Genet. 2005 Dec;37(12):1361-6 (medline /16258543)  
COMMENTS: Cites: Annu Rev Genet. 2005;39:615-51 (medline /16285873)  
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COMMENTS: Cites: J Cell Biol. 2000 May 29;149(5):1005-10 (medline /10831604)  
COMMENTS: Cites: Mol Cell. 2000 Feb;5(2):355-65 (medline /10882076)  
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COMMENTS: Cites: EMBO J. 1994 Aug 15;13(16):3822-31 (medline /7915232)  
COMMENTS: Cites: Development. 1993 Jun;118(2):401-15 (medline /8223268)  
COMMENTS: Cites: Genes Dev. 1994 Jan;8(1):96-104 (medline /8288132)  
COMMENTS: Cites: Semin Cell Biol. 1995 Aug;6(4):229-36 (medline /8562915)  
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COMMENTS: Cites: EMBO J. 1997 Sep 1;16(17):5280-8 (medline /9311988)  
COMMENTS: Cites: Curr Opin Genet Dev. 1998 Apr;8(2):147-53 (medline /9610404)  
COMMENTS: Cites: Genetics. 1998 Oct;150(2):699-709 (medline /9755201)  
COMMENTS: Cites: Chromosoma. 1998 Nov;107(5):286-92 (medline /9880761)  
ABSTRACT: In Drosophila, dosage compensation augments X chromosome-linked transcription in males relative to females. This process is achieved by the Dosage Compensation Complex (DCC), which associates specifically with the male X chromosome. We previously found that the morphology of this chromosome is sensitive to the amounts of the heterochromatin-associated protein SU(VAR)3-7. In this study, we examine the impact of change in levels of SU(VAR)3-7 on dosage compensation. We first demonstrate that the DCC makes the X chromosome a preferential target for heterochromatic markers. In addition, reduced or increased amounts of SU(VAR)3-7 result in redistribution of the DCC proteins MSL1 and MSL2, and of Histone 4 acetylation of lysine 16, indicating that a wild-type dose of SU(VAR)3-7 is required for X-restricted DCC targeting. SU(VAR)3-7 is also involved in the dosage compensated expression of the X-linked white gene. Finally, we show that absence of maternally provided SU(VAR)3-7 renders dosage compensation toxic in males, and that global amounts of heterochromatin affect viability of ectopic MSL2-expressing females. Taken together, these results bring to light a link between heterochromatin and dosage compensation.  
MESH HEADINGS: ATP-Binding Cassette Transporters/genetics  
MESH HEADINGS: Animals  
MESH HEADINGS: Animals, Genetically Modified  
MESH HEADINGS: Crosses, Genetic  
MESH HEADINGS: DNA-Binding Proteins/\*genetics/\*metabolism  
MESH HEADINGS: \*Dosage Compensation, Genetic  
MESH HEADINGS: Drosophila Proteins/\*genetics/\*metabolism  
MESH HEADINGS: Drosophila melanogaster/\*genetics  
MESH HEADINGS: Eye Proteins/genetics  
MESH HEADINGS: Female  
MESH HEADINGS: Gene Expression  
MESH HEADINGS: Genes, Insect  
MESH HEADINGS: Heterochromatin/\*genetics/\*metabolism  
MESH HEADINGS: Male  
MESH HEADINGS: Nuclear Proteins/genetics/metabolism  
MESH HEADINGS: Transcription Factors/genetics/metabolism  
MESH HEADINGS: X Chromosome/genetics/metabolism eng

1296. Sprague, L. A. and Nowell, L. H. Comparison of Pesticide Concentrations in Streams at Low Flow in Six Metropolitan Areas of the United States. 2008; 27, (2): 288-298.   
Rec #: 1390  
Keywords: FATE  
Call Number: NO FATE (ATZ,CBL,CPY,DZ,FPN,MLN,MTL,PRO,SZ,TBZ,TET,TFN)  
Notes: Chemical of Concern: ACO,ATZ,CBL,CPY,DLD,DZ,FPN,MLN,MTL,PRO,SZ,TBZ,TET,TFN

1297. Sreeprasad, Theruvakkattil Sreenivasan; Gupta, Soujit Sen; Maliyekkal, Shihabudheen Mundampra, and Pradeep, Thalappil. Immobilized graphene-based composite from asphalt: Facile synthesis and application in water purification. 2013 Feb 15-; 246Çô247, (0): 213-220.   
Rec #: 5010  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: An in situ strategy for the preparation of graphene immobilized on sand using asphalt, a cheap carbon precursor is presented. The as-synthesized material was characterized in detail using various spectroscopic and microscopic techniques. The presence of G and D bands at 1578 cmęĆ1 and 1345 cmęĆ1 in Raman spectroscopy and the 2D sheet-like structure with wrinkles in transmission electron microscopy confirmed the formation of graphenic materials. In view of the potential applicability of supported graphenic materials in environmental application, the as-synthesized material was tested for purifying water. Removal of a dye (rhodamine-6G) and a pesticide (chlorpyrifos), two of the important types of pollutants of concern in water, were investigated in this study. Adsorption studies were conducted in batch mode as a function of time, particle size, and adsorbent dose. The continuous mode experiments were conducted in multiple cycles and they confirmed that the material can be used for water purification applications. The adsorption efficacy of the present adsorbent system was compared to other reported similar adsorbent systems and the results illustrated that the present materials are superior. The adsorbents were analyzed for post treatment and their reusability was evaluated. Adsorption/ Graphene-sand composite/ Pesticide removal/ Water purification/ Asphalt

1298. Sridharan, I.; Kim, T., and Wang, R. Adapting Collagen/Cnt Matrix in Directing Hesc Differentiation.   
Rec #: 50899  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: The lineage selection in human embryonic stem cell (hESC) differentiation relies on both the growth factors and small molecules in the media and the physical characteristics of the micro-environment. In this work, we utilized various materials, including the collagen-carbon nanotube (collagen/CNT) composite material, as cell culture matrices to examine the impact of matrix properties on hESC differentiation. Our AFM analysis indicated that the collagen/CNT formed rigid fibril bundles, which polarized the growth and differentiation of hESCs, resulting in more than 90% of the cells to the ectodermal lineage in Day 3 in the media commonly used for spontaneous differentiation. We also observed the differentiated cells followed the coarse alignment of the collagen/CNT matrix. The research not only revealed the responsiveness of hESCs to matrix properties, but also provided a simple yet efficient way to direct the hESC differentiation, and imposed the potential of forming neural-cell based bio-devices for further applications.  
MESH HEADINGS: Animals  
MESH HEADINGS: Cell Differentiation/\*drug effects  
MESH HEADINGS: Collagen Type I/\*pharmacology  
MESH HEADINGS: Embryonic Stem Cells/\*drug effects/physiology/ultrastructure  
MESH HEADINGS: Humans  
MESH HEADINGS: Microscopy, Atomic Force  
MESH HEADINGS: \*Nanotubes, Carbon  
MESH HEADINGS: Rats eng

1299. Srinivasulu, M; Mohiddin, G J; Subramanyam, K; Rangaswamy, V, and Srinivasulu, M. Effect of Insecticides Alone and in Combination With Fungicides on Nitrification and Phosphatase Activity in Two Groundnut (Arachis Hypogeae L.) Soils. 2012 Jun; 34, (3): 365-374.   
Rec #: 42719  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effect of selected pesticides, monocrotophos, chlorpyrifos alone and in combination with mancozeb and carbendazim, respectively, was tested on nitrification and phosphatase activity in two groundnut (Arachis hypogeae L.) soils. The oxidation of ammonical nitrogen was significantly enhanced under the impact of selected pesticides alone and in combinations at 2.5 kg ha super(-1) in black soil, and furthermore, increase in concentration of pesticides decreased the rate of nitrification, whereas in the case of red soil, the nitrification was increased up to 5.0 kg ha super(-1) after 4 weeks, and then decline phase was started gradually from 6 to 8 weeks of incubation. The activity of phosphatase was increased in soils, which received the monocrotophos alone and in combination with mancozeb up to 2.5 and 5.0 kg ha super(-1), whereas the application of chlorpyrifos singly and in combination with carbendazim at 2.5 kg ha super(-1) profoundly increased the phosphatase activity after 20 days of incubation, in both soils. But higher concentrations of pesticides were either innocuous or inhibitory to the phosphatase activity.  
Keywords: Environment Abstracts; Pollution Abstracts; Water Resources Abstracts  
Keywords: Arachis  
Keywords: Arachis hypogaea  
Keywords: SW 3040:Wastewater treatment processes  
Keywords: Soil Contamination  
Keywords: ENA 09:Land Use & Planning  
Keywords: P 5000:LAND POLLUTION  
Keywords: Geochemistry  
Keywords: Incubation  
Keywords: Soil  
Keywords: Chlorpyrifos  
Keywords: Peanuts  
Keywords: Agricultural Chemicals  
Keywords: Insecticides  
Keywords: Nitrification  
Keywords: Oxidation  
Keywords: Fungicides  
Keywords: Pesticides  
Keywords: Nitrogen  
Date revised - 2012-04-01  
Language of summary - English  
Pages - 365-374  
ProQuest ID - 1008845216  
SubjectsTermNotLitGenreText - Chlorpyrifos; Soil; Insecticides; Nitrification; Oxidation; Fungicides; Pesticides; Nitrogen; Peanuts; Agricultural Chemicals; Soil Contamination; Geochemistry; Incubation; Arachis hypogaea; Arachis  
Last updated - 2012-12-14  
British nursing index edition - Environmental Geochemistry and Health [Environ. Geochem. Health]. Vol. 34, no. 3, pp. 365-374. Jun 2012.  
Corporate institution author - Srinivasulu, M; Mohiddin, G J; Subramanyam, K; Rangaswamy, V  
DOI - fc6dbfc2-ce05-4b35-8df0mfgefd108; 16540544; 0269-4042; 1573-2983 English

1300. Srivastava, S.; Narvi, S. S., and Prasad, S. C. Levels of select organophosphates in human colostrum and mature milk samples in rural region of Faizabad district, Uttar Pradesh, India. 2011; 30, (10): 1458-1463.   
Rec #: 69769  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Introduction: Human colostrum and mature milk samples from rural mothers were separately screened for organophosphate pesticides (OPPs). The samples were assessed for the pollution load they are transmitting to the nursing infant to determine potential toxicity. The role of colostrum for toxicity monitoring was assessed in comparison to mature milk as it is the very first infant food. Materials and methods: The pesticides were quantified using a Gas Chromatograph equipped with Electron Capture Detector (GC-ECD) and the results were further validated on GC linked with Mass Spectrophotometer (GC-MS) and Fourier transform infrared (FTIR). Results: A total of 33 samples were analyzed out of 40 samples collected. These samples were from 33 mothers. Out of these, 25 were colostrum samples and 8 were mature milk samples. Frequency percentage (N%) of organophosphates analyzed was highest for ethion (23.1% or 6/26) in colostrum and chlorpyrifos (50% or 4/8) in mature milk samples. Frequency percentage in colostrum was 19.2% (5/26) for chlorpyrifos and 3.8% (1/26) for dimethoate; 25.0% (2/8) mature milk samples carried dimethoate and 12.5% (1/8) carried ethion. Mean OPPs in colostrum: dimethoate (85.888 ng/g fat) > ethion (48.000 ng/g fat) > chlorpyrifos (4.003 ng/g fat); and mature milk: ethion (744.925 ng/g fat) > chlorpyrifos (37.274 ng/g fat) > dimethoate (26.752 ng/g fat). MS data revealed the presence of methyl parathion, which was not quantitated. None of the samples exceeded acceptable daily intake standards set by Joint Meeting on Pesticide Residues (JMPR). The study will pave way for further analysis on pesticide toxicology.  
Keywords: organophosphates, colostrum, milk, chlorpyrifos, dimethoate, ethion  
ISI Document Delivery No.: 832NR

1301. Stahlschmidt, P. and Bruhl, C. A. Bats at risk? Bat activity and insecticide residue analysis of food items in an apple orchard. 2012; 31, (7): 1556-1563.   
Rec #: 69779  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Although bats are reported as being threatened by pesticides, they are currently not considered in European Union pesticide risk assessments. The reason for that contradiction is probably related to the scarcity of information on bat activity in pesticide-treated fields and the pesticide residues on their food items. The authors recorded bat activity and measured pesticide residues on bat-specific food items following applications of two insecticides in an apple orchard. High activity levels of the common pipistrelle bat, a foraging habitat generalist, were detected. Airborne foragers and bats that take part of their food by gleaning arthropods from the vegetation were recorded frequently. The initial value and the decline of pesticide residues were found to depend on the arthropod type, their surface to volume ratio, their mobility, and the mode of action of the applied pesticide. The highest initial residue values were measured on foliage-dwelling arthropods. By following the toxicity-exposure ratio approaches of the current pesticide risk assessment, no acute dietary risk was found for all recorded bat species. However, a potential reproductive risk for bat species that include foliage-dwelling arthropods in their diet was indicated. The results emphasize the importance of adequately evaluating the risks of pesticides to bats, which, compared to other mammals, are potentially more sensitive due to their ecological traits. Environ. Toxicol. Chem. 2012; 31: 15561563. (C) 2012 SETAC  
Keywords: Chlorpyrifos-methyl, Fenoxycab, Mammal, Risk assessment, Sensitivity  
ISI Document Delivery No.: 958ZS

1302. Stamatis, N; Hela, D; Konstantinou, I, and Stamatis, N. Pesticide Inputs From the Sewage Treatment Plant of Agrinio to River Acheloos, Western Greece: Occurrence and Removal. 2010 Sep 1; 62, (5): 1098-1105.   
Rec #: 47759  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This work reports the occurrence and the removal of a wide spectrum of pesticides in municipal wastewaters from the Agrinio region, Greece. Analytical determination was carried out by means of solid-phase extraction followed by gas chromatography equipped with flame thermionic and mass spectrometric detection. The herbicides atrazine, alachlor, isoproturon, and s-metolachlor and the insecticides diazinon, methidathion, fenthion and chlorpyriphos, were more frequently detected in influent and effluent samples while they were also detected in river samples. Isoproturon and diazinon showed the highest concentrations in influent samples that reached concentrations up to 2,328 and 1,486 ng L[super]-1, respectively. Secondary treatment and cumulative removal rates for herbicides and insecticides ranged between 23-91%, 21-99% and 36-99%, 38-99%, respectively. The data demonstrate that there are significant levels of pesticides entering river waterways.  
Keywords: ASFA 3: Aquatic Pollution & Environmental Quality; ASFA 2: Ocean Technology Policy & Non-Living Resources; Environment Abstracts; Aqualine Abstracts; Water Resources Abstracts  
Keywords: Greece  
Keywords: Water sampling  
Keywords: ENA 09:Land Use & Planning  
Keywords: Herbicides  
Keywords: influents  
Keywords: Effluents  
Keywords: Environmental Studies  
Keywords: Insecticides  
Keywords: Pesticides  
Keywords: Atrazine  
Keywords: Municipal wastes  
Keywords: Diazinon  
Date revised - 2011-07-01  
Language of summary - English  
Location - Greece  
Pages - 1098-1105  
ProQuest ID - 886273486  
SubjectsTermNotLitGenreText - Insecticides; Water sampling; Atrazine; Pesticides; Municipal wastes; Herbicides; Effluents; influents; Diazinon; Greece  
Last updated - 2011-11-08  
Corporate institution author - Stamatis, N; Hela, D; Konstantinou, I  
DOI - OB-821848e0-ddb9-433f-96adcsaobj201; 14898186; 0273-1223 English

1303. Stanley, K.; Simonich, S. M.; Bradford, D.; Davidson, C., and Tallent-Halsell, N. Comparison of Pressurized Liquid Extraction and Matrix Solid-Phase Dispersion for the Measurement of Semivolatile Organic Compound Accumulation in Tadpoles. 2009; 28, (10): 2038-2043.   
Rec #: 330  
Keywords: NO CONC,NO DURATION,SURVEY  
Call Number: NO CONC (ACE,ACR,ANT,ATZ,CHR,CPY,DCPA,DZ,EPTC,ES,ES2,ESS,FA,FLU,MLN,MP,MTL,PAHs,PHE,PYR,SZ,TFN), NO DURATION (ACE,ACR,ANT,ATZ,CHR,CPY,DCPA,DZ,EPTC,ES,ES2,ESS,FA,FLU,MLN,MP,MTL,PAHs,PHE,PYR,SZ,TFN), NO SURVEY (ACE,ACR,ANT,ATZ,CHR,CPY,DCPA,DZ,EPTC,ES,ES2,ESS,FA,FLU,MLN,MP,MTL,PAHs,PHE,PYR,SZ,TFN)  
Notes: Chemical of Concern: ACE,ACO,ACR,AND,ANT,ATZ,BAP,CHR,CPY,DCPA,DDE,DDT,DLD,DZ,EN,EPRN,EPTC,ES,ES2,ESS,ETN,FA,FLU,HCCH,HPT,MBZ,MLN,MP,MRX,MTL,MXC,PCB,PCH,PEB,PHE,PPCP,PRN,PYR,SZ,TFN,TRL,TZL

1304. Starbuck, C. and Barrett, B. Biology and Control of Horned/Gouty Oak Galls. http://ppp.missouri.edu/newsletters/meg/archives/v16n4/v16n 4.pdf//: 2010; 16, (4): 29-30.   
Rec #: 2260  
Keywords: NO CONC,NO DURATION  
Call Number: NO CONC (ACP,BFT,CPY,DCTP,DMT,IMC), NO DURATION (ACP,BFT,CPY,DCTP,DMT,IMC)  
Notes: Chemical of Concern: ABM,ACP,BFT,CPY,DCTP,DMT,IMC

1305. Starks, Sarah E.; Gerr, Fred; Kamel, Freya; Lynch, Charles F.; Jones, Michael P.; Alavanja, Michael C.; Sandler, Dale P., and Hoppin, Jane A. Neurobehavioral function and organophosphate insecticide use among pesticide applicators in the Agricultural Health Study. 2012 Jan; 34, (1): 168-176.   
Rec #: 4390  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Although persistent decrements in cognitive function have been observed among persons who have recovered from clinically overt organophosphate (OP) pesticide poisoning, little is known about the cognitive effects of chronic OP exposures that do not result in acute poisoning. To examine associations between long-term pesticide use and neurobehavioral (NB) function, NB tests were administered to licensed pesticide applicators enrolled in the Agricultural Health Study (AHS) in Iowa and North Carolina. Between 2006 and 2008, 701 male participants completed nine NB tests to assess memory, motor speed and coordination, sustained attention, verbal learning and visual scanning and processing. Data on ever-use and lifetime days of use of 16 OP pesticides were obtained from AHS interviews conducted before testing between 1993 and 2007 and during the NB visit. The mean age of participants was 61 years (SD = 12). Associations between pesticide use and NB test performance were estimated with linear regression controlling for age and outcome-specific covariates. NB test performance was associated with lifetime days of use of some pesticides. Ethoprop was significantly associated with reduced performance on a test of motor speed and visual scanning. Malathion was significantly associated with poor performance on a test of visual scanning and processing. Conversely, we observed significantly better test performance for five OP pesticides. Specifically, chlorpyrifos, coumaphos, parathion, phorate, and tetrachlorvinphos were associated with better verbal learning and memory; coumaphos was associated with better performance on a test of motor speed and visual scanning; and parathion was associated with better performance on a test of sustained attention. Several associations varied by state. Overall, we found no consistent evidence of an association between OP pesticide use and adverse NB test performance among this older sample of pesticide applicators. Potential reasons for these mostly null results include a true absence of effect as well as possible selective participation by healthier applicators. Agricultural workers/ Epidemiology/ Organophosphates/ Neuropsychological testing/ Pesticide exposure

1306. Starks, Se ; Gerr, F; Kamel, F; Lynch, C F; Jones, M P; Alavanja, M C; Sandler, D P; Hoppin, Ja, and Starks, SE. Neurobehavioral Function and Organophosphate Insecticide Use Among Pesticide Applicators in the Agricultural Health Study. 2011 Oct; 17, (4): 364-365.   
Rec #: 43109  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Although persistent decrements in cognitive function have been observed among persons who have recovered from clinically overt organophosphate (OP) pesticide poisoning, little is known about the cognitive effects of chronic OP exposures that do not result in acute poisoning. To examine associations between long-term pesticide use and neurobehavioral (NB) function, NB tests were administered to licensed pesticide applicators enrolled in the Agricultural Health Study (AHS) in Iowa and North Carolina. Between 2006 and 2008, 701 male participants completed nine NB tests to assess memory, motor speed and coordination, sustained attention, verbal learning, and visual scanning and processing. Data on ever-use and lifetime days of use of 16 OP pesticides were obtained from AHS interviews conducted before testing between 1993 and 2007 and during the NB visit. The mean age of participants was 61 years (SD = 12). Associations between pesticide use and NB test performance were estimated with linear regression controlling for age and outcome-specific covariates. NB test performance was associated with lifetime days of use of some pesticides. Ethoprop was significantly associated with reduced performance on a test of motor speed and visual scanning. Malathion was significantly associated with poor performance on a test of visual scanning and processing. Conversely, we observed significantly better test performance for five OP pesticides. Specifically, chlorpyrifos, coumaphos, parathion, phorate, and tetrachlorvinphos were associated with better verbal learning and memory; coumaphos was associated with better performance on a test of motor speed and visual scanning; and parathion was associated with better performance on a test of sustained attention. Several associations varied by state. Overall, we found no consistent evidence of an association between OP pesticide use and adverse NB test performance among this older sample of pesticide applicators. Potential reasons for these mostly null results include a true absence of effect as well as possible selective participation by healthier applicators.  
Keywords: USA, North Carolina  
Keywords: Age  
Keywords: phorate  
Keywords: Organophosphates  
Keywords: Malathion  
Keywords: Memory  
Keywords: Insecticides  
Keywords: H 5000:Pesticides  
Keywords: Information processing  
Keywords: Coumaphos  
Keywords: Learning  
Keywords: Data processing  
Keywords: N3 11001:Behavioral and Cognitive Neuroscience  
Keywords: Poisoning  
Keywords: organophosphates  
Keywords: Sensorimotor integration  
Keywords: Chlorpyrifos  
Keywords: Visual discrimination learning  
Keywords: cognitive ability  
Keywords: Scanning  
Keywords: USA, Iowa  
Keywords: Cognitive ability  
Keywords: Neurotoxicity  
Keywords: Pesticides  
Keywords: Attention  
Keywords: CSA Neurosciences Abstracts; Health & Safety Science Abstracts  
Keywords: Parathion  
Date revised - 2011-11-01  
Language of summary - English  
Location - USA, North Carolina; USA, Iowa  
Pages - 364-365  
ProQuest ID - 907191188  
SubjectsTermNotLitGenreText - Learning; Age; Data processing; phorate; Poisoning; organophosphates; Malathion; Sensorimotor integration; Chlorpyrifos; Visual discrimination learning; Memory; Insecticides; Scanning; Cognitive ability; Information processing; Pesticides; Coumaphos; Attention; Parathion; cognitive ability; Organophosphates; Neurotoxicity; USA, North Carolina; USA, Iowa  
Last updated - 2012-03-29  
British nursing index edition - Journal of Agricultural Safety and Health [J. Agric. Saf. Health]. Vol. 17, no. 4, pp. 364-365. Oct 2011.  
Corporate institution author - Starks, SE; Gerr, F; Kamel, F; Lynch, C F; Jones, M P; Alavanja, M C; Sandler, D P; Hoppin, JA  
DOI - MD-0017838169; 16062002; 1074-7583 English

1307. Starr, J.; Graham, S.; Ii, D. S.; Andrews, K., and Nishioka, M. Pyrethroid pesticides and their metabolites in vacuum cleaner dust collected from homes and day-care centers. 2008; 108, (3): 271-279.   
Rec #: 69819  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Urinary metabolites of pyrethroid pesticides have been used as biomarkers to estimate human exposure to the parent insecticide. It is important to establish whether these markers are present in environments or media to which humans are exposed routinely. Failure to account for the contribution of pre-existing markers to urinary concentrations could result in risk assessments that overestimate exposure. The purpose of this study was to quantify the concentrations of 13 selected pyrethroid pesticides and their degradation products in samples of indoor dust that had been collected in vacuum cleaner bags during the children's total exposure to persistent pesticides and other persistent organic pollutants (CTEPP) study of homes and day cares in North Carolina and Ohio. Sieved contents of 85 vacuum cleaner bags were analyzed, and permethrin was found in all samples. Sixty-nine samples contained at least one additional pyrethroid, but none contained more than five pyrethroids in detectable concentrations. Resmethrin, prallethrin, and fenpropathrin were not detected in any samples, while 36 contained phenothrin. The median concentration of permethrin in the samples was 1454 ng/g of dust. Excluding permethrin, pyrethroid concentrations were typically less than or equal to 100ng/g of dust. The majority of degradates were present in more than half of the dust samples, usually at concentrations of less than or equal to 100 ng/g of dust. For those pyrethroids with a characteristic oxydibenzene group, the cyclopropane degradates were present at higher concentrations than the corresponding benzoic acid moieties. Using urinary concentrations of these metabolites to model human exposure to the parent pyrethroids, may over-estimate risk due to the presence of pre-existing degradates in dust. (C) 2008 Elsevier Inc. All rights reserved.  
Keywords: Pyrethroids, Biomarkers, Degradation, Indoor dust  
ISI Document Delivery No.: 368YR

1308. Steinmann, K. P.; Zhang, M. H.; Grant, J. A.; Pickel, C., and Goodhue, R. E. Pheromone-based pest management can be cost-effective for walnut growers. 2008; 62, (3): 105-110.   
Rec #: 69829  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Many organophosphate and pyrethroid insecticides currently used by California walnut growers have been linked to negative environmental or human health impacts, increasing the probability of use restrictions and phase-outs. We assessed the acceptability of alternative reduced-risk strategies by comparing their costs to those of pest management programs currently in use among San Joaquin County walnut growers. To do this, we analyzed data from the California Department of Pesticide Regulation's legally mandated Pesticide Use Reports on actual pesticide applications for 3 years, from 2002 to 2004. While many factors other than cost i nfluence growers'pest management choices, we found that alternative strategies can be cost-competitive with conventional approaches, depending on the pest pressure and savings due to reductions in secondary pest outbreaks.  
Keywords: ESFENVALERATE, CHLORPYRIFOS, MITES, ACARI  
ISI Document Delivery No.: 326JK

1309. Stone, D. L.; Sudakin, D. L., and Jenkins, J. J. Longitudinal trends in organophosphate incidents reported to the National Pesticide Information Center, 1995-2007. 2009; 8, 18-18.   
Rec #: 69859  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Regulatory decisions to phase-out the availability and use of common organophosphate pesticides among the general public were announced in 2000 and continued through 2004. Based on revised risk assessments, chlorpyrifos and diazinon were determined to pose unacceptable risks. To determine the impact of these decisions, organophosphate (OP) exposure incidents reported to the National Pesticide Information Center (NPIC) were analyzed for longitudinal trends. Methods: Non-occupational human exposure incidents reported to NPIC were grouped into pre-( 1995-2000) and post-announcement periods (2001-2007). The number of total OP exposure incidents, as well as reports for chlorpyrifos, diazinon and malathion, were analyzed for significant differences between these two periods. The number of informational inquiries from the general public was analyzed over time as well. Results: The number of average annual OP-related exposure incidents reported to NPIC decreased significantly between the pre- and post-announcement periods (p < 0.001). A significant decrease in the number of chlorpyrifos and diazinon reports was observed over time (p < 0.001). No significant difference in the number of incident reports for malathion was observed (p = 0.4), which was not phased-out of residential use. Similar to exposure incidents, the number of informational inquiries received by NPIC declined over time following the phase-out announcement. Conclusion: Consistent with other findings, the number of chlorpyrifos and diazinon exposure incidents reported to NPIC significantly decreased following public announcement and targeted regulatory action.  
Keywords: UNITED-STATES  
ISI Document Delivery No.: 444UK

1310. Stout, D. M.; Bradham, K. D.; Egeghy, P. P.; Jones, P. A.; Croghan, C. W.; Ashley, P. A.; Pinzer, E.; Friedman, W.; Brinkman, M. C.; Nishioka, M. G., and Cox, D. C. American Healthy Homes Survey: A National Study of Residential Pesticides Measured from Floor Wipes. 2009; 43, (12): 4294-4300.   
Rec #: 69869  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The U.S. Department of Housing and Urban Development in collaboration with the United States Environmental Protection Agency conducted a survey measuring lead, allergens, and insecticides in a randomly selected nationally representative sample of residential homes. Multistage sampling with clustering was used to select the 1131 homes of which a subset of 500 randomly selected homes included the collection of hard surface floor wipes. Samples were collected by trained field technicians between June 2005 and March 2006 using isopropanol wetted wipes. Samples were analyzed for a suite of 24 compounds which included insecticides in the organochlorine, organophosphate, pyrethroid and phenylpyrazole classes, and the insecticide synergist piperonyl butoxide. The most commonly detected were permethrin (89%), chlorpyrifos (78%), chlordane (64%, piperonyl butoxide (52%), cypermethrin (46%), and fipronil (40%). Mean and geometric mean (GM) concentrations varied widely among compounds, but were highest for trans-permethrin (mean 2.22 ng/cm(2) and GM 0.14 ng/cm(2)) and cypermethrin (mean 2.9 ng/cm(2) and GM 0.03 ng/cm(2)). Results show that most floors in occupied homes in the U.S. have measurable levels of insecticides that may serve as sources of exposure to occupants.  
Keywords: EXPOSURES, CHILDREN  
ISI Document Delivery No.: 457XF

1311. Sturlan, S.; Sachet, M.; Baumann, S.; Kuznetsova, I. ; Spittler, A., and Bergmann, M. Influenza a Virus Induces an Immediate Cytotoxic Activity in All Major Subsets of Peripheral Blood Mononuclear Cells.   
Rec #: 50959  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Nat Rev Immunol. 2008 Apr;8(4):259-68 (medline /18340344)  
COMMENTS: Cites: J Immunol. 2000 Mar 1;164(5):2635-43 (medline /10679103)  
COMMENTS: Cites: Curr Opin Mol Ther. 2008 Feb;10(1):32-7 (medline /18228179)  
COMMENTS: Cites: J Clin Invest. 2007 Oct;117(10):2834-46 (medline /17823660)  
COMMENTS: Cites: J Exp Med. 2007 Jun 11;204(6):1441-51 (medline /17535975)  
COMMENTS: Cites: J Immunol. 2007 Mar 1;178(5):2688-98 (medline /17312110)  
COMMENTS: Cites: Science. 2006 Nov 10;314(5801):997-1001 (medline /17038589)  
COMMENTS: Cites: Cancer Immun. 2006;6:11 (medline /17073402)  
COMMENTS: Cites: J Virol. 2006 Jul;80(13):6295-304 (medline /16775317)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2006 May 16;103(20):7753-8 (medline /16682640)  
COMMENTS: Cites: Nat Immunol. 2006 May;7(5):517-23 (medline /16565719)  
COMMENTS: Cites: J Immunol. 2006 Jan 1;176(1):248-55 (medline /16365416)  
COMMENTS: Cites: J Virol. 2006 Jan;80(1):383-94 (medline /16352563)  
COMMENTS: Cites: J Gen Virol. 2005 Jan;86(Pt 1):185-95 (medline /15604446)  
COMMENTS: Cites: J Clin Invest. 2004 Dec;114(12):1812-9 (medline /15599406)  
COMMENTS: Cites: Virology. 1998 Dec 20;252(2):324-30 (medline /9878611)  
COMMENTS: Cites: J Virol. 1998 Aug;72(8):6437-41 (medline /9658085)  
COMMENTS: Cites: Adv Immunol. 1989;47:187-376 (medline /2683611)  
COMMENTS: Cites: J Immunol. 2004 Jul 15;173(2):892-9 (medline /15240676)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2004 Apr 13;101(15):5598-603 (medline /15034168)  
COMMENTS: Cites: Science. 2004 Mar 5;303(5663):1529-31 (medline /14976261)  
COMMENTS: Cites: J Immunol. 2003 Sep 1;171(5):2366-73 (medline /12928383)  
COMMENTS: Cites: J Immunol. 2003 Feb 15;170(4):1814-21 (medline /12574346)  
COMMENTS: Cites: J Immunol. 2002 Jul 15;169(2):847-55 (medline /12097388)  
COMMENTS: Cites: Eur J Immunol. 2001 Dec;31(12):3525-34 (medline /11745372)  
COMMENTS: Cites: Nat Immunol. 2000 Dec;1(6):475-82 (medline /11101868)  
COMMENTS: Cites: Nature. 2001 Feb 22;409(6823):1055-60 (medline /11234016)  
COMMENTS: Cites: J Virol. 2000 Dec;74(24):11566-73 (medline /11090154)  
COMMENTS: Cites: J Virol. 2000 Sep;74(17):7738-44 (medline /10933679)  
COMMENTS: Cites: J Virol. 2000 Jul;74(13):6203-6 (medline /10846107)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2000 Apr 11;97(8):4309-14 (medline /10725408)  
COMMENTS: Cites: Cytokine Growth Factor Rev. 2008 Feb;19(1):79-92 (medline /18155952)  
ABSTRACT: BACKGROUND: A replication defective influenza A vaccine virus (delNS1 virus) was developed. Its attenuation is due to potent stimulation of the innate immune system by the virus. Since the innate immune system can also target cancer cells, we reasoned that delNS1 virus induced immune-stimulation should also lead to the induction of innate cytotoxic effects towards cancer cells.  
ABSTRACT: METHODOLOGY/PRINCIPAL FINDINGS: Peripheral blood mononuclear cells (PBMCs), isolated CD56+, CD3+, CD14+ and CD19+ subsets and different combinations of the above subsets were stimulated by delNS1, wild type (wt) virus or heat inactivated virus and co-cultured with tumor cell lines in the presence or absence of antibodies against the interferon system. Stimulation of PBMCs by the delNS1 virus effectively induced cytotoxicity against different cancer cell lines. Surprisingly, virus induced cytotoxicity was exerted by all major subtypes of PBMCs including CD56+, CD3+, CD14+ and CD19+ cells. Virus induced cytotoxicity in CD3+, CD14+ and CD19+ cells was dependent on virus replication, whereas virus induced cytotoxicity in CD56+ cells was only dependent on the binding of the virus. Virus induced cytotoxicity of isolated cell cultures of CD14+, CD19+ or CD56+ cells could be partially blocked by antibodies against type I and type II (IFN) interferon. In contrast, virus induced cytotoxicity in the complete PBMC preparation could not be inhibited by blocking type I or type II IFN, indicating a redundant system of activation in whole blood.  
ABSTRACT: CONCLUSIONS/SIGNIFICANCE: Our data suggest that apart from their well known specialized functions all main subsets of peripheral blood cells also initially exert a cytotoxic effect upon virus stimulation. This closely links the innate immune system to the adaptive immune response and renders delNS1 virus a potential therapeutic tool for viro-immunotherapy of cancer.  
MESH HEADINGS: Animals  
MESH HEADINGS: Antigens, CD/immunology  
MESH HEADINGS: Biological Markers/metabolism  
MESH HEADINGS: Cell Line, Tumor  
MESH HEADINGS: Coculture Techniques  
MESH HEADINGS: Cytokines/immunology  
MESH HEADINGS: Cytotoxins/\*immunology  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunity, Innate/\*immunology  
MESH HEADINGS: Influenza A virus/genetics/\*immunology/\*pathogenicity/physiology  
MESH HEADINGS: Leukocytes, Mononuclear/\*immunology  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred BALB C  
MESH HEADINGS: Oligodeoxyribonucleotides/genetics/immunology  
MESH HEADINGS: Spleen/cytology  
MESH HEADINGS: Virus Replication eng

1312. Suarez-Lopez, J. R.; Jacobs, D. R.; Himes, J. H.; Alexander, B. H.; Lazovich, D., and Gunnar, M. Lower acetylcholinesterase activity among children living with flower plantation workers. 2012; 114, 53-59.   
Rec #: 69909  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Children of workers exposed to pesticides are at risk of secondary pesticide exposure. We evaluated the potential for lower acetylcholinesterase activity in children cohabiting with fresh-cut flower plantation workers, which would be expected from organophosphate and carbamate insecticide exposure. Parental home surveys were performed and acetylcholinesterase activity was measured in 277 children aged 4-9 years in the Secondary Exposure to Pesticides among Infants, Children and Adolescents (ESPINA) study. Participants lived in a rural county in Ecuador with substantial flower plantation activity. RESULTS: Mean acetylcholinesterase activity was 3.14 U/ml, standard deviation (SD) of 0.49. It was lower by 0.09 U/ml (95% confidence interval (CI) -0.19, -0.001) in children of flower workers (57% of participants) than non-flower workers' children, after adjustment for gender, age, height-for-age, hemoglobin concentration, income, pesticide use within household lot, pesticide use by contiguous neighbors, examination date and residence distance to nearest flower plantation. Using a 4 level polychotomous acetylcholinesterase activity dependent variable, flower worker cohabitation (vs. not) had odds ratio 3.39 (95% CI 1.19, 9.64) for being < 15th percentile compared to the highest tertile. Children cohabitating for >= 5 years (vs. never) had OR of 4.11 (95% CI: 1.17, 14.38) of AChE activity within < 15th percentile compared to the highest tertile. Conclusions: Cohabitation with a flower worker was related to lower acetylcholinesterase activity in children. This supports the hypothesis that the amount of take-home pesticides from flower workers suffices to decrease acetylcholinesterase activity, with lower activity associated with longer exposure. (C) 2012 Elsevier Inc. All rights reserved.  
Keywords: Acetylcholinesterase, AChE, Children, Pesticide, Organophosphate  
ISI Document Delivery No.: 925ML

1313. Subburaju, S. and Selvarajan, V. R. The Acute Toxic Effect of Chlorpyrifos on the Oxygen Consumption of Different Regions of Brain of Tilapia mossambica (Peters). BCM,PHY. Dep. Zool., Univ. Madras, Guindy Campus, MADRAS-600 025//: AQUA; 1988; 17, 35-36.   
Rec #: 1400  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

1314. ---. Sublethal Effect of Chlorpyrifos on Selected Oxidative Enzymes in Different Tissues of the Tilapia Oreochromis mossambicus (Peters). 4394//: AQUA; 1990.  
Rec #: 1410  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

1315. Suciu, N. A. and Capri, E. Adsorption of chlorpyrifos, penconazole and metalaxyl from aqueous solution by modified clays. 2009; 44, (6): 525-532.   
Rec #: 69939  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Sorption of three pesticides (chlorpyrifos, metalaxyl and penconazole) has been measured on a commercial clay montmorillonite and on the same mineral modified with either of two cationic-surfactant micelles. Both micelle-clay complexes, commercial names Cloisite 20A and Cloisite 30B, showed a good capacity to sorb all three pesticides from water, whereas their sorption on the natural montmorillonite was not described by an isotherm. Modelling sorption on both micelle-clay complexes showed that the Freundlich sorption constant (K(F)) was higher for chlorpyrifos on Cloisite 20A (K(F) = 7.76) than on Cloisite 30B (K(F) = 5.91), whereas the sorption of metalaxyl was stronger on Cloisite 30B (K(F) = 1.07) than on Cloisite 20A (K(F) = 0.57). Moreover the micelle-clay complex Cloisite 20A also showed a good affinity for penconazole, the maximum quantity adsorbed (q(m)) of 6.33 mg g(-1) being 45% more than that on Cloisite 30B. Single-batch adsorption of each pesticide onto both micelle-clay complexes was studied using the Freundlich isotherm for chlorpyrifos and metalaxyl and the Langmuir isotherm for penconazole. The Cloisite 20A micelle-clay complex was predicted to require 23% less adsorbent to treat certain volumes of wastewater containing 30 mg L(-1) chlorpyrifos, 43% more to treat metalaxyl similarly and 57% less to treat penconazole compared with Cloisite 30B.  
Keywords: Modified clays, natural montmorillonite, pesticide, maximum adsorption,  
ISI Document Delivery No.: 535VX

1316. Sudakin, D. L. and Power, L. E. Organophosphate exposures in the United States: A longitudinal analysis of incidents reported to poison centers. 2007; 70, (2): 141-147.   
Rec #: 69949  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The implementation of the Food Quality Protection Act of 1996 resulted in a decision by the U. S. Environmental Protection Agency to phase out and eliminate the use of organophosphate insecticides in residential environments. The phase-out and cancellation process began in the year 2000 and was complete in 2005. The purpose of this investigation was to utilize national Poison Control Center data to assess whether the risk mitigation decision had an impact on the number of incident cases involving organophosphates in the United States. Organophosphate exposure incident data were extracted from Annual Reports of the American Association of Poison Control Centers Toxic Exposure Surveillance System (TESS) for the years 1995 to 2004. The number of organophosphate exposure incidents peaked at 20,135 in 1997, and declined in each subsequent year. A statistically significant decrease was observed in the average annual number of organophosphate exposure incidents when comparing data from the time periods before (1995-1999) and after (2000-2004) the commencement of the phase-out process. The decrease in organophosphate incident cases was observed for all age categories, as well as for the circumstances surrounding the exposure ( unintentional and intentional exposure incidents). TESS data showed a significant decrease in incident cases involving organophosphates in association with the phase-out from residential uses. The results of this investigation are consistent with other studies that have reported that regulatory restriction of access to pesticide formulations may have a significant impact on the number of human exposure incidents.  
Keywords: QUALITY PROTECTION ACT, PESTICIDE-RELATED ILLNESS, AMERICAN-ASSOCIATION,  
ISI Document Delivery No.: 148TN

1317. Sudakin, D. L. and Stone, D. L. Dialkyl phosphates as biomarkers of organophosphates: The current divide between epidemiology and clinical toxicology. 2011; 49, (9): 771-781.   
Rec #: 69959  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Context. Organophosphate insecticides are widely utilized throughout the world. The cholinergic toxidrome, resulting from cholinesterase inhibition, is the clinically relevant endpoint in organophosphate poisoning. In recent years, urinary dialkyl phosphates (DAPs) have emerged as a common method of assessing exposure to organophosphates in epidemiological investigations. Using dialkyl phosphates as biomarkers of exposure to organophosphates, several recent epidemiological studies have reported associations with adverse health outcomes. The purpose of this article is to review the application and limitations of urinary DAPs as biomarkers of exposure to organophosphate insecticides. Methods. A literature search was conducted of the PubMed database, using keywords dialkylphosphate "and "dialkyl phosphate. "The scientific literature was reviewed to identify sources of dialkyl phosphate metabolites from in vivo metabolism of organophosphates, and as environmental degradation products. Epidemiological investigations were reviewed to summarize the use of use of DAPs as biomarkers in cross-sectional studies, occupational exposures, acute poisonings, and in health outcome studies. Emphasis was placed on the assessment of DAPs in the context of existing biomarker frameworks, as defined by the National Research Council. Studies were assessed for concurrent use of cholinesterase activity as a biomarker of effect, and whether a dose-response relationship could be determined between DAPs and cholinesterase depression or cholinergic effects. Results. Over 184 publications were identified, describing dialkyl phosphates and their use as biomarkers of exposure. The in vivo metabolism of organophosphates yields different DAPs, depending upon whether they undergo bioactivation or detoxification. The detection of urinary DAPs does not provide specificity with respect to the organophosphate from which they were derived, or their toxicological potency. Several recent studies documented the common presence of DAPs in residential environments and foods. Experimental studies support that DAPs have significant oral bioavailability, and undergo little to no metabolism prior to urinary excretion. Cross-sectional studies in multiple countries confirm that urinary DAPs are commonly detectable in the general population. No occupational studies were identified supporting a dose-response relationship between DAPs and significant cholinesterase inhibition. No occupational studies were identified supporting evidence of a threshold level of DAPs excretion at which clinical cholinergic signs or symptoms have been observed. Recent prospective epidemiological studies using DAPs as biomarkers have not concurrently assessed effects on cholinesterase activity, or conducted analyses that distinguish different DAPs that reflect bioactivation versus detoxification pathways. Discussion. There are numerous limitations to the use of DAPs as biomarkers of exposure. These include a lack of specificity with respect to the organophosphate from which they were derived, and a growing body of evidence that toxicologically irrelevant DAPs are commonly encountered in food and the environment. Substantial intra-and inter-day variability has been reported for dialkyl phosphate excretion in humans, which is problematic for studies that rely on single measurements to assess exposure. The toxicological distinction between different DAPs reflecting biomarkers of activation and detoxification processes has not been considered in some prospective epidemiological studies. A relationship between DAPsas biomarkers of exposure and the critical biomarker of effect, cholinesterase activity, has not been established. Conclusions. The science of exposure assessment using DAPs as biomarkers is not advancing, and this complicates the interpretation of epidemiological studies. At the current time, DAPs have very limited utility in clinical toxicology or in the risk assessment process for organophosphates. Until these limitations are addressed, the appropriate role of DAPs in the assessment of human health risks from organophosphates is unclear.  
Keywords: Pesticide, Organophosphate, Dialkyl phosphate, Dialkylphosphate,  
ISI Document Delivery No.: 847OB

1318. Sullivan, Daniel J; Vecchia, Aldo V; Lorenz, David L; Gilliom, Robert J; Martin, Jeffrey D , and Sullivan, Daniel J. Trends in Pesticide Concentrations in Corn-Belt Streams, 1996-2006. 2009.  
Rec #: 45299  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Trends in the concentrations of commonly occurring pesticides in the Corn Belt of the United States were assessed, and the performance and application of several statistical methods for trend analysis were evaluated. Trends in the concentrations of 11 pesticides with sufficient data for trend assessment were assessed at up to 31 stream sites for two time periods: 1996-2002 and 2000-2006. Pesticides included in the trend analyses were atrazine, acetochlor, metolachlor, alachlor, cyanazine, EPTC, simazine, metribuzin, prometon, chlorpyrifos, and diazinon. The statistical methods applied and compared were (1) a modified version of the nonparametric seasonal Kendall test (SEAKEN), (2) a modified version of the Regional Kendall test, (3) a parametric regression model with seasonal wave (SEAWAVE), and (4) a version of SEAWAVE with adjustment for streamflow (SEAWAVE-Q). The SEAKEN test is a statistical hypothesis test for detecting monotonic trends in seasonal time-series data such as pesticide concentrations at a particular site. Trends across a region, represented by multiple sites, were evaluated using the regional seasonal Kendall test, which computes a test for an overall trend within a region by computing a score for each season at each site and adding the scores to compute the total for the region. The SEAWAVE model is a parametric regression model specifically designed for analyzing seasonal variability and trends in pesticide concentrations. The SEAWAVE-Q model accounts for the effect of changing flow conditions in order to separate changes caused by hydrologic trends from changes caused by other factors, such as pesticide use. There was broad, general agreement between unadjusted trends (no adjustment for streamflow effects) identified by the SEAKEN and SEAWAVE methods, including the regional seasonal Kendall test. Only about 10 percent of the paired comparisons between SEAKEN and SEAWAVE indicated a difference in the direction of trend, and none of these had differences significant at the 10-percent significance level. This consistency of results supports the validity and robustness of all three approaches as trend analysis tools. The SEAWAVE method is favored, however, because it has less restrictive data requirements, enabling analysis for more site/pesticide combinations, and can incorporate adjustment for streamflow (SEAWAVE-Q) with substantially fewer measurements than the flow-adjustment procedure used with SEAKEN. Analysis of flow-adjusted trends is preferable to analysis of non-adjusted trends for evaluating potential effects of changes in pesticide use or management practices because flow-adjusted trends account for the influence of flow-related variability. Analysis of flow-adjusted trends by SEAWAVE-Q showed that all of the pesticides assessed, except simazine and acetochlor, were dominated by varying degrees of concentration downtrends in one or both analysis periods. Atrazine, metolachlor, alachlor, cyanazine, EPTC, and metribuzin - all major corn herbicides, as well as prometon and chlorpyrifos, showed more prevalent concentration downtrends during 1996-2002 compared to 2000-2006. Diazinon had no clear trends during 1996-2002, but had predominantly downward trends during 2000-2006. Acetochlor trends were mixed during 1996-2002 and slightly upward during 2000-2006, but most of the trends were not statistically significant. Simazine concentrations trended upward at most sites during both 1996-2002 and 2000-2006. Comparison of concentration trends to agricultural-use trends indicated similarity in direction and magnitude for acetochlor, metolachlor, alachlor, cyanazine, EPTC, and metribuzin. Concentration downtrends for atrazine, chlorpyrifos, and diazinon were steeper than agricultural-use downtrends at some sites, indicating the possibility that agricultural management practices may have increasingly reduced transport to streams (particularly atrazine) or, for chlorpyrifos and diazinon, that non  
Start Page: 76  
End Page: 76  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: Testing Procedures  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: SW 3040:Wastewater treatment processes  
Keywords: Alachlor  
Keywords: Streamflow  
Keywords: Herbicides  
Keywords: Streams  
Keywords: Stream flow  
Keywords: USA  
Keywords: Q2 02123:Conservation  
Keywords: Agricultural Chemicals  
Keywords: Hydrologic Models  
Keywords: Atrazine  
Keywords: Pesticides  
Keywords: Aqualine Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; ASFA 2: Ocean Technology Policy & Non-Living Resources  
Keywords: Diazinon  
Date revised - 2011-11-01  
Language of summary - English  
Location - USA  
Pages - 76  
ProQuest ID - 904498209  
SubjectsTermNotLitGenreText - Pesticides; Herbicides; Streams; Stream flow; Testing Procedures; Hydrologic Models; Agricultural Chemicals; Atrazine; Alachlor; Streamflow; Diazinon; USA  
Last updated - 2012-03-29  
British nursing index edition - Scientific Investigations Report. U.S. Geological Survey. no. 2009-5132, 76 pp. 2009.  
Corporate institution author - Sullivan, Daniel J; Vecchia, Aldo V; Lorenz, David L; Gilliom, Robert J; Martin, Jeffrey D  
DOI - 88ceeb2f-8c60-4008-8100csamfg201; 15957700; NO1100778 English

1319. Sultatos, L G; Kaushik, R, and Sultatos, L G. Altered Binding of Thioflavin T to the Peripheral Anionic Site of Acetylcholinesterase After Phosphorylation of the Active Site by Chlorpyrifos Oxon or Dichlorvos. 2008 Aug 1; 230, (3): 390-396.   
Rec #: 42039  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The peripheral anionic site of acetylcholinesterase, when occupied by a ligand, is known to modulate reaction rates at the active site of this important enzyme. The current report utilized the peripheral anionic site specific fluorogenic probe thioflavin t to determine if the organophosphates chlorpyrifos oxon and dichlorvos bind to the peripheral anionic site of human recombinant acetylcholinesterase, since certain organophosphates display concentration-dependent kinetics when inhibiting this enzyme. Incubation of 3 nM acetylcholinesterase active sites with 50 nM or 2000 nM inhibitor altered both the B sub(m) sub(a) sub(x) and K sub(d) for thioflavin t binding to the peripheral anionic site. However, these changes resulted from phosphorylation of Ser203 since increasing either inhibitor from 50 nM to 2000 nM did not alter further thioflavin t binding kinetics. Moreover, the organophosphate-induced decrease in B sub(m) sub(a) sub(x) did not represent an actual reduction in binding sites, but instead likely resulted from conformational interactions between the acylation and peripheral anionic sites that led to a decrease in the rigidity of bound thioflavin t. A drop in fluorescence quantum yield, leading to an apparent decrease in B sub(m) sub(a) sub(x), would accompany the decreased rigidity of bound thioflavin t molecules. The organophosphate-induced alterations in K sub(d) represented changes in binding affinity of thioflavin t, with diethylphosphorylation of Ser203 increasing K sub(d), and dimethylphosphorylation of Ser203 decreasing K sub(d). These results indicate that chlorpyrifos oxon and dichlorvos do not bind directly to the peripheral anionic site of acetylcholinesterase, but can affect binding to that site through phosphorylation of Ser203.  
Keywords: Pharmacy And Pharmacology  
Keywords: Fluorescence  
Keywords: Acetylcholinesterase  
Keywords: Probes  
Keywords: Enzymes  
Keywords: Acylation  
Keywords: organophosphates  
Keywords: Chlorpyrifos  
Keywords: Phosphorylation  
Keywords: Kinetics  
Keywords: Toxicology Abstracts  
Keywords: X 24330:Agrochemicals  
Keywords: Dichlorvos  
Date revised - 2008-10-01  
Language of summary - English  
Pages - 390-396  
ProQuest ID - 290119351  
SubjectsTermNotLitGenreText - Acetylcholinesterase; organophosphates; Chlorpyrifos; Dichlorvos; Phosphorylation; Kinetics; Enzymes; Fluorescence; Probes; Acylation  
Last updated - 2011-11-04  
Corporate institution author - Sultatos, L G; Kaushik, R  
DOI - OB-MD-0008353629; 8374300; 0041-008X English

1320. Suman, P. and Singh, D. K. Estimating the uncertainty of pesticide residue analysis from mango using multi-residue analysis and validation of method. 2011; 93, (10): 1880-1896.   
Rec #: 70009  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Validation of method was performed for various pesticides on mango matrix involving the processing of sample at ambient and cryogenic conditions. The linearity, limits of detection, repeatability, matrix effect, and recovery were studied as the aspects of method validation. The effect of matrix on recovery was found to be medium (20-50%) and strong (>50%). After correction by matrix-matched calibration curves, the recovery was calculated to be in the range of 80-107% and 80-105% at ambient and cryogenic processing, respectively. The precision estimated for the recovery of pesticides obtained from both solvent-and matrix-matched calibration curves and at both the processing conditions was determined to be >20% except for chlorpyrifos and atrazine. The uncertainty established for the methodology was >20%, which substantiates the efficiency and reliability of methodology used for pesticide residue analysis in mango in this study.  
Keywords: mango, multi-residue analysis, method validation, matrix effect,  
ISI Document Delivery No.: 884WY

1321. Sumith, J. A.; Hansani, P. L. C.; Weeraratne, T. C., and Munkittrick, K. R. Seasonal exposure of fish to neurotoxic pesticides in an intensive agricultural catchment, Uma-oya, Sri Lanka: Linking contamination and acetylcholinesterase inhibition. 2012; 31, (7): 1501-1510.   
Rec #: 70029  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The annual cultivation pattern in the Uma-oya catchment in Sri Lanka is characterized by Yala and Maha rainfall periods and associated cropping. Two cultivation seasons were compared for pesticide residues: base flow, field drainage, and the runoff and supplementary sediment data for three sites in the catchment. Organophosphate and N-methyl carbamate pesticide analysis confirmed a higher concentration in the Yala season with low-flow conditions. Acetylcholinesterase (AChE) activity was measured by standard spectrometry in the brain, muscle, and eye tissues of three freshwater cyprinid fishes, Garra ceylonensis, Devario malabaricus, and Rasbora daniconius from three study sites during months overlapping two seasons in 2010 (December) and 2011 (July). Baseline AChE data were measured from fish samples from a forested reserve in the Knuckles. A 73% inhibition in muscle AChE activity in G. ceylonensis was associated with intense pesticide exposure months in the Yala season. The AChE inhibition more than 70% in G. ceylonensis eyes in both Yala (76%) and Maha (72.5%) seasons indicates particular sensitivity of eye tissue to inhibitors. The less dramatic AChE inhibition in the eye tissues in D. malabaricus and R. daniconius in both seasons indicates exemplary protective capacity of muscle AChE in fish. The highest inhibition of AChE (up to 60% in brain and up to 56% in muscle AChE activity in R. daniconius and up to 47.8% in brain and up to 64.6% in muscle AChE activity in D. malabaricus) occurred during the Yala season. Tissue AChE activity and physiological activity in fish were correlated. The results collectively indicate that AChE is a consistent biomarker for diffused contaminant exposure in agricultural catchments. Environ. Toxicol. Chem. 2012; 31: 15011510. (C) 2012 SETAC  
Keywords: Agricultural catchment, Acetylcholinesterase, Cyprinid fish species,  
ISI Document Delivery No.: 958ZS

1322. Sun, B-L; Zeng, X-B, and Sun, B-L. Adsorption-Desorption Behavior of Chlorpyrifos Toxic Metabolite 3,5,6-Tcp on Soils. 2011 Jun; 30, (6): 1114-1120.   
Rec #: 39729  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: On the basis of the OECD Guideline 106, the batch equilibrium experiments were carried out in six kinds of soils to investigate adsorption and desorption processes of 3,5,6-TCP (3,5,6-trichloro-2-pyridinol), which were an ionizable organic compound and one kind of toxic metabolites of chlorpyrifos. The results showed that the adsorption kinetic behaviors of the 3,5,6-TCP in the quaternary red soil, black soil, yellow loam soil and brown soil were best described by the Elovich equation, Double Constant model and Parabolic diffusion model, while it could not be well described by above models (Correlation coefficient1. The adsorption constant K super(a) sub(f) super(ds) and K sub(d) in six kinds of soils varied form 1.37 similar to 6.74 mu g super(1-nf) times mL super(nf) times g super(-1) and 0.50 times 1.30 mL times g super(-1) respectively. It was concluded that the quaternary red and black soils had the strongest capacity of adsorption, while the other four soils had a great leaching risk.  
Keywords: Chlorpyrifos  
Keywords: Soil  
Keywords: sandy soils  
Keywords: Sorption  
Keywords: loam  
Keywords: Desorption  
Keywords: P 5000:LAND POLLUTION  
Keywords: Adsorption  
Keywords: Pollution Abstracts; Environment Abstracts  
Keywords: Metabolites  
Keywords: ENA 15:Renewable Resources-Terrestrial  
Keywords: quaternary  
Date revised - 2012-01-01  
Language of summary - English  
Pages - 1114-1120  
ProQuest ID - 907260279  
SubjectsTermNotLitGenreText - Chlorpyrifos; Soil; sandy soils; Sorption; Desorption; loam; Adsorption; Metabolites; quaternary  
Last updated - 2012-08-02  
Corporate institution author - Sun, B-L; Zeng, X-B  
DOI - OB-MD-0017451898; 15742835; 1672-2043 English

1323. Sun, F; Chen, H S, and Sun, F. Monitoring of Pesticide Chlorpyrifos Residue in Farmed Fish: Investigation of Possible Sources. 2008 May; 71, (10): 1866-1869.   
Rec #: 42159  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos, a widely used organophosphorus insecticide having many urban and agricultural pest control uses, is one of the major pesticides detected in Taiwan fishery products. Whereas previous studies examined, this study explored possible sources of chlorpyrifos residue, particularly in farmed fish. Eight hundred fourteen samples of marketable fish were analyzed for chlorpyrifos residues. One hundred thirty-seven samples contained detectable residues, and farmed fish showed higher detection rates (23%) than wild fish. Based on the findings of all media of the eleven aquiculture farms, the existence of chlorpyrifos in the farmed fish were positively related to existence in fish feed. A study of indoor carp confirmed dietary accumulation of chlorpyrifos.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Taiwan  
Keywords: SW 3030:Effects of pollution  
Keywords: Freshwater fish  
Keywords: Freshwater  
Keywords: Aquaculture  
Keywords: Insecticides  
Keywords: Agricultural Chemicals  
Keywords: farms  
Keywords: Fish culture  
Keywords: Diets  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: Organophosphorus compounds  
Keywords: Q3 01582:Fish culture  
Keywords: Feed  
Keywords: Residues  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Pollution Abstracts; Aqualine Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; ASFA 1: Biological Sciences & Living Resources; ASFA Aquaculture Abstracts  
Keywords: Fish Farming  
Keywords: Pest control  
Keywords: Q1 01582:Fish culture  
Keywords: Chlorpyrifos  
Keywords: Carp  
Keywords: Bioaccumulation  
Keywords: Pesticides  
Keywords: Fish  
Keywords: Fish Populations  
Keywords: Monitoring  
Keywords: Fishery products  
Keywords: Feeds  
Date revised - 2008-07-01  
Language of summary - English  
Location - Taiwan  
Pages - 1866-1869  
ProQuest ID - 19305231  
SubjectsTermNotLitGenreText - Insecticides; Bioaccumulation; Feed; Pesticides; Pest control; Freshwater fish; Fish culture; Fishery products; Diets; Chlorpyrifos; Organophosphorus compounds; Residues; farms; Aquaculture; Feeds; Carp; Agricultural Chemicals; Fish Farming; Fish; Fish Populations; Monitoring; Taiwan; Freshwater  
Last updated - 2011-12-14  
British nursing index edition - Chemosphere [Chemosphere]. Vol. 71, no. 10, pp. 1866-1869. May 2008.  
Corporate institution author - Sun, F; Chen, H S  
DOI - MD-0008221348; 8291344; CS0839779; 0045-6535 English

1324. Sun, H.; Si, C. Z.; Bian, Q.; Chen, X. D.; Chen, L. S., and Wang, X. R. Developing in vitro reporter gene assays to assess the hormone receptor activities of chemicals frequently detected in drinking water. 2012; 32, (8): 635-641.   
Rec #: 70059  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The present study intended to develop receptor-mediated luciferase reporter gene assays to evaluate and compare the estrogen receptor (ER), androgen receptor (AR) and thyroid hormone receptor (TR) activities of target chemicals. Di-2-ethylhexyl-phthalate (DEHP), chlorpyrifos (CPF), 2,4-dichlorophenoxyacetic acid (2,4-D) and bisphenol A (BPA) are some of the most common contaminants in drinking water and are frequently detected in China and worldwide. The chemicals were tested at concentrations of 0.1, 1, 10 and 100 times their maximum contaminant level in drinking water. The results showed that BPA possessed various activities on ER, AR and TR. DEHP and CPF could suppress 17 beta-estradiol or testosterone activity with different potencies, and DEHP possessed weaker anti-thyroid hormone activity. 2,4-D showed no agonist or antagonist activity against these hormone receptors, but it significantly enhanced the activity of testosterone through AR. Furthermore, the mixture of DEHP and CPF exhibited stronger ER and AR antagonist activities than each single component alone, but their combined effects were less than the expected effects based on the additive model. These results implied that the transcription activation mediated by hormone receptors was the potential endocrine-disrupting mechanism of the test chemicals. Our study also provided useful tools for evaluation of their endocrine disrupting activity. Copyright (c) 2012 John Wiley & Sons, Ltd.  
Keywords: di-2-ethylhexyl-phthalate, chlorpyrifos, 2, 4-dichlorophenoxyacetic  
ISI Document Delivery No.: 963EO

1325. Sun, J. F. ; Guo, L.; Bao, Y., and Xie, J. W. A simple, label-free AuNPs-based colorimetric ultra sensitive detection of nerve agents and highly toxic organophosphate pesticide. 2011; 28, (1): 152-157.   
Rec #: 70069  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Here, a simple label-free colorimetric sensing method for organophosphate (OP) nerve agents and pesticide based on catalytic reaction of acetylcholine esterase (AChE) and the aggregation of lipoic acid (LA) capped AuNPs has been established, which is highly sensitive with a limit of detection (LOD) lowered to pM level. In this method, only the AChE hydrolysis product of acetylthiocholine (ATCh), i.e., cationic thiocholine (TCh) can induce the aggregation of LA capped AuNPs along with a distinct color change from red to steel-blue. When OPs as enzyme inhibitors exist, the generation of TCh can be suppressed and the color change of LA capped AuNPs is gradually diminished according to different concentrations of OPs. The feasibility of this method has been demonstrated by sensitive measurement of OP nerve agents and pesticide in a spiked fruit sample with reliable results. This distinct and rapid colorimetric response enables us to readily probe OPs without more technical demand. (C) 2011 Elsevier B.V. All rights reserved.  
Keywords: Gold nanoparticles, Organophosphates, Acetylcholine esterase, Lipoic  
ISI Document Delivery No.: 830MS

1326. Sun, Lina. Determination of Organophosphorus Pesticides and Their Degradation Products in Atmospheric Samples in Western Canada by Lc/Esi+ Ms/Ms. 2009: (UMI# MR65725 ).   
Rec #: 51859  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This thesis describes a new analytical method for determination of organophosphorus pesticides along with their degradation products using liquid chromatography positive ion electrospray-tandem mass spectrometry with selected reaction monitoring. Chromatography was performed on a Gemini C 6 -phenyl column with a gradient elution using a water-methanol with 0.1% formic acid, 2mM ammonium acetate mobile phase at a flow rate of 0.2 mL min-1 . Method detection limits of 0.1-5 ÎĽg L-1 for selected organophosphorus pesticides, organophosphorus oxon degradation products and other degradation products, such as: 3,5,6-trichloro-2-pyridinol; 2-isopropyl-6-methyl-4-pyrimidol; and diethyl phosphate. Some organophosphorus pesticides such as fenchlorphos are less sensitive with method detection limits of 30 ÎĽg L -1 . A three-point identification approach was adopted with an area from the first selected reaction monitoring transition used for quantitative analysis, while a second selected reaction monitoring transition along with the ratio of areas obtained from the first to second transition are used for confirmation with sample tolerance established by the relative standard deviation of the ratio obtained from standards, which ranged from 3% to 11%. This new method permitted the first known detection of organophosphorus oxon degradation products including chlorpyrifos oxon in atmospheric samples from Bratt's Lake, Saskatchewan and diazinon oxon and malathion oxon from Abbotsford, British. Atmospheric detection limits typically ranged from 0.2-10 pg m -3 . High atmospheric concentrations were observed for chlorpyrifos at Bratt's Lake, diazinon at Abbotsford, and malathion at both sites, particularly in the spring or summer. These high atmospheric concentrations were partly attributed to volatilization of malathion at both sites. A significant amount of the variability in atmospheric concentrations could not be explained by local temperature variations, indicating the source contributions from both local/regional and long-range atmospheric transport were also important. Degradation products followed similar atmospheric trends to their parent active ingredients, indicating that in general higher concentrations of degradation products were observed with elevated concentrations of organophosphorus parent compounds. Additionally, the ratios between the atmospheric concentrations of organophosphorus pesticides and organophosphorus oxons provide an insight into the age of pesticides. Keywords: Liquid chromatography-tandem mass spectrometry; Currently used pesticides; Pesticide analysis; Long-range atmospheric transport; Organophosphorus oxon; Bratt's Lake, Saskatchewan; Abbotsford, British Columbia.  
Start Page: 128  
ISSN/ISBN: 9780494657256  
Keywords: 0486:Analytical chemistry  
Keywords: 0371:Atmospheric Chemistry  
Keywords: Earth sciences  
Keywords: Pure sciences  
55025091  
2009  
Sun, Lina  
0486: Analytical chemistry  
759469623  
66569  
n/a  
English  
Copyright ProQuest, UMI Dissertations Publishing 2009  
0371: Atmospheric Chemistry  
2169298161  
9780494657256  
MR65725  
2012-07-06  
Pure sciences  
Earth sciences English

1327. Sundaramurthy, V. T. and Chitra, K. Integrated Pest Management in Cotton. 1992; 20, (1): 1-17.   
Rec #: 340  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ADC,CBF,CBL,CPY,CYP,DCF,DM,DMT,DU,ES,FNV,NMO), NO REVIEW (ADC,CBF,CBL,CPY,CYP,DCF,DM,DMT,DU,ES,FNV,NMO)  
Notes: Chemical of Concern: ADC,CBF,CBL,CPY,CYP,DCF,DM,DMT,DU,ES,FNV,NMO,PHSL,PPHD

1328. Sungur, S. and Tunur, C. Investigation of pesticide residues in vegetables and fruits grown in various regions of Hatay, Turkey. 2012; 5, (4): 265-267.   
Rec #: 70079  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In this study, 175 pesticide residues in various vegetable and fruit samples grown in different regions of Hatay, Turkey, were investigated. Residue analyses were performed using liquid chromatography-tandem mass spectrometry with the QuEChERS method. In tomato, plum and apricot samples, pesticide residues were below the limits of detection. In other samples, at least one pesticide residue was detected. Twelve pesticides (acetamiprid, carbendazim, chlorpyrifos, fenarimol, fludioxonil, hexythiazox, imidacloprid, metalaxyl, pyridaben, pyriproxyfen, thiabendozole, triadimenol) were found at levels between 0.003 and 0.759 mg kg(-1). Only in cucumber samples, acetamiprid residues were found at levels greater than the maximum acceptable limit in Turkish Food Codex and European Union maximum residue limits (EU MRLs). In other samples, the detected residue amounts are less than the MRLs declared in the Turkish Food Codex and EU MRLs.  
Keywords: pesticide, residue, fruit, vegetable, LC-MS/MS  
ISI Document Delivery No.: 030UR

1329. Sunkaria, A.; Wani, W. Y.; Sharma, D. R., and Gill, K. D. Dichlorvos Exposure Results in Activation Induced Apoptotic Cell Death in Primary Rat Microglia. 2012; 25, (8): 1762-1770.   
Rec #: 70089  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Dichlorvos [2,2-dichlorovinyl dimethyl phosphate] is one of the most common in-use organophosphate (OP) in developing nations. Previous studies from our lab have shown chronic Dichlorvos exposure leads to neuronal cell death in rats. However, the extent of damage caused by Dichlorvos to other cells of the central nervous system (CNS) is still not clear. Microglial cells are the primary threat sensors of CNS which become activated in many pathological conditions. Activation of microglial cells results in reactive microgliosis, manifested by increased cellular damage in the affected regions. **Using rat primary microglial cultures, here we show that Dichlorvos exposure can activate and induce apoptotic cell death in microglia.** We observed significant up-regulation of pro-inflammatory molecules like nitric oxide, TNF-alpha, and IL-1 beta when microglia were treated with Dichlorvos (10 mu M). Significant up-regulation of CD11b, microglial specific activation marker, was also observed after 24 h of Dichlorvos treatment. The activated microglial cells eventually undergo cell death after 48 h of Dichlorvos treatment. The DNA fragmentation pattern of Dichlorvos treated microglia along with increased expression of Bax in mitochondria, cytochrome c release from mitochondria, and caspase-3 activation led us to assume that microglia were undergoing apoptosis. Thus, the present study showed that Dichlorvos can induce microglial activation and ultimately apoptotic cell death. These findings gave new perspective to the current knowledge of Dichlorvos (OPs) mediated CNS damage and presents microglial activation as a potential therapeutic target for preventing the OP induced neuronal damage.  
Keywords: NITRIC-OXIDE SYNTHASE, DUAL ROLE, BRAIN, MECHANISM, NEUROTOXICITY,  
ISI Document Delivery No.: 990IS

1330. Swarcewicz, M. K. and Gregorczyk, A. The effects of pesticide mixtures on degradation of pendimethalin in soils. 2012; 184, (5): 3077-3084.   
Rec #: 70109  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Most agronomic situations involve a sequence of herbicide, fungicide, and insecticide application. On the other hand, use of pesticidal combinations has become a standard practice in the production of many agricultural crops. One of the most important processes influencing the behavior of a pesticide in the environment is its degradation in soil. It is known that due to several pesticide applications in one vegetation season, the pesticide may be present in mixtures with other pesticides or xenobiotics in soil. This study examines the role which a mixture of chemicals plays in pesticide degradation. The influence of other pesticides on the rate of **pendimethalin** (PDM) degradation in soil was measured in controlled conditions. Mixtures of PDM with **mancozeb** or mancozeb and **thiamethoxam** significantly influenced the degradation of pendimethalin under controlled conditions. The second type of mixtures, with **metribuzin** or thiamethoxam, did not affect the behavior of pendimethalin in soil. Also, we determined the influence of water content on the rate of pendimethalin degradation alone in two soils and compared it to the rate in three pesticide mixtures. We compared two equations to evaluate the predictors of the rate of herbicide dissipation in soil: the first-order kinetic and the non-linear empirical models. We used the non-linear empirical model assuming that the degradation rate of a herbicide in soil is proportional to the difference of the observed concentration of herbicide in soil at time and concentration of herbicide in the last day of measurement.  
Keywords: Dissipation, Mancozeb, Metribuzin, Pendimethalin, Soil, Thiamethoxam  
ISI Document Delivery No.: 933RX

1331. Swier, S. R.; Rollins, A.; Nye, L.; Rodgers, V., and Johnson, A. Efficacy of Nematodes, Talstar and Lorsban for Residual Control of Black Vine Weevil, 1998. SOIL; 1999; 24, 77-78 (C20).   
Rec #: 2270  
Keywords: NO CONC  
Call Number: NO CONC (BFT,CPY)  
Notes: Chemical of Concern: BFT,CPY

1332. Taccari, M ; Comitini, F; Casucci, C; Ciani, M, and Taccari, M. Toxicity Assessment of Compounds in Soil Using a Simple Respirometric Technique. 2011 Jan; 65, ( 1): 60-64.   
Rec #: 43659  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A laboratory procedure using a simple respirometric technique was evaluated to determine the microbial toxicity in soil of three toxicant compounds: two pesticides, chlorpyrifos and glyphosate; and diesel oil. The microbial toxicity was tested using the specific oxygen uptake rate (SOUR) method, evaluating the soil samples for both the reduction in maximum SOUR (SOUR sub(max)) and the cumulative oxygen demands after 20 h (OD sub(20)). Consumption rate curves were produced for the lowest concentrations assessed: diesel (2460 ppm), chlorpyrifos (62.5 ppm), and glyphosate (250 ppm) (limiting amounts considered as local soil contamination). In comparison with the control, these showed drastic reductions in SOUR sub(max), demonstrating the high sensitivity of this SOUR method. The SOUR sub(max) provides a better indication of the microbial toxicity of these contaminants compared to the OD sub(20) because of the different effects of these toxic compounds on microbial communities in the soil. Increasing concentrations of these toxic compounds resulted in different responses, evaluated as percentage inhibition by these different xenobiotic compounds. For these reasons, the microbial toxicity of xenobiotic compounds can be better recognized with SOUR sub(max) as compared to other respirometric methodologies.  
Keywords: A 01380:Plant Protection, Fungicides & Seed Treatments  
Keywords: Sour taste  
Keywords: Biodeterioration  
Keywords: Biodegradation  
Keywords: Contamination  
Keywords: Toxicants  
Keywords: P 5000:LAND POLLUTION  
Keywords: Microbial activity  
Keywords: Xenobiotics  
Keywords: Toxicity  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Soil  
Keywords: Oil  
Keywords: Soil pollution  
Keywords: Oxygen  
Keywords: W 30950:Waste Treatment & Pollution Clean-up  
Keywords: Environment Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Pollution Abstracts  
Keywords: soil contamination  
Keywords: Pesticides  
Keywords: Diesel  
Keywords: Contaminants  
Keywords: Glyphosate  
Keywords: Biology  
Date revised - 2011-05-01  
Language of summary - English  
Pages - 60-64  
ProQuest ID - 876369183  
SubjectsTermNotLitGenreText - Sour taste; Biodeterioration; Biodegradation; Toxicants; Contamination; Toxicity; Oil; Soil; Chlorpyrifos; Soil pollution; Oxygen; Pesticides; Diesel; Contaminants; Glyphosate; soil contamination; Microbial activity; Xenobiotics  
Last updated - 2011-11-09  
Corporate institution author - Taccari, M; Comitini, F; Casucci, C; Ciani, M  
DOI - OB-818851ac-1222-47a2-8d98csamfg201; 14183910; 0964-8305 English

1333. Tadeo, J. L.; Castro, J., and Sanchez-Brunete, C. Multiresidue Determination in Soil of Pesticides Used in Tomato Crops by Sonication-Assisted Extraction in Small Columns and Gas Chromatography. SOIL; 2004; 84, (1-3): 29-37.   
Rec #: 1420  
Keywords: CHEM METHODS  
Call Number: NO CHEM METHODS (CPY,ES1,ES2,ESS,PDM,TFN)  
Notes: Chemical of Concern: BTL,CPY,EFL,ES1,ES2,ESS,PDM,TFN

1334. Taggart, D. J.; Mitchell, J. K., and Friesen, P. D. A Conserved N-Terminal Domain Mediates Required Dna Replication Activities and Phosphorylation of the Transcriptional Activator Ie1 of Autographa Californica Multicapsid Nucleopolyhedrovirus.   
Rec #: 49939  
Keywords: VIRUS  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: IE1 is the principal transcriptional regulator of the baculoviruses. Like multifunctional transcription factors of other large DNA viruses, IE1 is an essential, site-specific DNA-binding phosphoprotein that activates virus gene expression and promotes genome replication. To define the poorly understood mechanisms by which IE1 achieves its diverse functions, we identified IE1 domains that contribute to productive infection of Autographa californica multicapsid nucleopolyhedrovirus (AcMNPV), the baculovirus prototype. Site-directed mutagenesis revealed that the N-terminal 23 residues of IE1 are required for origin-specific DNA replication and AcMNPV propagation, but not for DNA-binding-dependent transcriptional activation. Within this defined replication domain, we identified an invariant TPXR/H motif that resembles a consensus cyclin-dependent kinase phosphorylation site. Amino acid substitutions of potential phosphorylation sites within or near this motif caused loss of IE1-mediated DNA replication activity. Remarkably, substitution of the single threonine (residue 15) within the TPXR/H motif caused complete loss of AcMNPV multiplication. The replication domain was required for IE1 phosphorylation. It was also sufficient for conferring phosphorylation of a heterologous protein. Importantly, IE1 hyperphosphorylation coincided exclusively with AcMNPV DNA replication. The temporal regulation of IE1 phosphorylation and the essential nature of the TPXR/H motif suggest that phosphorylation critically alters and possibly activates DNA replication activity of IE1 during infection. The striking conservation of the TPXR/H motif among IE1 proteins further suggests that this molecular switch may be a common mechanism by which the alphabaculoviruses coordinate DNA replication and gene expression by using a single regulator.  
MESH HEADINGS: Animals  
MESH HEADINGS: Cell Line  
MESH HEADINGS: Conserved Sequence  
MESH HEADINGS: \*DNA Replication  
MESH HEADINGS: Drosophila melanogaster  
MESH HEADINGS: Gene Expression Regulation, Viral  
MESH HEADINGS: Immediate-Early Proteins/\*chemistry/genetics/\*metabolism  
MESH HEADINGS: Nucleopolyhedrovirus/chemistry/\*genetics/physiology  
MESH HEADINGS: Phosphorylation  
MESH HEADINGS: Protein Structure, Tertiary  
MESH HEADINGS: Spodoptera  
MESH HEADINGS: Trans-Activators/\*chemistry/genetics/\*metabolism  
MESH HEADINGS: Virus Replication eng

1335. Tait, S.; Ricceri, L.; Venerosi, A.; Maranghi, F.; Calamandrei, G., and Mantovani, A. Long-Term Effect of Developmental Exposure to Chlorpyrifos on Hypothalamic Neuropeptides in Mice. 2008; 180, (Suppl. 1): S175(ABS).   
Rec #: 1430  
Keywords: ABSTRACT  
Call Number: NO ABSTRACT (CPY)  
Notes: Chemical of Concern: CPY

1336. Tait, Sabrina; Ricceri, Laura; Venerosi, Aldina; Maranghi, Francesca; Calamandrei, Gemma, and Mantovani, Alberto. Long-term effect of developmental exposure to chlorpyrifos on hypothalamic neuropeptides in mice: Abstracts of the 45th Congress of the European Societies of Toxicology. 2008 Oct 5-; 180, Supplement, (0): S175.   
Rec #: 2480  
Keywords: ABSTRACT  
Notes: Chemical of Concern: CPY

1337. Takahashi, S.; Kawashima, K.; Kawasaki, M.; Kamito, J. ; Endo, Y.; Akatsu, K.; Horino, S.; Yamada, R., and Kera, Y. Enrichment and characterization of chlorinated organophosphate ester-degrading mixed bacterial cultures. 2008; 106, (1): 27-32.   
Rec #: 70139  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorinated organophosphate ester (OPE)-degrading enrichment cultures were obtained using tris(2-chloroethyl) phosphate (TCEP) or tris(1,3-dichloro-2-propyl) phosphate (TDCPP) as the sole phosphorus source. In cultures with 46 environmental samples, significant TCEP and TDCPP degradation was observed in 10 and 3 cultures, respectively, and successive subcultivation markedly increased their degradation rates. 67E and 45D stable enrichment cultures obtained with TCEP and TDCPP, respectively, completely degraded 20 mu M of the respective compounds within 6 h and also the other, although the degradation rate of TCEP by 45D was relatively slow. We confirmed chloride ion generation on degradation in both cases and the generation of 2-chloroethanol (2-CE) and 1,3-dichloro-2-propanol (1,3-DCP) as metabolites of TCEP and TDCPP, respectively. 67E and 45D also showed dehalogenation ability toward 2-CE and 1,3-DCP, respectively. Addition of inorganic phosphate did not significantly influence their ability to degrade the chlorinated OPEs but markedly increased their dehalogenation ability, which was maximum at 0.2 mM of inorganic phosphate and decreased at a higher concentration. Denaturing gradient gel electrophoresis analysis showed that dominant bacteria in 67E are related to Acidovorax spp. and Sphingomonas spp. and those in 45D are Acidovorax spp., Aquabacterium spp., and Sphingomonas spp. This analysis indicated the relationship of the Sphingomonas- and Acidovorax-related bacteria with the cleavage of the phosphoester bond and dehalogenation, respectively, in both cultures. This is the first report on bacterial enrichment cultures capable of degrading both TCEP and TDCPP.  
Keywords: tris(2-chloroethyl) phosphate, tris(1,3-dichloro-2-propyl) phosphate,  
ISI Document Delivery No.: 352PG

1338. Tamarit-L+¦pez, Jes+ s; Morais, Sergi; Puchades, Rosa, and Maquieira, +üngel. Direct hapten-linked multiplexed immunoassays on polycarbonate surface. 2011 Jan 15-; 26, (5): 2694-2698.   
Rec #: 5750  
Keywords: METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Direct hapten-linked multiplexed immunoassay is developed on the polycarbonate surface of standard Digital Versatile Discs (DVDs) for six compounds of environmental concern, as proof of concept. Carboxylated haptens are directly linked to the aminated polycarbonate surface through carbodiimide/succinimide coupling. The modified DVD surface maintained its physical and optical properties. Multiplexed assay reached detection limits down to 0.1 ++g/L for chlorpyrifos, 2,4,5-trichlorophenoxypropionic acid, sulfathiazole and sulfasalazine and down to 1.0 ++g/L for fenthion and malathion. This approach presents advantages such as the improvement in sensitivity in comparison to proteinÇôhapten conjugate format for all the studied analytes and the absence of cross-interference effects, allowing high throughput multianalysis on the same surface. Also, a comparison of the performance of two sensing strategies indicated that DVD disc and drive approach turned out in a simpler mode, the assays being more reproducible and with higher signal to noise ratios. Direct hapten-linked immunoassay/ Polycarbonate/ Digital versatile disc/ Microarray/ Multiplexed analysis

1339. Tamarit-Lopez, J.; Morais, S.; Banuls, M. J.; Puchades, R., and Maquieira, A. Development of Hapten-Linked Microimmunoassays on Polycarbonate Discs. 2010; 82, (5): 1954-1963.   
Rec #: 70159  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An amino-modified polycarbonate surface of compact discs is used to link haptens covalently and directly as an alternative to the classic protein-hapten conjugate adsorption coating strategy employed in immunoassays. The modified surface maintains its physical and optical properties, and a standard disk drive can then read the assay results. Advantages are evaluated, such as the use of it broader spectrum of coupling media including organic, solvents that are inappropriate for proteins but necessary for some water-insoluble haptens and the bypassing of the synthesis and purification for protein conjugates. As proof of concept, competitive microimmunoassays were developed for chlorpyrifos, atrazine, and 2-(2,4,5-trichlorophenoxy)propionic acid (2,4,5-TP), in microarray format, obtaining detection limits of 37.2, 8.1, and 76 ng/L, respectively. The sensitivity was 1 order of magnitude better than that obtained for all the studied systems using hapten-protein conjugates adsorbed on polystyrene enzyme-linked immunosorbent assay (ELISA) plates and polycarbonate surfaces. Further, the influence of hapten structure and presentation on molecular recognition pattern is discussed. To our knowledge, this is the first time that microarray and compact disc technologies converge with this particular hapten immobilization mode. The great potential of the approach is demonstrated through the high-throughput capability of the disc in a range of analytical applications, as well as the inherent advantages of compact disc reading technology.  
Keywords: IMMUNOSORBENT-ASSAY, 2,4-DICHLOROPHENOXYACETIC ACID, MICROTITER PLATES,  
ISI Document Delivery No.: 559QN

1340. Tamasi, V. ; Miller, K. K.; Ripp, S. L.; Vila, E.; Geoghagen, T. E., and Prough, R. A. Modulation of Receptor Phosphorylation Contributes to Activation of Peroxisome Proliferator Activated Receptor Alpha by Dehydroepiandrosterone and Other Peroxisome Proliferators.   
Rec #: 51329  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Biol Chem. 1999 Apr 9;274(15):10505-10 (medline /10187842)  
COMMENTS: Cites: Nature. 1998 Nov 26;396(6709):377-80 (medline /9845075)  
COMMENTS: Cites: Mutat Res. 2000 Mar 17;448(2):121-38 (medline /10725467)  
COMMENTS: Cites: Biochem Pharmacol. 2000 Oct 15;60(8):1027-32 (medline /11007938)  
COMMENTS: Cites: Mol Pharmacol. 2001 Sep;60(3):611-9 (medline /11502894)  
COMMENTS: Cites: Mol Pharmacol. 2003 Jul;64(1):113-22 (medline /12815167)  
COMMENTS: Cites: Mol Pharmacol. 2003 Aug;64(2):355-64 (medline /12869640)  
COMMENTS: Cites: J Steroid Biochem Mol Biol. 2003 Jun;85(2-5):267-73 (medline /12943712)  
COMMENTS: Cites: J Biol Chem. 2003 Nov 21;278(47):46261-9 (medline /12966092)  
COMMENTS: Cites: Cancer Res. 1992 May 15;52(10):2977-9 (medline /1316232)  
COMMENTS: Cites: Mol Endocrinol. 2004 Jul;18(7):1589-98 (medline /14988430)  
COMMENTS: Cites: Biochem Biophys Res Commun. 2004 Oct 29;323(4):1313-20 (medline /15451440)  
COMMENTS: Cites: J Pharm Sci. 2005 Jun;94(6):1169-86 (medline /15858847)  
COMMENTS: Cites: J Steroid Biochem Mol Biol. 2005 Feb;93(2-5):99-105 (medline /15860251)  
COMMENTS: Cites: Biochemistry. 2005 Aug 2;44(30):10313-21 (medline /16042408)  
COMMENTS: Cites: Cancer Res. 1989 May 1;49(9):2337-43 (medline /2523237)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1979 Sep;76(9):4350-4 (medline /388439)  
COMMENTS: Cites: Nature. 1970 Aug 15;227(5259):680-5 (medline /5432063)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1984 Oct;81(20):6378-82 (medline /6093099)  
COMMENTS: Cites: Methods Enzymol. 1981;72:315-9 (medline /7031421)  
COMMENTS: Cites: Biochemistry. 1993 Jun 1;32(21):5598-604 (medline /7684926)  
COMMENTS: Cites: Cell. 1995 Jan 27;80(2):225-36 (medline /7834742)  
COMMENTS: Cites: J Biol Chem. 1994 Sep 30;269(39):23861-4 (medline /7929029)  
COMMENTS: Cites: Genes Dev. 1994 Nov 1;8(21):2527-39 (medline /7958915)  
COMMENTS: Cites: Cancer Res. 1994 Jun 1;54(11):2878-86 (medline /8187072)  
COMMENTS: Cites: J Biol Chem. 1993 Mar 15;268(8):5530-4 (medline /8383673)  
COMMENTS: Cites: Mol Pharmacol. 1996 Jul;50(1):67-74 (medline /8700121)  
COMMENTS: Cites: Endocrinology. 1996 Oct;137(10):4499-502 (medline /8828512)  
COMMENTS: Cites: J Biol Chem. 1996 Dec 13;271(50):31771-4 (medline /8943212)  
COMMENTS: Cites: Science. 1996 Dec 20;274(5295):2100-3 (medline /8953045)  
COMMENTS: Cites: J Biol Chem. 1997 Feb 21;272(8):5128-32 (medline /9030579)  
COMMENTS: Cites: J Biol Chem. 1997 Mar 21;272(12):8071-6 (medline /9065481)  
COMMENTS: Cites: J Biol Chem. 1997 Apr 18;272(16):10811-6 (medline /9099735)  
COMMENTS: Cites: Diabetes. 1997 Aug;46(8):1319-27 (medline /9231657)  
COMMENTS: Cites: Anal Biochem. 1976 May 7;72:248-54 (medline /942051)  
COMMENTS: Cites: Mol Pharmacol. 1998 Jan;53(1):14-22 (medline /9443928)  
COMMENTS: Cites: Biochem Pharmacol. 1999 Sep 15;58(6):1001-8 (medline /10509752)  
ABSTRACT: Dehydroepiandrosterone (DHEA), a C19 human adrenal steroid, activates peroxisome proliferator-activated receptor alpha (PPARalpha) in vivo but does not ligand-activate PPARalpha in transient transfection experiments. We demonstrate that DHEA regulates PPARalpha action by altering both the levels and phosphorylation status of the receptor. Human hepatoma cells (HepG2) were transiently transfected with the expression plasmid encoding PPARalpha and a plasmid containing two copies of fatty acyl coenzyme oxidase (FACO) peroxisome-proliferator activated receptor responsive element consensus oligonucleotide in a luciferase reporter gene. Nafenopin treatment increased reporter gene activity in this system, whereas DHEA treatment did not. Okadaic acid significantly decreased nafenopin-induced reporter activity in a concentration-dependent manner. Okadaic acid treatment of primary rat hepatocytes decreased both DHEA- and nafenopin-induced FACO activity in primary rat hepatocytes. DHEA induced both PPARalpha mRNA and protein levels, as well as PP2A message in primary rat hepatocytes. Western blot analysis showed that the serines at positions 12 and 21 were rapidly dephosphorylated upon treatment with DHEA and nafenopin. Results using specific protein phosphatase inhibitors suggested that protein phosphatase 2A (PP2A) is responsible for DHEA action, and protein phosphatase 1 might be involved in nafenopin induction. Mutation of serines at position 6, 12, and 21 to an uncharged alanine residue significantly increased transcriptional activity, whereas mutation to negative charged aspartate residues (mimicking receptor phosphorylation) decreased transcriptional activity. DHEA action involves induction of PPARalpha mRNA and protein levels as well as increased PPARalpha transcriptional activity through decreasing receptor phosphorylation at serines in the AF1 region.  
MESH HEADINGS: Animals  
MESH HEADINGS: Cell Line, Tumor  
MESH HEADINGS: Cell Survival/drug effects  
MESH HEADINGS: Cells, Cultured  
MESH HEADINGS: Data Interpretation, Statistical  
MESH HEADINGS: Dehydroepiandrosterone/\*pharmacology  
MESH HEADINGS: Dose-Response Relationship, Drug  
MESH HEADINGS: Genes, Reporter  
MESH HEADINGS: Hepatocytes/drug effects/metabolism  
MESH HEADINGS: Luciferases/metabolism  
MESH HEADINGS: Male  
MESH HEADINGS: Mutation  
MESH HEADINGS: Nafenopin/\*pharmacology  
MESH HEADINGS: PPAR alpha/chemistry/genetics/\*metabolism  
MESH HEADINGS: Peroxisome Proliferators/\*pharmacology  
MESH HEADINGS: Phosphorylation/drug effects  
MESH HEADINGS: Plasmids  
MESH HEADINGS: Pyrimidines/\*pharmacology  
MESH HEADINGS: RNA, Messenger/biosynthesis  
MESH HEADINGS: Rats  
MESH HEADINGS: Rats, Sprague-Dawley  
MESH HEADINGS: Transfection eng

1341. Tan, D. H. ; Peng, S. Q.; Wu, Y. L.; Wang, Y. M.; Lu, C. F., and Yan, C. H. Chronic organophosphate (OP)-induced neuropsychiatric disorder is a withdrawal syndrome. 2009; 72, (4): 405-406.   
Rec #: 70189  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chronic organophosphate-induced neuropsychiatric disorder is a less well-characterized syndrome, which is usually delay-occurred, persists long and is similar to the symptom of cholinergic deficit, its mechanism is unclear. The characteristics of chronic organophosphate-induced neuropsychiatric disorder are somewhat opposite to the direct action of OP pesticide, since withdrawal effect is usually opposite to the original effect of a drug, hypothesis that chronic organophosphate-induced neuropsychiatric disorder is a kind of withdrawal syndrome is suggested. (C) 2008 Elsevier Ltd. All rights reserved.  
Keywords: CHOLINERGIC SYSTEM, ALZHEIMERS-DISEASE, EXPOSURE, NEURONS,  
ISI Document Delivery No.: 425EM

1342. Tan, De-Hong; Peng, Shuang-Qing; Wu, Ying-Liang; Wang, Yi-Mei; Lu, Chun-Feng; Ding, Wei; Wang, Qiao-Xu, and Yan, Chang-Hui. Chlorpyrifos Induces Delayed Cytotoxicity After Withdrawal in Primary Hippocampal Neurons Through Extracellular Signal-Regulated Kinase Inhibition. 2009 Oct; 32, (10): 1649-1655.   
Rec #: 40969  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In this study, the delayed effect and related mechanism after chlorpyrifos (CPF) withdrawal was studied in primary rat hippocampal neurons. The results showed that 10 muM CPF induced no detectable cytotoxicity during 96 h continuous exposure while its withdrawal after 48 h exposure induced evident cytotoxicity, as indexed by decreased methyl thiazolyl tetrazolium (MTT) metabolism, increased loss of neurons immunostained by neuron-specific enolase (NSE) antibody, and the increased terminal deoxynucleotidyl transferase-mediated deoxyuridine triphosphate nick end labeling (TUNEL) positive cell rate in the following 24 h and 48 h incubation in the absence of CPF. Extracellular signal-related kinase (ERK)1/2 activation by phosphorylation was observed and persisted during CPF exposure. However, CPF withdrawal after 48 h exposure led to inhibition of ERK1/2 phosphorylation. Carbacol and nerve growth factor (NGF), which are ERK1/2 activators, protected the neurons after CPF withdrawal, while atropine and PD98059, which are ERK1/2 inhibitors, exacerbated the cytotoxicity, indicating the involvement of inhibition of ERK1/2 phosphorylation in CPF-induced delayed cytotoxicity. In conclusion, CPF withdrawal after exposure induced delayed cytotoxicity in cultured neurons. Inhibition of ERK1/2 phosphorylation was found to be related to the delayed cytotoxicity. This finding may provide a new insight into the toxicological mechanism of organophosphorus pesticides, especially chronic organophosphate-induced neuropsychiatric disorder characterized by delayed occurrence.  
Keywords: 51-55-8  
Keywords: 2921-88-2  
Keywords: 51-83-2  
Keywords: Animals  
Keywords: Cholinergic Agonists  
Keywords: Neurons -- drug effects  
Keywords: EC 2.7.11.24  
Keywords: Cholinergic Agonists -- pharmacology  
Keywords: Nerve Growth Factor -- pharmacology  
Keywords: Hippocampus -- drug effects  
Keywords: Rats  
Keywords: Insecticides  
Keywords: Phosphorylation  
Keywords: Flavonoids -- pharmacology  
Keywords: Atropine -- pharmacology  
Keywords: Phosphopyruvate Hydratase -- immunology  
Keywords: Insecticides -- toxicity  
Keywords: PD 98059  
Keywords: Flavonoids  
Keywords: EC 4.2.1.11  
Keywords: 9061-61-4  
Keywords: Nerve Growth Factor  
Keywords: Extracellular Signal-Regulated MAP Kinases  
Keywords: Chlorpyrifos  
Keywords: In Situ Nick-End Labeling  
Keywords: Rats, Sprague-Dawley  
Keywords: 0  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Extracellular Signal-Regulated MAP Kinases -- antagonists & inhibitors  
Keywords: Carbachol  
Keywords: Phosphopyruvate Hydratase  
Keywords: Carbachol -- pharmacology  
Keywords: Atropine  
Date completed - 2010-01-28  
Date created - 2009-10-05  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 1649-1655  
ProQuest ID - 734069651  
Last updated - 2013-01-19  
British nursing index edition - Biological & pharmaceutical bulletin, October 2009, 32(10):1649-1655  
Corporate institution author - Tan, De-Hong; Peng, Shuang-Qing; Wu, Ying-Liang; Wang, Yi-Mei; Lu, Chun-Feng; Ding, Wei; Wang, Qiao-Xu; Yan, Chang-Hui  
DOI - MEDL-19801823; 19801823; 1347-5215 eng

1343. Tan, Furong; Wang, Ligang; Wang, Jinbin; Wu, Xiao; Zhu, Hong; Jiang, Lingxi; Tao, Shiru; Zhao, Kai; Yang, Yan; Tang, Xueming, and Tang, Xueming. Enhanced Pesticide Sensitivity of Novel Housefly Actylcholinesterases: a New Tool for the Detection of Residual Pesticide Contamination. 2011 Mar; 34, (3): 305-314.   
Rec #: 43499  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The full-length cDNA encoding an acetylcholinesterase (AChE) was cloned and sequenced from the housefly, Musca domestica, by reverse transcriptase-polymerase chain reaction (RT-PCR). Sequence analysis revealed that this 2,076bp sequence encodes a mature protein of 612 amino acids (67kDa) and a 79 residue signal peptide. The amino acid sequence shared 52.8-81.4% identity with the AChE proteins of other insects. The cDNA sequence, which lacked the signal peptide was inserted into the vector pPIC9K and then introduced into strain GS115 of the yeast Pichia pastoris. The recombinant AChE protein was then expressed in P. pastoris strain GS115 by methanol induction. Site-directed mutagenesis of the A262G, Y327F, Y327D and I374D residues, either singly or in combination, was performed by reverse PCR. These mutants improved the catalytic activity and sensitivity to the organophosphate and carbamate insecticides. Although the sensitivity of other mutants was slightly increased, the results still showed that the sensitivity of triple mutant, GDD (A262G/Y327D/I374D), enhanced remarkably as much as 16 times for methomyl, 14 times for both carbofuran and chlorpyrifos, and ten times for parathion-methyl, compared to that of the wild-type. The results strongly suggested that these residues are the key structural elements controlling AChE enzyme catalytic activity and sensitivity to inhibition by insecticides. The AChE enzyme obtained by this method could be used to detect the organophosphate and carbamate insecticide residues in fruits and vegetables, a characteristic of great potential research and industrial application.  
Keywords: Site-directed mutagenesis  
Keywords: Musca domestica  
Keywords: Fruits  
Keywords: Z 05300:General  
Keywords: Vegetables  
Keywords: Entomology Abstracts; Biotechnology and Bioengineering Abstracts  
Keywords: Carbofuran  
Keywords: Contamination  
Keywords: Acetylcholinesterase  
Keywords: Signal peptides  
Keywords: Methanol  
Keywords: Vectors  
Keywords: Enzymes  
Keywords: organophosphates  
Keywords: Pesticides (carbamates)  
Keywords: Chlorpyrifos  
Keywords: W 30905:Medical Applications  
Keywords: Insecticides  
Keywords: Industrial applications  
Keywords: Pesticides  
Keywords: Polymerase chain reaction  
Keywords: Pichia pastoris  
Keywords: Amino acid sequence  
Date revised - 2011-07-01  
Language of summary - English  
Pages - 305-314  
ProQuest ID - 879474857  
SubjectsTermNotLitGenreText - Site-directed mutagenesis; Fruits; Vegetables; Contamination; Carbofuran; Acetylcholinesterase; Methanol; Signal peptides; Enzymes; Vectors; organophosphates; Pesticides (carbamates); Chlorpyrifos; Insecticides; Industrial applications; Pesticides; Polymerase chain reaction; Amino acid sequence; Musca domestica; Pichia pastoris  
Last updated - 2012-03-29  
British nursing index edition - Bioprocess and Biosystems Engineering [Bioprocess Biosystems Eng.]. Vol. 34, no. 3, pp. 305-314. Mar 2011.  
Corporate institution author - Tan, Furong; Wang, Ligang; Wang, Jinbin; Wu, Xiao; Zhu, Hong; Jiang, Lingxi; Tao, Shiru; Zhao, Kai; Yang, Yan; Tang, Xueming  
DOI - 12bfa6d5-c290-43d5-9225mfgefd101; 14379430; 1615-7591; 1615-7605 English

1344. Tan, S.; Lam, W. P.; Wai, M. S.; Yu, W. H., and Yew, D. T. Chronic Ketamine Administration Modulates Midbrain Dopamine System in Mice.   
Rec #: 73659  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Ketamine is an anesthetic and a popular abusive drug. As an anesthetic, effects of ketamine on glutamate and GABA transmission have been well documented but little is known about its long-term effects on the dopamine system. In the present study, the effects of ketamine on dopamine were studied in vitro and in vivo. In pheochromocytoma (PC 12) cells and NGF differentiated-PC 12 cells, ketamine decreased the cell viability while increasing dopamine (DA) concentrations in a dose-related manner. However, ketamine did not affect the expression of genes involved in DA synthesis. In the long-term (3 months) ketamine treated mice, significant increases of DA contents were found in the midbrain. Increased DA concentrations were further supported by up-regulation of tyrosine hydroxylase (TH), the rate limiting enzyme in catecholamine synthesis. Activation of midbrain dopaminergic neurons could be related to ketamine modulated cortical-subcortical glutamate connections. Using western blotting, significant increases in BDNF protein levels were found in the midbrain, suggesting that perhaps BDNF pathways in the cortical-subcortical connections might contribute to the long-term ketamine induced TH upregulation. These data suggest that long-term ketamine abuse caused a delayed and persistent upregulation of subcortical DA systems, which may contribute to the altered mental status in ketamine abusers.  
MESH HEADINGS: Animals  
MESH HEADINGS: Brain-Derived Neurotrophic Factor/metabolism  
MESH HEADINGS: Dopamine/\*metabolism  
MESH HEADINGS: Dopaminergic Neurons/\*drug effects/metabolism  
MESH HEADINGS: Dose-Response Relationship, Drug  
MESH HEADINGS: Excitatory Amino Acid Antagonists/\*administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Ketamine/\*administration &amp  
MESH HEADINGS: dosage  
MESH HEADINGS: Mesencephalon/\*drug effects/metabolism  
MESH HEADINGS: Mice  
MESH HEADINGS: PC12 Cells  
MESH HEADINGS: Rats  
MESH HEADINGS: Tyrosine 3-Monooxygenase/metabolism  
MESH HEADINGS: Up-Regulation/drug effects eng

1345. Tanaka, A.; Masago, H.; Kanou, K., and Ujiie, A. Studies on Simple Analytical Methods of Trace Pesticides in Water and Acute Toxicity to Fish. I. Simple Test Methods for Organophosphate Pesticides and Fish Swimming Test for Pesticide Toxicity. II. A.Tanaka, Public Health Inst. Gunma Prefect., Gunma, Japan//: 1982; 24, (8): 907-915(JPN).   
Rec #: 1440  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

1346. Tanaka, T.; Hori, T.; Asada, T.; Oikawa, K., and Kawata, K. Simple one-step extraction and cleanup by pressurized liquid extraction for gas chromatographic-mass spectrometric determination of pesticides in green leafy vegetables. 2007; 1175, (2): 181-186.   
Rec #: 70209  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A simple one-step extraction and cleanup using a pressurized liquid extraction method was developed for the gas chromatographic-mass spectrometric determination of pesticides in vegetables. The pressurized liquid extraction conditions were optimized and cleanup agents were evaluated. The investigated pesticides included six insecticides, chlorpyrifos methyl, pirimiphos-methyl, malathion, chlorpyrifos, O-ethyl O-4-nitrophenylphenyl phosphonothioate (EPN) and permethrins, a fungicide, isoprothiolane, and a herbicides, thiobencarb. The cleanup agent and a mixture of the vegetable and anhydrous sodium sulfate were separately packed in an extraction vessel. A transparent and colorless extract was obtained using graphitized carbon as the cleanup agent. The overall recoveries were 71-103% and the relative standard deviations ranged from 5.6 to 24%. The limit of detection values were 3-8 mu g kg(-1). This method was successfully applied to green leafy vegetables. (c) 2007 Elsevier B.V. All rights reserved.  
Keywords: vegetable, GC-MS, cleanup, pesticide, pressurized liquid extraction  
ISI Document Delivery No.: 245PK

1347. Tang, F.; Shen, X., and Gao, X. W. In Vitro Inhibition of the Diphenolase Activity of Tyrosinase by Insecticides and Allelochemicals in Micromelalopha troglodyta (Lepidoptera: Notodontidae). 2009; 44, (2): 111-119.   
Rec #: 70219  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Tyrosinase is a copper enzyme and plays a key role in normal insect development. We studied the in vitro inhibitory effects of selected insecticides and allelochemicals on the diphenolase activity of tyrosinase in Micromelalopha troglodyta (Graeser) (Lepidoptera: Notodontidae). Two pyrethriods (cyfluthrin and deltamethrin) and 3 other insecticides (hexaflumuron, abamectin and imidacloprid) were the least inhibitory, whereas 5 organophosphates (triazophos, malathion, chlorpyrifos, omethoate and profenofos), 1 carbamate (methomyl), 4 pyrethriods (fenpropathrin, beta-cypermethrin, bifenthrin and lambda-cyhalothrin), 1 organochlorine (endosulfan), 2 allelochemicals (tannic acid and 2-tridecanone) and 4 other insecticides (emamectin benzoate, fipronil, acetamiprid and pyridaben) were moderately inhibitory. Three chemicals (quercetin, phenyl thiourea and phoxim) were the most potent inhibitors of the enzymes among all compounds tested and inhibited the diphenolase activity of tyrosinase in vitro in a close-dependent manner. Furthermore, phenyl thiourea, phoxim and quercetin showed neither typical competitive nor noncompetitive binding to the substrate, with Ki of 0.13 mu M, 49.30 mu M and 37.71 mu M, respectively.  
Keywords: diphenolase activity, tyrosinase, Micromelalopha troglodyta,  
ISI Document Delivery No.: 436OE

1348. Tang, F; Wang, Y Y; Gao, X W, and Tang, F. In Vitro Inhibition of Carboxylesterases by Insecticides and Allelochemicals in the Larvae and Adults of Odontotermes Formosanus (Isoptera: Termitidae). 2009; 53, (3): 667-675.   
Rec #: 45309  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In vitro inhibitory effects by insecticides and allelochemicals on carboxylesterase activity were studied in the larvae and adults of Odontotermes formosanus. The results showed that five insecticides (phoxim, chlorpyrifos, triazophos, malathion and profenofos) were the best inhibitors of the enzymes among all compounds tested in these two stages, and these five insecticides inhibited carboxylesterase activity in vitro in a dose-dependent manner. Furthermore, the I sub(5)0 values of these five insecicides for carboxylesterase activity in these two stages ranged from 4.39x10 super(-8) to 6.4x10 super(-4) M, and these five insecticides inhibited carboxylesterase activity to different degrees in larvae and adults. These results may contribute to the understanding of the sensitivity difference of the larvae and adults of O. formosanus to pesticides, and could provide the basis for the management of O. formosanus.  
Keywords: G 07810:Insects  
Keywords: Termitidae  
Keywords: Allelochemicals  
Keywords: Z 05350:Medical, Veterinary, and Agricultural Entomology  
Keywords: Carboxylesterase  
Keywords: Enzymes  
Keywords: Malathion  
Keywords: Y 25040:Behavioral Ecology  
Keywords: Chlorpyrifos  
Keywords: Odontotermes  
Keywords: Phoxim  
Keywords: triazophos  
Keywords: Insecticides  
Keywords: D 04040:Ecosystem and Ecology Studies  
Keywords: Pesticides  
Keywords: Genetics Abstracts; Entomology Abstracts; Animal Behavior Abstracts; Ecology Abstracts  
Keywords: Isoptera  
Date revised - 2009-11-01  
Language of summary - English  
Pages - 667-675  
ProQuest ID - 21147276  
SubjectsTermNotLitGenreText - Chlorpyrifos; Phoxim; triazophos; Insecticides; Pesticides; Allelochemicals; Enzymes; Carboxylesterase; Malathion; Odontotermes; Termitidae; Isoptera  
Last updated - 2012-03-29  
British nursing index edition - Sociobiology [Sociobiology]. Vol. 53, no. 3, pp. 667-675. 2009.  
Corporate institution author - Tang, F; Wang, Y Y; Gao, X W  
DOI - MD-0010940005; 11188931; 0361-6525 English

1349. Tang, F.; Zhang, X. B.; Liu, Y. S., and Gao, X. W. Tissue Distribution and Properties of Glutathione S-Transferases in Micromelalopha troglodyta (Lepidoptera : Notodontidae). 2008; 43, (3): 268-278.   
Rec #: 2490  
Keywords: IN VITRO  
Call Number: NO IN VITRO (BFT,CPY,CYP,FPN,FPP,HFR,IMC,LCYT,MLN,MOM,OMT,PFF,PRB)  
Notes: Chemical of Concern: ABM,ACT,BFT,CPY,CYP,EMMB,FPN,FPP,HFR,IMC,LCYT,MLN,MOM,OMT,PFF,PRB

1350. Tang, J. S.; Zhang, M.; Cheng, G. H.; Li, A., and Lu, Y. T. Development of IC-ELISA for detection of organophosphorus pesticides in water. 2008; 43, (8): 707-712.   
Rec #: 70249  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Diethyl (carboxymethyl) phosphonate (DECP) was used as the hapten to develop an indirect competitive enzyme-linked immunosorbent assay (IC-ELISA) for detecting organophosphorus pesticides (OPs). Conjugator of DECP with bovin serum albumin (BSA) was used as the immunogen for producing the polyclonal antibodies (PcAbs). Three antisera were obtained after the immune procedure. Characterization studies of the PcAbs indicated that the titer of antiserum-1 was highest in 3 antisera, and antiserum-1 had high affinity and specificity to the parathion, dichlorvos and pirimiphos. The IC-ELISA showed an IC(50) of 0.428 mu g/mL with a detection limit of 0.0125 mu g/mL to parathion. The assay also indicated that the IC50 values of pirimiphos and dichlorvos were 0.331 mu g/mL and 1.25 mu g/mL respectively, and the detection limits of pirimiphos and dichlorvos were 0.0116 mu g/mL and 0.048 mu g/mL respectively. Recoveries of parathion, pirimiphos and dichlorvos spiked into water samples ranged from 90% to 160%. The results indicated that the ELISA could be a convenient and supplemental analytical tool for monitoring OPs residues in environmental water samples.  
Keywords: Organophosphorus insecticide, indirect competitive enzyme-linked  
ISI Document Delivery No.: 362XF

1351. Tang, Q.; Ben¡Tez, R., and Zeng, F. G. Spatial Channel Interactions in Cochlear Implants.   
Rec #: 50109  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Annu Rev Biomed Eng. 2003;5:207-49 (medline /12704085)  
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COMMENTS: Cites: Ear Hear. 2008 Apr;29(2):250-60 (medline /18595189)  
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COMMENTS: Cites: Ear Hear. 2002 Jun;23(3):207-23 (medline /12072613)  
ABSTRACT: The modern multi-channel cochlear implant is widely considered to be the most successful neural prosthesis owing to its ability to restore partial hearing to post-lingually deafened adults and to allow essentially normal language development in pre-lingually deafened children. However, the implant performance varies greatly in individuals and is still limited in background noise, tonal language understanding, and music perception. One main cause for the individual variability and the limited performance in cochlear implants is spatial channel interaction from the stimulating electrodes to the auditory nerve and brain. Here we systematically examined spatial channel interactions at the physical, physiological, and perceptual levels in the same five modern cochlear implant subjects. The physical interaction was examined using an electric field imaging technique, which measured the voltage distribution as a function of the electrode position in the cochlea in response to the stimulation of a single electrode. The physiological interaction was examined by recording electrically evoked compound action potentials as a function of the electrode position in response to the stimulation of the same single electrode position. The perceptual interactions were characterized by changes in detection threshold as well as loudness summation in response to in-phase or out-of-phase dual-electrode stimulation. To minimize potentially confounding effects of temporal factors on spatial channel interactions, stimulus rates were limited to 100 Hz or less in all measurements. Several quantitative channel interaction indexes were developed to define and compare the width, slope and symmetry of the spatial excitation patterns derived from these physical, physiological and perceptual measures. The electric field imaging data revealed a broad but uniformly asymmetrical intracochlear electric field pattern, with the apical side producing a wider half-width and shallower slope than the basal side. In contrast, the evoked compound action potential and perceptual channel interaction data showed much greater individual variability. It is likely that actual reduction in neural and higher level interactions, instead of simple sharpening of the electric current field, would be the key to predicting and hopefully improving the variable cochlear implant performance. The present results are obtained with auditory prostheses but can be applied to other neural prostheses, in which independent spatial channels, rather than a high stimulation rate, are critical to their performance.  
MESH HEADINGS: Action Potentials/physiology  
MESH HEADINGS: Aged  
MESH HEADINGS: Algorithms  
MESH HEADINGS: Child  
MESH HEADINGS: \*Cochlear Implants  
MESH HEADINGS: Deafness/etiology/therapy  
MESH HEADINGS: Electromagnetic Fields  
MESH HEADINGS: Female  
MESH HEADINGS: Hearing Tests  
MESH HEADINGS: Humans  
MESH HEADINGS: Linear Models  
MESH HEADINGS: Male  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: Noise/adverse effects  
MESH HEADINGS: \*Prosthesis Design eng

1352. Tang, Tiantian; Dong, Jing; Ai, Shiyun; Qiu, Yanyan; Han, Ruixia, and Tang, Tiantian. Electro-Enzymatic Degradation of Chlorpyrifos by Immobilized Hemoglobin. 2011 Apr 15; 188, (1-3): 92-97.   
Rec #: 39849  
Keywords: FATE  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Electro-enzymatic processes, which are enzyme catalysis combined with electrochemical reactions, have been used in the degradation of many environment pollutants. For some pollutants, the catalytic mechanisms of the electrochemical-enzyme reaction are still poorly understood. In this paper, the degradation of chlorpyrifos by a combination of immobilized hemoglobin and in situ generated hydrogen peroxide is reported for the first time. Hemoglobin was immobilized on graphite felts to catalyze the removal of chlorpyrifos in an electrochemical-enzyme system. Under the optimal conditions, more than 98% of the chlorpyrifos was degraded. Furthermore, the degradation products of chlorpyrifos were also studied and identified using liquid chromatography-mass spectrometry analysis. The results suggest a possible degradation mechanism for chlorpyrifos with low power and high efficiency, reveal the feasibility of hemoglobin as a substitute for some expensive natural enzymes, and demonstrate the application of an electro-enzymatic process in the treatment of organophosphorus compounds in wastewater.  
Keywords: Environmental degradation  
Keywords: Feasibility studies  
Keywords: P 3000:SEWAGE & WASTEWATER TREATMENT  
Keywords: Graphite  
Keywords: Organophosphorus compounds  
Keywords: Degradation  
Keywords: ENA 09:Land Use & Planning  
Keywords: Enzymes  
Keywords: Wastewater treatment  
Keywords: Spectrometry  
Keywords: Hemoglobin  
Keywords: Chlorpyrifos  
Keywords: Toxicology Abstracts; Environment Abstracts; Pollution Abstracts  
Keywords: Pollutants  
Keywords: Hydrogen peroxide  
Keywords: Pesticides  
Keywords: Waste water  
Keywords: X 24330:Agrochemicals  
Keywords: Degradation products  
Keywords: Catalysis  
Date revised - 2011-05-01  
Language of summary - English  
Pages - 92-97  
ProQuest ID - 867737921  
SubjectsTermNotLitGenreText - Hemoglobin; Chlorpyrifos; Organophosphorus compounds; Graphite; Pollutants; Hydrogen peroxide; Enzymes; Waste water; Degradation products; Catalysis; Spectrometry; Feasibility studies; Environmental degradation; Degradation; Pesticides; Wastewater treatment  
Last updated - 2012-03-29  
British nursing index edition - Journal of Hazardous Materials [J. Hazard. Mater.]. Vol. 188, no. 1-3, pp. 92-97. 15 Apr 2011.  
Corporate institution author - Tang, Tiantian; Dong, Jing; Ai, Shiyun; Qiu, Yanyan; Han, Ruixia  
DOI - 82a94149-23a0-477a-bf89csamfg201; 14563808; 0304-3894 English

1353. Tarantino, G.; Di Minno, M. N., and Capone, D. Drug-Induced Liver Injury: Is It Somehow Foreseeable?   
Rec #: 50839  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Therapie. 2005 Jan-Feb;60(1):39-45 (medline /15929472)  
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ABSTRACT: The classic view on the pathogenesis of drug-induced liver injury is that the so-called parent compounds are made hepatotoxic by metabolism (formation of neo-substances that react abnormally), mainly by cytochromes P-450 (CYP), with further pathways, such as mitochondrial dysfunction and apoptosis, also playing a role. Risk factors for drug-induced liver injury include concomitant hepatic diseases, age and genetic polymorphisms of CYP. However, some susceptibility can today be predicted before drug administration, working on the common substrate, by phenotyping and genotyping studies and by taking in consideration patients' health status. Physicians should always think of this adverse effect in the absence of other clear hepatic disease. Ethical and legal problems towards operators in the health care system are always matters to consider.  
MESH HEADINGS: Age Factors  
MESH HEADINGS: Animals  
MESH HEADINGS: Calcium/metabolism  
MESH HEADINGS: Cytochrome P-450 Enzyme System/genetics/metabolism  
MESH HEADINGS: Dietary Supplements  
MESH HEADINGS: Disease Susceptibility  
MESH HEADINGS: Drug Interactions  
MESH HEADINGS: Drug-Induced Liver Injury/epidemiology/genetics/\*metabolism/\*pathology  
MESH HEADINGS: Genotype  
MESH HEADINGS: Humans  
MESH HEADINGS: Hypersensitivity, Immediate  
MESH HEADINGS: Lipid Peroxidation  
MESH HEADINGS: \*Liver/drug effects/metabolism/pathology  
MESH HEADINGS: Liver Diseases/epidemiology/genetics/pathology  
MESH HEADINGS: Nutritional Status  
MESH HEADINGS: Oxidative Stress  
MESH HEADINGS: Pharmaceutical Preparations/\*adverse effects  
MESH HEADINGS: Phenotype  
MESH HEADINGS: Sex Factors eng

1354. Tassano, M. R.; Audicio, P. F.; Gambini, J. P.; Fernandez, M.; Damian, J. P.; Moreno, M.; Chabalgoity, J. A.; Alonso, O.; Benech, J. C., and Cabral, P. Development of 99mtc(Co)&#8323;-Dendrimer-Fitc for Cancer Imaging.   
Rec #: 50079  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Study of fluorophore and technetium labeling of poly(amido)-amine (PAMAM) generation 4 (G4) dendrimer and its evaluation as potential molecular imaging agent in both normal and melanoma-bearing mice, are described. Dendrimers were first conjugated with FITC (fluorescein isothiocyanate). Dendrimer-FITC was then incubated with the intermediate [(99m)Tc(CO)(3)(H(2)O)(3)](+) and purified by gel filtration. Biodistribution and scintigraphy images were performed administrating (99m)Tc(CO)(3)-dendrimer-FITC to normal mice (NM) or melanoma-bearing mice (MBM). Cryostat tissue sections from MBM mice were analyzed by confocal microscopy. Radiolabeling yield of dendrimer was approx. 90%. The (99m)Tc(CO)(3)-dendrimer-FITC complex was stable for at least 24h. Biodistribution studies in NM showed blood clearance with hepatic and renal depuration. MBM showed a similar pattern of biodistribution with high tumor uptake that allowed tumor imaging. Confocal microscopy analysis showed cytoplasmic distribution of (99m)Tc(CO)(3)-dendrimer-FITC.  
MESH HEADINGS: Animals  
MESH HEADINGS: Dendrimers/administration &amp  
MESH HEADINGS: dosage/\*pharmacokinetics  
MESH HEADINGS: Fluorescein-5-isothiocyanate/administration &amp  
MESH HEADINGS: dosage/\*pharmacokinetics  
MESH HEADINGS: Melanoma, Experimental/\*radionuclide imaging  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Inbred C57BL  
MESH HEADINGS: Molecular Imaging/\*methods  
MESH HEADINGS: Organotechnetium Compounds/administration &amp  
MESH HEADINGS: dosage/\*pharmacokinetics  
MESH HEADINGS: Polyamines/administration &amp  
MESH HEADINGS: dosage/\*pharmacokinetics  
MESH HEADINGS: Radiopharmaceuticals/administration &amp  
MESH HEADINGS: dosage/\*pharmacokinetics  
MESH HEADINGS: Time Factors  
MESH HEADINGS: Tissue Distribution eng

1355. Tejada, A. W. and Calumpang, S. M. F. The Fate of Carbofuran in Rice-Fish and Live-Stock Farming. 8253//: 1990; 36, (3): 237-243.   
Rec #: 1450  
Keywords: SURVEY  
Call Number: NO SURVEY (CBF,CPY)  
Notes: Chemical of Concern: CBF,CPY

1356. Teller, C; Halamek, J; Zeravik, J; Stocklein, Wfm; Scheller, F W, and Teller, C. Development of a Bifunctional Sensor Using Haptenized Acetylcholinesterase and Application for the Detection of Cocaine and Organophosphates. 2008 Sep 15; 24, (1): 111-117.   
Rec #: 49199  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We developed a dual piezoelectric/amperometric sensor for the detection of two unrelated analytes in one experiment that uses propidium to anchor **acetylcholinesterases (AChE)** at the surface. This mass-sensitive sensor does not only allow the examination of the interaction between AChE and the modified surface but also the detection of in situ inhibition of the surface-bound AChE. Here we describe the application of the propidium-based sensor in combination with a modified AChE. For this reason the cocaine derivative benzoylecgonine (BZE) was coupled via a 10A long hydrophilic linker - 1,8-diamino-3,4-dioxaoctane - to carboxylic groups of the AChE after EDC/NHS activation. Thus the modified AChE (BZE-AChE) possesses an additional recognition element besides the inhibitor binding site. After the deposition of BZE-AChE on the sensor surface the binding of an anti-BZE-antibody to the BZE-AChE can be monitored. This makes it possible to determine two analytes - cocaine and organophosphate - in one experiment by measuring antibody binding and decrease in enzymatic activity, respectively. Furthermore it was also shown that other cocaine-binding enzymes, e.g., butyrylcholinesterase, can bind to the modified BZE-AChE. The competitive immunoassay allowed the detection of cocaine with a dynamic range from 10 super(-) super(9) to 10 super(-) super(7)M. The organophosphate chlorpyrifos-oxon could be detected in concentrations from 10 super(-) super(6) down to 10 super(-) super(8)M after 20min of injection time (equals to 500 mu L sample volume.  
Keywords: Biosensors  
Keywords: Antibodies  
Keywords: Acetylcholinesterase  
Keywords: Biotechnology and Bioengineering Abstracts  
Keywords: W 30955:Biosensors  
Keywords: organophosphates  
Keywords: Enzymatic activity  
Keywords: Cocaine  
Keywords: Immunoassays  
Date revised - 2008-07-01  
Language of summary - English  
Pages - 111-117  
ProQuest ID - 20826707  
SubjectsTermNotLitGenreText - Cocaine; organophosphates; Acetylcholinesterase; Antibodies; Enzymatic activity; Biosensors; Immunoassays  
Last updated - 2011-12-13  
British nursing index edition - Biosensors and Bioelectronics [Biosensors Bioelectron.]. Vol. 24, no. 1, pp. 111-117. 15 Sep 2008.  
Corporate institution author - Teller, C; Halamek, J; Zeravik, J; Stocklein, WFM; Scheller, F W  
DOI - MD-0008313835; 8353884; 0956-5663 English

1357. Terrado, M ; Lavigne, M P; Tremblay, S; Duchesne, S; Villeneuve, J P; Rousseau, an; Barcelo, D; Tauler, R, and Terrado, M. Distribution and Assessment of Surface Water Contamination by Application of Chemometric and Deterministic Models. 2009 May 15; 369, (3-4): 416-426.   
Rec #: 44759  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chemometrics and deterministic modelling is proposed to extract useful information from data sets obtained in environmental monitoring studies. Contamination from organic compounds in the Llobregat River basin (Catalunya, NE Spain) was investigated for the period 2003-2006. From the application of Multivariate Curve Resolution using Alternating Least Squares (MCR-ALS), five different patterns of organic compound contamination are identified, explaining nearly 65% of the total variance of data. While pollution from chlorinated pesticides and alkylphenols shows lower levels in recent years, contamination resulting from PAHs has a rather constant distribution in space as well as in time. On the other hand, diffuse pollution from an agricultural pattern with terbutryn and chlorpyrifos increases in the year 2006 as compared to 2005. Dynamics of the products describing this last agricultural pattern are modeled using the modelling system GIBSI. Existing cultures in the studied area as well as possible pesticide usages and application loads are considered for the simulation of pesticide concentrations in water. In this way, the transfer of pesticides applied on soils to the water system is assessed and compared with other possible scenarios involving alternative practices. A new modelling approach based on considering different contamination patterns instead of using individual variables and chemicals is proposed at the end of this work.  
Keywords: Chemicals  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Aqualine Abstracts; Water Resources Abstracts; Pollution Abstracts; Meteorological & Geoastrophysical Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Contamination  
Keywords: Spain, Cataluna, Llobregat R.  
Keywords: Surface water  
Keywords: Agricultural pollution  
Keywords: Spain  
Keywords: SW 3030:Effects of pollution  
Keywords: Surface Water  
Keywords: Freshwater  
Keywords: Soil  
Keywords: Agricultural Chemicals  
Keywords: Hydrologic Models  
Keywords: Assessments  
Keywords: Hydrology  
Keywords: Aromatic hydrocarbons  
Keywords: Pollution data  
Keywords: Environmental monitoring  
Keywords: Soil Contamination  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Simulation  
Keywords: River basins  
Keywords: AQ 00003:Monitoring and Analysis of Water and Wastes  
Keywords: Water pollution  
Keywords: Chlorpyrifos  
Keywords: Numerical simulations  
Keywords: Pesticides  
Keywords: Pesticides in river water  
Keywords: J1W  
Keywords: Water wells  
Keywords: Organic compounds  
Keywords: Organic Compounds  
Keywords: Monitoring  
Keywords: Earth Sciences--Hydrology  
Date revised - 2009-06-01  
Language of summary - English  
Location - Spain, Cataluna, Llobregat R.; Spain  
Pages - 416-426  
ProQuest ID - 289818766  
SubjectsTermNotLitGenreText - Contamination; Pesticides; Agricultural Chemicals; Hydrologic Models; Organic Compounds; Soil Contamination; Monitoring; Surface Water; Assessments; Spain, Cataluna, Llobregat R.; Spain; J1W; Chemicals; Soil; Chlorpyrifos; Environmental monitoring; Simulation; River basins; Surface water; Hydrology; Water wells; Organic compounds; Pollution data; Agricultural pollution; Water pollution; Aromatic hydrocarbons; Pesticides in river water; Numerical simulations; Freshwater  
Last updated - 2011-11-09  
Corporate institution author - Terrado, M; Lavigne, M P; Tremblay, S; Duchesne, S; Villeneuve, J P; Rousseau, AN; Barcelo, D; Tauler, R  
DOI - OB-MD-0009571574; 9264463; 0022-1694 English

1358. Terry, A. V. Jr. and Middlemore-Risher, M. L. Letter in Response to Juberg and Burns. 2010; 32, 649-650.   
Rec #: 2600  
Keywords: ADDENDUM  
Call Number: NO ADDENDUM (CPY)  
Notes: Chemical of Concern: CPY

1359. Terry Jr., A. V. Functional consequences of repeated organophosphate exposure: Potential non-cholinergic mechanisms. 2012 Jun; 134, (3): 355-365.   
Rec #: 3230  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: The class of chemicals known as the ÇŁorganophosphatesÇĄ (OPs) comprises many of the most common agricultural and commercial pesticides that are used worldwide as well as the highly toxic chemical warfare agents. The mechanism of the acute toxicity of OPs in both target and non-target organisms is primarily attributed to inhibitory actions on various forms of cholinesterase leading to excessive peripheral and central cholinergic activity. However, there is now substantial evidence that this canonical (cholinesterase-based) mechanism cannot alone account for the wide-variety of adverse consequences of OP exposure that have been described, especially those associated with repeated exposures to levels that produce no overt signs of acute toxicity. This type of exposure has been associated with prolonged impairments in attention, memory, and other domains of cognition, as well as chronic illnesses where these symptoms are manifested (e.g., Gulf War Illness, Alzheimer's disease). Due to their highly reactive nature, it is not surprising that OPs might alter the function of a number of enzymes and proteins (in addition to cholinesterase). However, the wide variety of long-term neuropsychiatric symptoms that have been associated with OPs suggests that some basic or fundamental neuronal process was adversely affected during the exposure period. **The purpose of this review is to discuss several non-cholinesterase targets of OPs that might affect such fundamental processes and includes cytoskeletal and motor proteins involved in axonal transport, neurotrophins and their receptors, and mitochondria (especially their morphology and movement in axons).** Potential therapeutic implications of these OP interactions are also discussed. Pesticide/ Cholinesterase inhibitor/ Chronic/ Memory/ Cognition

1360. Testai, Emanuela; Buratti, Franca M., and Di Consiglio, Emma. Chapter 70 - Chlorpyrifos. Robert Krieger. Hayes' Handbook of Pesticide Toxicology (Third Edition). New York: Academic Press; 2010: 1505-1526.   
Rec #: 1780  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ISSN/ISBN: 978-0-12-374367-1

1361. Thacker, J.; Young, R.; Allen, I., and Curtis, D. J. The Effect of a Polymeric Adjuvant on the Off-target Movement of a Pesticide Spray. 1994; 1-3, 1361-1366.   
Rec #: 1460  
Keywords: FATE  
Call Number: NO FATE (CPY)  
Notes: Chemical of Concern: CPY

1362. Thakur, J. S.; Prinja, S.; Singh, D.; Rajwanshi, A.; Prasad, R.; Parwana, H. K., and Kumar, R. Adverse reproductive and child health outcomes among people living near highly toxic waste water drains in Punjab, India. 2010; 64, (2): 148-154.   
Rec #: 70359  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background Environmental influence plays a major role in determining health status of individuals. Punjab has been reported as having a high degree of water pollution due to heavy metals from untreated industrial effluent discharge and high pesticide consumption in agriculture. The present study ascertained the association of heavy metal and pesticide exposure on reproductive and child health outcomes in Punjab, India. Methods A cross-sectional community-based survey was conducted in which 1904 women in reproductive age group and 1762 children below 12 years of age from 35 villages in three districts of Punjab were interviewed on a semistructured schedule for systemic and general health morbidities. Medical doctors conducted a clinical examination and review of records where relevant. Out of 35 study villages, 25 served as target ( exposed) and 10 as non-target ( less exposed or reference). Effluent, ground and surface water, fodder, vegetables and milk ( bovine and human) samples were tested for chemical composition, heavy metals and pesticides. Results Spontaneous abortion (20.6 per 1000 live births) and premature births (6.7 per 1000 live births) were significantly higher in area affected by heavy metal and pesticide pollution (p<0.05). Stillbirths were about five times higher as compared with a meta-analysis for South Asian countries. A larger proportion of children in target area were reported to have delayed milestones, language delay, blue line in the gums, mottling of teeth and gastrointestinal morbidities (p<0.05). Mercury was found in more than permissible limits (MPL) in 84.4% samples from the target area. Heptachlor, chlorpyriphos, beta-endosulfan, dimethoate and aldrin were found to be more than MPL in 23.9%, 21.7%, 19.6%, 6.5% and 6.5% ground water samples respectively. Conclusion Although no direct association could be established in this study, heavy metal and pesticide exposure may be potential risk factors for adverse reproductive and child health outcomes.  
Keywords: BIRTH OUTCOMES, RESIDENTIAL PROXIMITY, CONGENITAL-ANOMALIES,  
ISI Document Delivery No.: 541FO

1363. Thakur, J S; Rao, B T; Rajwanshi, Arvind; Parwana, H K, and Kumar, Rajesh. Epidemiological Study of High Cancer Among Rural Agricultural Community of Punjab in Northern India. 2008 Dec; 5, (5): 399-407.   
Rec #: 49059  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Based on a citizen's report, a house-to-house survey was conducted in Talwandi Sabo and Chamkaur Sahib Community Development Blocks in Bathinda and Roop Nagar District respectively in Punjab state located in a northern part of India to identify the number of existing cancer cases, and the number of cancer deaths that occurred in the last 10 years. Age adjusted prevalence of confirmed cancer cases per 100,000 population was 125 (107/85315) in Talwandi Sabo and 72 (71/97928) in Chamkaur Sahib. Cancer of female reproductive system, i.e., breast, uterus/cervix and ovary were more common in Talwandi sabo whereas cancer of blood and lymphatic system, esophagus, and bones were more common in Chamkaur Sahib. Cancer deaths per 100,000 populations per year were 52 in Talwandi Sabo compared to 30 at Chamkaur Sahib. A comparison of the characteristics of randomly selected individuals, from the villages where a cancer case existed or death due to cancer had occurred in last 2 years, revealed that involvement in cultivation, pesticide use, alcohol consumption and smoking were more common in Talwandi Sabo as compared to Chamkaur Sahib. Limited studies show that in drinking water the levels of heavy metals such as As, Cd, Cr, Se, Hg were generally higher, and pesticides such as heptachlor, ethion, and chloropyrifos were also higher in samples of drinking water, vegetables, and blood in Talwandi Sabo as compared to Chamkaur Sahib. As multiple factors were responsible for significantly higher prevalence of cancer cases in Talwandi Sabo, therefore, a multi-pronged strategy to discourage the indiscriminate use of pesticides, tobacco and alcohol needs to be adopted for cancer prevention, and a cancer registry should be set up for elucidation of the role of pesticides and heavy metals in the etiology of cancer in this area.  
Keywords: Agriculture  
Keywords: Young Adult  
Keywords: Humans  
Keywords: Neoplasms -- epidemiology  
Keywords: Child  
Keywords: India  
Keywords: Pesticides -- toxicity  
Keywords: Pesticides -- chemistry  
Keywords: Cross-Sectional Studies  
Keywords: 0  
Keywords: Pesticides  
Keywords: Adult  
Keywords: Environmental Exposure  
Keywords: Data Collection  
Keywords: Middle Aged  
Keywords: Adolescent  
Keywords: Male  
Keywords: Female  
Keywords: Prevalence  
Date completed - 2009-04-03  
Date created - 2009-01-19  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 399-407  
ProQuest ID - 66653310  
Last updated - 2013-01-19  
British nursing index edition - International journal of environmental research and public health, December 2008, 5(5):399-407  
Corporate institution author - Thakur, J S; Rao, B T; Rajwanshi, Arvind; Parwana, H K; Kumar, Rajesh  
DOI - MEDL-19151435; 19151435; 1660-4601 eng

1364. Tham, L. G.; Perumal, N.; Syed, M. A.; Shamaan, N. A., and Shukor, M. Y. Assessment of Clarias batrachus as a Source of Acetylcholinesterase (AChE) for the Detection of Insecticides. 2009; 30, (1): 135-138.   
Rec #: 1470  
Keywords: IN VITRO  
Call Number: NO IN VITRO (ACP,Ag,As,CBF,CBL,CPY,Cr,Cr element,Cu,DMT,DZ,MLN,MOM,Zn,Zn element)  
Notes: Chemical of Concern: ACP,Ag,Al,As,BDC,CBF,CBL,CPY,Cd,Cr,Cu,DMT,DZ,EPRN,Fe,Hg,MLN,MOM,Mg,Mn,Ni,PRN,Pb,Zn

1365. Thivakaran, T.; Gamage, R.; Gunarathne, K. S., and Gooneratne, I. K. Chlorpyrifos-Induced Delayed Myelopathy and Pure Motor Neuropathy: a Case Report.   
Rec #: 74079  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: INTRODUCTION: Organophosphate (OP) poisoning is known to cause delayed neurological manifestations. Chlorpyrifos, an OP, causes a delayed syndrome that is characterized by a motor sensory polyneuropathy. Pure motor neuropathy with intact sensory conduction is rarely documented. Rapidly evolving delayed myelopathy is extremely uncommon.  
ABSTRACT: CASE REPORT: A healthy 15-year-old female was admitted to hospital with cholinergic crisis due to ingestion of a large dose of chlorpyrifos (OP). She was treated with atropine and recovered completely without any neurological symptoms or signs. She came to hospital 6 weeks later with upper and lower motor neuron signs involving the lower limbs without sensory loss. By the end of 7 weeks, there was urinary incontinence. At 2-month follow-up, she had progressive spasticity. Electrophysiological studies revealed a pure motor neuropathy. Spine magnetic resonance imaging showed early signs of thoracic cord atrophy. Other causes of myelopathy were excluded.  
ABSTRACT: CONCLUSIONS: Chronic neurotoxicity due to OP poisoning is dependent on several factors: chemical composition of the OP, dose systematized, and the administration of anitcholinergics for cholinergic crisis. The pathology of OP-induced delayed neuropathy involves a central-peripheral distal axonopathy. Peripheral distal axonopathy results in a predominantly motor polyneuropathy. Axonopathy of the central nervous system results in myelopathic features that makes for a poorer prognosis.  
MESH HEADINGS: Adolescent  
MESH HEADINGS: Chlorpyrifos/\*poisoning  
MESH HEADINGS: Electrophysiology  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: Insecticides/\*poisoning  
MESH HEADINGS: Neurotoxicity Syndromes/\*physiopathology  
MESH HEADINGS: Peripheral Nervous System Diseases/\*chemically induced  
MESH HEADINGS: Spinal Cord Diseases/\*chemically induced eng

1366. Thomas, Kent W; Dosemeci, Mustafa; Coble, Joseph B; Hoppin, Jane a; Sheldon, Linda S; Chapa, Guadalupe; Croghan, Carry W; Jones, Paul a; Knott, Charles E; Lynch, Charles F; Sandler, Dale P; Blair, Aaron E; Alavanja, Michael C, and Lynch, Charles F. Assessment of a Pesticide Exposure Intensity Algorithm in the Agricultural Health Study. 2010 Sep; 20, (6): 559-569.   
Rec #: 43879  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The accuracy of the exposure assessment is a critical factor in epidemiological investigations of pesticide exposures and health in agricultural populations. However, few studies have been conducted to evaluate questionnaire-based exposure metrics. The Agricultural Health Study (AHS) is a prospective cohort study of pesticide applicators who provided detailed questionnaire information on their use of specific pesticides. A field study was conducted for a subset of the applicators enrolled in the AHS to assess a pesticide exposure algorithm through comparison of algorithm intensity scores with measured exposures. Pre- and post-application urinary biomarker measurements were made for 2,4-D (n=69) and chlorpyrifos (n=17) applicators. Dermal patch, hand wipe, and personal air samples were also collected. Intensity scores were calculated using information from technician observations and an interviewer-administered questionnaire. Correlations between observer and questionnaire intensity scores were high (Spearman's r=0.92 and 0.84 for 2,4-D and chlorpyrifos, respectively). Intensity scores from questionnaires for individual applications were significantly correlated with post-application urinary concentrations for both 2,4-D (r=0.42, P<0.001) and chlorpyrifos (r=0.53, P=0.035) applicators. Significant correlations were also found between intensity scores and estimated hand loading, estimated body loading, and air concentrations for 2,4-D applicators (r-values 0.28-0.50, P-values<0.025). Correlations between intensity scores and dermal and air measures were generally lower for chlorpyrifos applicators using granular products. A linear regression model indicated that the algorithm factors for individual applications explained 24% of the variability in post-application urinary 2,4-D concentration, which increased to 60% when the pre-application urine concentration was included. The results of the measurements support the use of the algorithm for estimating questionnaire-based exposure intensities in the AHS for liquid pesticide products. Refinement of the algorithm may be possible using the results from this and other measurement studies.  
Keywords: 2,4-D  
Keywords: Bioindicators  
Keywords: Inventories  
Keywords: Skin  
Keywords: P 0000:AIR POLLUTION  
Keywords: Algorithms  
Keywords: Hand  
Keywords: Toxicology Abstracts; Pollution Abstracts  
Keywords: biomarkers  
Keywords: Chlorpyrifos  
Keywords: Urine  
Keywords: Pesticides  
Keywords: Air sampling  
Keywords: Regression analysis  
Keywords: 2,4-Dichlorophenoxyacetic acid  
Keywords: X 24330:Agrochemicals  
Keywords: technicians  
Date revised - 2010-10-01  
Language of summary - English  
Pages - 559-569  
ProQuest ID - 877599385  
SubjectsTermNotLitGenreText - Chlorpyrifos; 2,4-D; Inventories; Skin; Urine; Pesticides; Regression analysis; Algorithms; Hand; biomarkers; Bioindicators; Air sampling; 2,4-Dichlorophenoxyacetic acid; technicians  
Last updated - 2012-03-29  
British nursing index edition - Journal of Exposure Science and Environmental Epidemiology [J. Exposure Sci. Environ. Epidemiol.]. Vol. 20, no. 6, pp. 559-569. Sep 2010.  
Corporate institution author - Thomas, Kent W; Dosemeci, Mustafa; Coble, Joseph B; Hoppin, Jane A; Sheldon, Linda S; Chapa, Guadalupe; Croghan, Carry W; Jones, Paul A; Knott, Charles E; Lynch, Charles F; Sandler, Dale P; Blair, Aaron E; Alavanja, Michael C  
DOI - 1dbfeee5-0de2-4c05-87b5mfgefd101; 13709743; 1559-0631 English

1367. Thomas, Kent W; Dosemeci, Mustafa; Hoppin, Jane a; Sheldon, Linda S; Croghan, Carry W; Gordon, Sydney M; Jones, Martin L; Reynolds, Stephen J; Raymer, James H; Akland, Gerald G; Lynch, Charles F; Knott, Charles E; Sandler, Dale P; Blair, Aaron E; Alavanja, Michael C, and Akland, Gerald G. Urinary Biomarker, Dermal, and Air Measurement Results for 2,4-D and Chlorpyrifos Farm Applicators in the Agricultural Health Study. 2010 Mar; 20, (2): 119-134.   
Rec #: 40719  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A subset of private pesticide applicators in the Agricultural Health Study (AHS) epidemiological cohort was monitored around the time of their agricultural use of 2,4-dichlorophenoxyacetic acid (2,4-D) and O,O-diethyl-O-3,5,6-trichloro-2-pyridyl phosphorothioate (chlorpyrifos) to assess exposure levels and potential determinants of exposure. Measurements included pre- and post-application urine samples, and patch, hand wipe, and personal air samples. Boom spray or hand spray application methods were used by applicators for 2,4-D products. Chlorpyrifos products were applied using spray applications and in-furrow application of granular products. Geometric mean (GM) values for 69 2,4-D applicators were 7.8 and 25 mu g/l in pre- and post-application urine, respectively (P<0.05 for difference); 0.39mg for estimated hand loading; 2.9mg for estimated body loading; and 0.37 mu g/m super(3) for concentration in personal air. Significant correlations were found between all media for 2,4-D. GM values for 17 chlorpyrifos applicators were 11 mu g/l in both pre- and post-application urine for the 3,5,6-trichloro-2-pyridinol metabolite, 0.28mg for body loading, and 0.49 mu g/m super(3) for air concentration. Only 53% of the chlorpyrifos applicators had measurable hand loading results; their median hand loading being 0.02mg. Factors associated with differences in 2,4-D measurements included application method and glove use, and, for hand spray applicators, use of adjuvants, equipment repair, duration of use, and contact with treated vegetation. Spray applications of liquid chlorpyrifos products were associated with higher measurements than in-furrow granular product applications. This study provides information on exposures and possible exposure determinants for several application methods commonly used by farmers in the cohort and will provide information to assess and refine exposure classification in the AHS. Results may also be of use in pesticide safety education for reducing exposures to pesticide applicators.  
Keywords: 2,4-D  
Keywords: Bioindicators  
Keywords: Farms  
Keywords: Skin  
Keywords: Sprays  
Keywords: Hand  
Keywords: Vegetation  
Keywords: Metabolites  
Keywords: Adjuvants  
Keywords: biomarkers  
Keywords: Environmental Studies  
Keywords: Pollution Abstracts; Toxicology Abstracts; Environmental Engineering Abstracts  
Keywords: Chlorpyrifos  
Keywords: phosphorothioate  
Keywords: Education  
Keywords: EE 20:Air Pollution: Monitoring, Control & Remediation  
Keywords: Classification  
Keywords: Urine  
Keywords: Pesticides  
Keywords: classification  
Keywords: Air sampling  
Keywords: Gloves  
Keywords: 2,4-Dichlorophenoxyacetic acid  
Keywords: X 24330:Agrochemicals  
Date revised - 2010-02-01  
Language of summary - English  
Pages - 119-134  
ProQuest ID - 813452489  
SubjectsTermNotLitGenreText - Pesticides; 2,4-Dichlorophenoxyacetic acid; Chlorpyrifos; Sprays; Urine; Bioindicators; Air sampling; Education; classification; Hand; 2,4-D; biomarkers; Classification; Skin; Adjuvants; Farms; Metabolites; phosphorothioate; Vegetation; Gloves  
Last updated - 2011-11-08  
Corporate institution author - Thomas, Kent W; Dosemeci, Mustafa; Hoppin, Jane A; Sheldon, Linda S; Croghan, Carry W; Gordon, Sydney M; Jones, Martin L; Reynolds, Stephen J; Raymer, James H; Akland, Gerald G; Lynch, Charles F; Knott, Charles E; Sandler, Dale P; Blair, Aaron E; Alavanja, Michael C  
DOI - OB-MD-0012741861; 12503157; 1559-0631 English

1368. Thomas, S M; Bodour, a a; Murray, Ke; Inniss, E C, and Thomas, S M. Sorption Behavior of a Synthetic Antioxidant, Polycyclic Musk, and an Organophosphate Insecticide in Wastewater Sludge. 2009; 60, (1): 145-154.   
Rec #: 41739  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Emerging contaminants (ECs) are chemicals that are currently unregulated due to limited understanding of health effects and limited data regarding occurrence. Wastewater treatment plants (WWTP) receive many ECs as components of influent waste and the removal of organic contaminants, such as ECs, occurs primarily by sorption to sludge. Therefore, it is important to develop measures of sorption behavior by ECs to sludge. This study evaluates sorption of three ECs: 3-tert-butyl-4-hydroxyanisole (BHA) a synthetic antioxidant, 1,3,4,6,7,8-hexahydro-4,6,6,7,8, 8-hexamethyl-cyclopenta(g)-2-benzopyrane (HHCB) a polycyclic musk, and chlorpyrifos a organophosphate insecticide. Twenty-four hour laboratory-scale sorption experiments were conducted for each compound individually and then in combination, which allowed the quantification of sorption onto wastewater sludge and the affects of multiple compounds. ECs in both the liquid and solid phases were analyzed using a gas chromatograph with flame ionization detector (GC/FID). Isotherms of individual sorption behavior followed a linear trend (R super(2) > 0.9) for individual ECs, while K sub(d) averaged 2,689Lkg super(-1), 27,786Lkg super(-1) and 31,402Lkg super(-1) for BHA, chlorpyrifos and HHCB, respectively. Sorption behavior for BHA was linear during combined studies with K sub(d) of 1,766Lkg super(-1) or a decrease of 34%, while HHCB and chlorpyrifos followed non-linear isotherm models. Synergistic effects were observed with spike concentrations greater than or equal to 25mgL super(-1) for HHCB and greater than or equal to 20mgL super(-1) for chlorpyrifos. K sub(d) values ranged from 16,984-6,000,000Lkg super(-1) for HHCB and 19,536-3,000,000Lkg super(-1) for chlorpyrifos. These distribution coefficients differed substantially from previously published values, mainly because few studies used sludge as the sorption media. Results suggest that HHCB and chlorpyrifos may be contained in the sludge unlike BHA, which is more available in the aqueous phase. Future investigations should evaluate WWTP processes for degrading ECs to harmless products and releases of ECs from sludge.  
Keywords: Chemicals  
Keywords: P 3000:SEWAGE & WASTEWATER TREATMENT  
Keywords: Pollutant removal  
Keywords: Sorption  
Keywords: Synergistic effects  
Keywords: Wastewater Facilities  
Keywords: Antioxidants  
Keywords: SW 3040:Wastewater treatment processes  
Keywords: Organophosphates  
Keywords: EE 50:Water & Wastewater Treatment  
Keywords: AQ 00003:Monitoring and Analysis of Water and Wastes  
Keywords: Pollution Abstracts; Environmental Engineering Abstracts; Environment Abstracts; Aqualine Abstracts; Water Resources Abstracts  
Keywords: influents  
Keywords: Sludge  
Keywords: Wastewater treatment  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos  
Keywords: Agricultural Chemicals  
Keywords: Insecticides  
Keywords: Behavior  
Keywords: Pesticides  
Keywords: Isotherms  
Keywords: Wastewater  
Date revised - 2009-09-01  
Language of summary - English  
Pages - 145-154  
ProQuest ID - 290617190  
SubjectsTermNotLitGenreText - Sorption; Sludge; Pesticides; Behavior; Wastewater Facilities; Insecticides; Agricultural Chemicals; Wastewater; Isotherms; Chlorpyrifos; Organophosphates; Antioxidants; Pollutant removal; Chemicals; influents; Synergistic effects; Wastewater treatment  
Last updated - 2011-10-26  
Corporate institution author - Thomas, S M; Bodour, A A; Murray, KE; Inniss, E C  
DOI - OB-MD-0010395038; 10865613; 0273-1223 English

1369. Thompson, Charles M; Prins, John M, and George, Kathleen M. Mass Spectrometric Analyses of Organophosphate Insecticide Oxon Protein Adducts. 2010 Jan; 118, (1): 11-9.   
Rec #: 48169  
Keywords: METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphate (OP) insecticides continue to be used to control insect pests. Acute and chronic exposures to OP insecticides have been documented to cause adverse health effects, but few OP-adducted proteins have been correlated with these illnesses at the molecular level. **Our aim was to review the literature covering the current state of the art in mass spectrometry (MS) used to identify OP protein biomarkers.**  We identified general and specific research reports related to OP insecticides, OP toxicity, OP structure, and protein MS by searching PubMed and Chemical Abstracts for articles published before December 2008. A number of OP-based insecticides share common structural elements that result in predictable OP-protein adducts. The resultant OP-protein adducts show an increase in molecular mass that can be identified by MS and correlated with the OP agent. Customized OP-containing probes have also been used to tag and identify protein targets that can be identified by MS. MS is a useful and emerging tool for the identification of proteins that are modified by activated organophosphate insecticides. MS can characterize the structure of the OP adduct and also the specific amino acid residue that forms the key bond with the OP. Each protein that is modified in a unique way by an OP represents a unique molecular biomarker that with further research can lead to new correlations with exposure.  
Keywords: Insecticides -- toxicity  
Keywords: Organophosphorus Compounds -- analysis  
Keywords: Animals  
Keywords: Cholinesterases -- chemistry  
Keywords: Cholinesterases  
Keywords: Humans  
Keywords: Amino Acid Sequence  
Keywords: Environmental Pollutants -- analysis  
Keywords: Insecticides -- analysis  
Keywords: Environmental Studies  
Keywords: Environmental Pollutants  
Keywords: Environmental Monitoring  
Keywords: Proteins -- drug effects  
Keywords: Organophosphorus Compounds  
Keywords: Cholinesterases -- drug effects  
Keywords: Proteins -- chemistry  
Keywords: Insecticides  
Keywords: Molecular Sequence Data  
Keywords: Environmental Exposure  
Keywords: Mass Spectrometry -- methods  
Keywords: Organophosphorus Compounds -- toxicity  
Keywords: Proteins  
Keywords: Biological Markers  
Copyright - Copyright National Institute of Environmental Health Sciences Jan 2010  
Language of summary - English  
Pages - 11-9  
ProQuest ID - 222623450  
Last updated - 2012-03-04  
Place of publication - Research Triangle Park  
Corporate institution author - Thompson, Charles M; Prins, John M; George, Kathleen M  
DOI - 1943895611; 50348511; 67001; ENHP; 20056576; INODENHP0006208103  
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Rec #: 1840  
Keywords: REVIEW  
Call Number: NO REVIEW (ACP,CPY,CYP,DM,DMT,DS,MOM,PMR,PRT)  
Notes: EcoReference No.: 111784  
Chemical of Concern: ACP,CPY,CYP,DM,DMT,DS,MOM,PHSL,PIM,PMR,PRT

1371. Thomsen, M.; Faber, J. H., and Sorensen, P. B. Soil ecosystem health and services - Evaluation of ecological indicators susceptible to chemical stressors. 2012; 16, 67-75.   
Rec #: 70419  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The paper presents a methodological framework for quantifying soil ecosystem health with special focus on chemical stressors and ecological integrity as determinant for biological productivity of soil ecosystems. Ecological risk assessment is needed to facilitate the assessment of soil health and the capability of a soil to provide ecosystem services such as e.g. detoxification and decomposition of wastes, soil formation and renewal of soil fertility. We have developed such an approach that is based on systematic enumeration of vulnerable indicators that reflect essential soil ecosystem structures and processes that underlay such soil ecosystem services. The method is illustrated fora shortlist of common chemical stressors, represented by nickel, cadmium, chlorpyriphos, lindane and diazinon, and applied in a comparative assessment of suitability for use of grassland on contaminated soil. A comprehensive and relevant set of ecological integrity indicators has been analysed to derive a smaller core set of indicators highly relevant for all types of grassland use: i.e. reflecting ecological requirements to be fulfilled for any sustainable use of grassland. (C) 2011 Elsevier Ltd. All rights reserved.  
Keywords: Soil ecosystem health, Ecosystem services, Ecological requirements,  
ISI Document Delivery No.: 888DT

1372. Thuy, P. T.; Anh, N. V., and van der Bruggen, B. Evaluation of Two Low-Cost-High-Performance Adsorbent Materials in the Waste-to-Product Approach for the Removal of Pesticides from Drinking Water. 2012; 40, (3): 246-253.   
Rec #: 70429  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study evaluates the performance of two low cost and high performance adsorption materials, i.e., activated carbon produced from two natural waste products: Bamboo and coconut shell, in the removal of three pesticides from drinking water sources. Due to the fact that bamboo and coconut shell are abundant and inexpensive materials in many parts of the world, they respond to the low-cost aspect. The adsorption capacities of two local adsorbents have been compared with commercial activated carbon to explore their potential to respond to the high quality aspect. Two pesticides were selected, namely dieldrin and chlorpyrifos, because they are commonly used in agriculture activities, and may remain in high concentrations in surface water used as drinking water sources. The results indicate that the adsorption of pesticides on activated carbons is influenced by physico-chemical properties of the activated carbon and the pesticides such as the presence of an aromatic ring, and their molar mass. The activated carbon produced from bamboo can be employed as low-cost and high performance adsorbent, alternative to commercial activated carbon for the removal of pesticides during drinking water production. The performance of activated carbon from bamboo was better due to its relatively large macroporosity and planar surface. The effect of adsorbent and pesticide characteristics on the performance was derived from batch experiments in which the adsorption behavior was studied on the basis of Freundlich isotherms.  
Keywords: Activated carbon, Adsorption, Biomass, Surface water  
ISI Document Delivery No.: 901NC

1373. Thuy, Pham Thi; Geluwe, Steven; Nguyen, Viet-Anh; Bruggen, Bart, and Thuy, Pham Thi. Current Pesticide Practices and Environmental Issues in Vietnam: Management Challenges for Sustainable Use of Pesticides for Tropical Crops in (South-East) Asia to Avoid Environmental Pollution. 2012 Oct; 14, (4): 379-387.   
Rec #: 46479  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Pesticides are widely used in modern agriculture to minimize financial losses and maintain food supplies. In southeast Asia, where agriculture is the principal economic activity, pesticides are considered essential, particularly in tropical regions seeking to enter the global economy by providing off-season fresh fruits and vegetables. The absence of a strong legal framework for pesticides facilitated a significant increase in the use of low-quality pesticides. Farmers ignore the risks, safety instructions, and protective directives when using pesticides. They are only concerned about the effectiveness of the pesticides for killing pests, without paying attention to the effects on their health and the environment. The improper usage of pesticides and the incorrect disposal of pesticide wastes contributed to the pollution of groundwater, surface water, and soil, and induced health problems in local communities. This paper describes the impact of the exposure of pesticides on human health and water resources in connection with the usage of pesticides and their management. Because of availability, the data are mainly taken for Northern Vietnam, and applied to the water quality in the delta; nevertheless, the problem relates to all countries in the delta, and similar situations may be found in other regions, particularly in Asia.  
Keywords: Agriculture  
Keywords: ISEW, Vietnam  
Keywords: Health problems  
Keywords: Surface water  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: M3 1010:Issues in Sustainable Development  
Keywords: Environmental health  
Keywords: Deltas  
Keywords: Water quality  
Keywords: Environmental Studies  
Keywords: Public health  
Keywords: Sustainability Science Abstracts; Pollution Abstracts  
Keywords: Pesticides  
Keywords: Economics  
Keywords: INW, Asia  
Keywords: ISEW, Southeast Asia  
Date revised - 2012-11-01  
Language of summary - English  
Location - ISEW, Vietnam; INW, Asia; ISEW, Southeast Asia  
Pages - 379-387  
ProQuest ID - 1223189863  
SubjectsTermNotLitGenreText - Agriculture; Health problems; Surface water; Economics; Pesticides; Environmental health; Deltas; Water quality; Public health; ISEW, Vietnam; INW, Asia; ISEW, Southeast Asia  
Last updated - 2012-12-06  
Corporate institution author - Thuy, Pham Thi; Geluwe, Steven; Nguyen, Viet-Anh; Bruggen, Bart  
DOI - OB-8ff4d0ab-325d-4f97-a6famfgefd101; 17341016; 1438-4957; 1611-8227 English

1374. Tian, X.; Xu, F.; Lung, W. Y.; Meyerson, C.; Ghaffari, A. A.; Cheng, G., and Deng, J. C. Poly I:C Enhances Susceptibility to Secondary Pulmonary Infections by Gram-Positive Bacteria.   
Rec #: 50009  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Secondary bacterial pneumonias are a frequent complication of influenza and other respiratory viral infections, but the mechanisms underlying viral-induced susceptibility to bacterial infections are poorly understood. In particular, it is unclear whether the host's response against the viral infection, independent of the injury caused by the virus, results in impairment of antibacterial host defense. Here, we sought to determine whether the induction of an "antiviral" immune state using various viral recognition receptor ligands was sufficient to result in decreased ability to combat common bacterial pathogens of the lung. Using a mouse model, animals were administered polyinosine-polycytidylic acid (poly I:C) or Toll-like 7 ligand (imiquimod or gardiquimod) intranasally, followed by intratracheal challenge with Streptococcus pneumoniae. We found that animals pre-exposed to poly I:C displayed impaired bacterial clearance and increased mortality. Poly I:C-exposed animals also had decreased ability to clear methicillin-resistant Staphylococcus aureus. Furthermore, we showed that activation of Toll-like receptor (TLR)3 and Retinoic acid inducible gene (RIG-I)/Cardif pathways, which recognize viral nucleic acids in the form of dsRNA, both contribute to poly I:C mediated impairment of bacterial clearance. Finally, we determined that poly I:C administration resulted in significant induction of type I interferons (IFNs), whereas the elimination of type I IFN signaling improved clearance and survival following secondary bacterial pneumonia. Collectively, these results indicate that in the lung, poly I:C administration is sufficient to impair pulmonary host defense against clinically important gram-positive bacterial pathogens, which appears to be mediated by type I IFNs.  
MESH HEADINGS: Aminoquinolines/pharmacology  
MESH HEADINGS: Animals  
MESH HEADINGS: Antibodies/pharmacology  
MESH HEADINGS: Antigens, Viral/administration &amp  
MESH HEADINGS: dosage/\*immunology  
MESH HEADINGS: Disease Susceptibility  
MESH HEADINGS: Gene Expression Regulation/drug effects  
MESH HEADINGS: Imidazoles/pharmacology  
MESH HEADINGS: Interferon Inducers/pharmacology  
MESH HEADINGS: Interferon Type I/genetics/\*immunology  
MESH HEADINGS: Membrane Proteins/genetics/immunology  
MESH HEADINGS: Methicillin-Resistant Staphylococcus aureus/immunology  
MESH HEADINGS: Mice  
MESH HEADINGS: Nerve Tissue Proteins/genetics/immunology  
MESH HEADINGS: Pneumococcal Infections/genetics/\*immunology/microbiology/mortality  
MESH HEADINGS: Pneumonia, Bacterial/genetics/\*immunology/microbiology/mortality  
MESH HEADINGS: Poly I-C/administration &amp  
MESH HEADINGS: dosage/\*immunology  
MESH HEADINGS: Receptor, Interferon alpha-beta/genetics/immunology  
MESH HEADINGS: Signal Transduction/drug effects  
MESH HEADINGS: Staphylococcal Infections/genetics/\*immunology/microbiology/mortality  
MESH HEADINGS: Streptococcus pneumoniae/immunology  
MESH HEADINGS: Survival Rate  
MESH HEADINGS: Toll-Like Receptor 3/genetics/immunology eng

1375. Tian, Y. and Yamauchi, T. Corrigendum to "Micronucleus Formation in 3-Day Mouse Embryos Associated with Maternal Exposure to Chlorpyrifos During the Early Preimplantation Period": [Reprod. Toxicol. 17 (2003) 401-405]. 2004; 18, (3): 451-754.   
Rec #: 350  
Keywords: ADDENDUM  
Call Number: NO ADDENDUM (CPY)  
Notes: Chemical of Concern: CPY

1376. Tierney, K. B. Neurotoxicity of Pesticides to Salmon: Physiology to Ethology. 2007: 367 p. (Publ As 89637,90046,89625,89700,101435).   
Rec #: 1480  
Keywords: PUBL AS  
Call Number: NO PUBL AS (24D,24DXY,ATZ,CBL,CPY,DMT,DZ,ES,GYPI,LNR,MLN,MTM,SZ)  
Notes: Chemical of Concern: 24D,24DXY,ATZ,CBL,CPY,DMT,DZ,EPRN,ES,GYPI,IPB,LNR,MLN,MTM,PRN,SZ

1377. Tierney, K. B.; Sampson, J. L.; Ross, P. S.; Sekela, M. A., and Kennedy, C. J. Salmon Olfaction is Impaired by an Environmentally Realistic Pesticide Mixture. 2008; 42, 4996-5001.   
Rec #: 1490  
Keywords: MIXTURE  
Call Number: NO MIXTURE (ATZ,CPY,DMT,DZ,ES,LNR,MLN,MTM,SZ)  
Notes: Chemical of Concern: ATZ,CPY,DMT,DZ,EPRN,ES,LNR,MLN,MTM,PRN,SZ

1378. Tierney, K. B.; Sekela, M. A.; Cobbler, C. E.; Xhabija, B.; Gledhill, M.; Ananvoranich, S., and Zielinski, B. S. EVIDENCE FOR BEHAVIORAL PREFERENCE TOWARD ENVIRONMENTAL CONCENTRATIONS OF URBAN-USE HERBICIDES IN A MODEL ADULT FISH. 2011; 30, (9): 2046-2054.   
Rec #: 70479  
Keywords: SURVEY,MIXTURE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Fish live in waters of contaminant flux. In three urban, fish-bearing waterways of British Columbia, Canada, we found the active ingredients of WeedEx (R), KillEx (R), and Roundup (R) herbicide formulations (2,4-D, dicamba, glyphosate, and mecoprop) at low to high ng/L concentrations (0.26 to 309 ng/L) in routine conditions, i.e., no rain for at least one week. Following rain, these concentrations increased by an average of eightfold, suggesting runoff as a major route of herbicide introduction in these waterways. To determine whether fish might be able to limit point-source exposures through sensory-driven behaviors, we introduced pulses of representative herbicide mixtures to individual adult zebrafish (a model species) in flow-through tanks. Fish did the opposite of limit exposure; they chose to spend more time in pulses of herbicide mixtures representative of those that may occur with rain events. **This attraction response was not altered by a previous 4-d exposure to lower concentrations of the mixtures**, suggesting fish will not learn from previous exposures. However, previous exposures did alter an attraction response to an amino acid prevalent in food (L-alanine). The present study demonstrates that fish living within urban waterways may elect to place themselves in herbicide-contaminated environments and that these exposures may alter their behavioral responses to cues necessary for survival. Environ. Toxicol. Chem. 2011;30:2046-2054. (C) 2011 SETAC  
Keywords: Zebrafish, Herbicide avoidance, Behavioral attraction, 2,4-D, Glyphosate  
ISI Document Delivery No.: 813AH

1379. Tighe, A.; Ray-Sinha, A.; Staples, O. D., and Taylor, S. S. Gsk-3 Inhibitors Induce Chromosome Instability.   
Rec #: 51409  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: EMBO J. 2003 Jun 2;22(11):2752-63 (medline /12773390)  
COMMENTS: Cites: J Biol Chem. 2003 Nov 14;278(46):45937-45 (medline /12928438)  
COMMENTS: Cites: Science. 2003 Sep 12;301(5639):1547-50 (medline /12970569)  
COMMENTS: Cites: J Biol Chem. 2003 Dec 19;278(51):51786-95 (medline /14523000)  
COMMENTS: Cites: Mol Cell. 2003 Aug;12(2):381-92 (medline /14536078)  
COMMENTS: Cites: Curr Opin Cell Biol. 2003 Dec;15(6):672-83 (medline /14644191)  
COMMENTS: Cites: J Cell Biol. 2003 Dec 8;163(5):949-61 (medline /14662741)  
COMMENTS: Cites: Bioorg Med Chem Lett. 2004 Jan 19;14(2):413-6 (medline /14698171)  
COMMENTS: Cites: J Cell Biol. 2000 May 15;149(4):761-6 (medline /10811817)  
COMMENTS: Cites: Nature. 2000 Jul 6;406(6791):86-90 (medline /10894547)  
COMMENTS: Cites: Chem Biol. 2000 Oct;7(10):793-803 (medline /11033082)  
COMMENTS: Cites: Mol Med Today. 2000 Dec;6(12):462-9 (medline /11099951)  
COMMENTS: Cites: Curr Biol. 2001 Jan 9;11(1):44-9 (medline /11166179)  
COMMENTS: Cites: Nat Cell Biol. 2001 Apr;3(4):429-32 (medline /11283619)  
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COMMENTS: Cites: Diabetes. 2001 May;50(5):937-46 (medline /11334436)  
COMMENTS: Cites: EMBO Rep. 2001 Jul;2(7):609-14 (medline /11454737)  
COMMENTS: Cites: Nat Rev Mol Cell Biol. 2001 Oct;2(10):769-76 (medline /11584304)  
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COMMENTS: Cites: J Med Chem. 2002 Mar 14;45(6):1292-9 (medline /11881998)  
COMMENTS: Cites: Nat Rev Mol Cell Biol. 2002 May;3(5):328-38 (medline /11988767)  
COMMENTS: Cites: Bioorg Med Chem Lett. 2002 Jun 3;12(11):1525-8 (medline /12031334)  
COMMENTS: Cites: Genes Dev. 2004 Jan 1;18(1):48-61 (medline /14724178)  
COMMENTS: Cites: J Cell Biol. 2004 Jan 19;164(2):243-53 (medline /14734535)  
COMMENTS: Cites: J Cell Sci. 1992 Nov;103 ( Pt 3):665-75 (medline /1478963)  
COMMENTS: Cites: J Cell Sci. 2004 Mar 1;117(Pt 7):1117-28 (medline /14970257)  
COMMENTS: Cites: J Cell Sci. 2004 Mar 15;117(Pt 8):1577-89 (medline /15020684)  
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ABSTRACT: BACKGROUND: Several mechanisms operate during mitosis to ensure accurate chromosome segregation. However, during tumour evolution these mechanisms go awry resulting in chromosome instability. While several lines of evidence suggest that mutations in adenomatous polyposis coli (APC) may promote chromosome instability, at least in colon cancer, the underlying mechanisms remain unclear. Here, we turn our attention to GSK-3 - a protein kinase, which in concert with APC, targets beta-catenin for proteolysis - and ask whether GSK-3 is required for accurate chromosome segregation.  
ABSTRACT: RESULTS: To probe the role of GSK-3 in mitosis, we inhibited GSK-3 kinase activity in cells using a panel of small molecule inhibitors, including SB-415286, AR-A014418, 1-Azakenpaullone and CHIR99021. Analysis of synchronised HeLa cells shows that GSK-3 inhibitors do not prevent G1/S progression or cell division. They do, however, significantly delay mitotic exit, largely because inhibitor-treated cells have difficulty aligning all their chromosomes. Although bipolar spindles form and the majority of chromosomes biorient, one or more chromosomes often remain mono-oriented near the spindle poles. Despite a prolonged mitotic delay, anaphase frequently initiates without the last chromosome aligning, resulting in chromosome non-disjunction. To rule out the possibility of &quot;off-target&quot; effects, we also used RNA interference to selectively repress GSK-3beta. Cells deficient for GSK-3beta exhibit a similar chromosome alignment defect, with chromosomes clustered near the spindle poles. GSK-3beta repression also results in cells accumulating micronuclei, a hallmark of chromosome missegregation.  
ABSTRACT: CONCLUSION: Thus, not only do our observations indicate a role for GSK-3 in accurate chromosome segregation, but they also raise the possibility that, if used as therapeutic agents, GSK-3 inhibitors may induce unwanted side effects by inducing chromosome instability.  
MESH HEADINGS: Cell Line, Tumor  
MESH HEADINGS: \*Chromosomal Instability  
MESH HEADINGS: \*Chromosome Segregation  
MESH HEADINGS: Glycogen Synthase Kinase 3/\*antagonists &amp  
MESH HEADINGS: inhibitors/\*metabolism  
MESH HEADINGS: HeLa Cells  
MESH HEADINGS: Humans  
MESH HEADINGS: Mitosis/drug effects  
MESH HEADINGS: Mitotic Spindle Apparatus/drug effects  
MESH HEADINGS: Protein Kinase Inhibitors/adverse effects/chemistry/metabolism/\*pharmacology  
MESH HEADINGS: RNA Interference  
MESH HEADINGS: beta Catenin/metabolism eng

1380. Tirelli, V.; Catone, T.; Turco, L.; Di Consiglio, E.; Testai, E., and De Angelis, I. Effects of the pesticide clorpyrifos on an in vitro model of intestinal barrier. 2007; 21, (2): 308-313.   
Rec #: 70609  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Clorpyrifos (CPF), one of the most widely used organophosphorothionate pesticide can be detected as residues in food and drinking water; therefore the oral route is the major route of exposure for the general population, including children, following household use of this insecticide. Aim of this work was to investigate the possible acute cytotoxic effects of CPF on intestine and the integrity of the epithelial barrier, using Caco-2/TC7 cells as intestinal in vitro model. High level of CPF found inside the cells, corresponding to about 80% of the nominal concentration tested (30, 50 and 250 mu M), chosen as representative of the concentrations attainable in the intestinal lumen after actual levels of human oral exposure. In these conditions, no cytotoxicity in terms of cellular viability was observed. However, at the highest CPF nominal concentration (250 M) the impairment of barrier integrity was evidenced, due only to the parent compound, since no CPF metabolites could be detected in our experimental conditions. CPF itself was demonstrated to interfere with the tight junction on this in vitro model of epithelial intestinal cells, altering the barrier integrity and very likely the absorption of other co-administered chemicals. (c) 2006 Elsevier Ltd. All rights reserved.  
Keywords: clorpyrifos, Caco-2/TC7 cells, intestinal barrier  
ISI Document Delivery No.: 154HZ

1381. Tiryaki, Osman; Baysoyu, Dilan; Secer, Emine; Aydin, Guelizar, and Tiryaki, Osman. Testing the Stability of Pesticides During Sample Processing for the Chlorpyrifos and Malathion Residue Analysis in Cucumber, Including Matrix Effects. 2008 Jan; 80, (1): 38-43.   
Rec #: 42319  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This article describes the procedure of the testing the stability of compounds during sample processing for the pesticide residue analysis in cucumber, including matrix matched assessment. To find out significant differences, one-tailed t test was applied to the data at 95% confidence level. Our results showed that the calculated value was bigger than the critical value (t sub(calc) > t sub(crit)), which means the pesticides were decomposed under our processing conditions.  
Keywords: Chlorpyrifos  
Keywords: T-cell receptor  
Keywords: Data processing  
Keywords: Pesticide residues  
Keywords: Pesticides  
Keywords: Toxicology Abstracts; Pollution Abstracts  
Keywords: X 24330:Agrochemicals  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Malathion  
Keywords: Environmental Studies  
Date revised - 2012-09-01  
Language of summary - English  
Pages - 38-43  
ProQuest ID - 293872961  
SubjectsTermNotLitGenreText - Chlorpyrifos; T-cell receptor; Data processing; Pesticide residues; Pesticides; Malathion  
Last updated - 2012-11-08  
Corporate institution author - Tiryaki, Osman; Baysoyu, Dilan; Secer, Emine; Aydin, Guelizar  
DOI - OB-MD-0008051199; 8152639; 0007-4861 English

1382. Tiwari, M. K. and Guha, S. Role of Soil Organic Matter on the Sorption and Cosorption of Endosulfan and Chlorpyrifos on Agricultural Soils. 2012; 138, (4): 426-435.   
Rec #: 70649  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Sorption of endosulfan and chlorpyrifos was studied through batch experiments with three agricultural soils (organic carbon 0.8, 1.37, and 2%) and different initial concentrations of pesticides below the limits of their solubility. The effect of the presence of one pesticide on sorption of the other was also examined. The sorption of both pesticides followed the Lagergren kinetic model, and more than 95% of sorption was completed within 4-6 hours for endosulfan and 6-12 hours for chlorpyrifos. The equilibrium sorption of both pesticides was primarily on the soil organic matter, but the isotherms were nonlinear, especially at low-solute concentrations. The nonlinearity was the result of the sorption onto the hard carbon portion of soil organic carbon, which was also indicated by the simulations with a dual reactive domain model (DRDM). The sorption of either pesticide was suppressed in the presence of the other, and the isotherm nonlinearity decreased with increasing concentration of the cosolute. The effect of a cosolute was more prominent for the sorption of endosulfan compared with that of chlorpyrifos. The simulations with DRDM indicated a competitive sorption in the portion of organic carbon showing site-limited sorption. No competition was observed in the portion showing linear partition behavior. Among the two isomers of endosulfan, the beta isomer was preferentially partitioned over the alpha isomer. DOI: 10.1061/(ASCE)EE.1943-7870.0000490. (C) 2012 American Society of Civil Engineers.  
Keywords: Endosulfan, Chlorpyrifos, Sorption, Pertition, Soil organic carbon,  
ISI Document Delivery No.: 932AD

1383. Toccalino, Patricia L; Norman, Julia E; Scott, Jonathon C, and Toccalino, Patricia L. Chemical Mixtures in Untreated Water From Public-Supply Wells in the U.s. - Occurrence, Composition, and Potential Toxicity. 2012 Aug 1; 431, 262-270.   
Rec #: 46589  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chemical mixtures are prevalent in groundwater used for public water supply, but little is known about their potential health effects. As part of a large-scale ambient groundwater study, we evaluated chemical mixtures across multiple chemical classes, and included more chemical contaminants than in previous studies of mixtures in public-supply wells. We (1) assessed the occurrence of chemical mixtures in untreated source-water samples from public-supply wells, (2) determined the composition of the most frequently occurring mixtures, and (3) characterized the potential toxicity of mixtures using a new screening approach. The U.S. Geological Survey collected one untreated water sample from each of 383 public wells distributed across 35 states, and analyzed the samples for as many as 91 chemical contaminants. Concentrations of mixture components were compared to individual human-health benchmarks; the potential toxicity of mixtures was characterized by addition of benchmark-normalized component concentrations. Most samples (84%) contained mixtures of two or more contaminants, each at concentrations greater than one-tenth of individual benchmarks. The chemical mixtures that most frequently occurred and had the greatest potential toxicity primarily were composed of trace elements (including arsenic, strontium, or uranium), radon, or nitrate. Herbicides, disinfection by-products, and solvents were the most common organic contaminants in mixtures. The sum of benchmark-normalized concentrations was greater than 1 for 58% of samples, suggesting that there could be potential for mixtures toxicity in more than half of the public-well samples. Our findings can be used to help set priorities for groundwater monitoring and suggest future research directions for drinking-water treatment studies and for toxicity assessments of chemical mixtures in water resources.  
Keywords: Pollution monitoring  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: geological surveys  
Keywords: Toxicity  
Keywords: Water supplies  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: USA  
Keywords: Environment Abstracts; Pollution Abstracts; Aqualine Abstracts; Water Resources Abstracts  
Keywords: Water wells  
Keywords: Chemical pollution  
Keywords: Groundwater  
Keywords: Benchmarks  
Keywords: Drinking water  
Date revised - 2012-11-01  
Language of summary - English  
Location - USA  
Pages - 262-270  
ProQuest ID - 1223021506  
SubjectsTermNotLitGenreText - Pollution monitoring; geological surveys; Water wells; Chemical pollution; Toxicity; Drinking water; Benchmarks; Groundwater; Water supplies; USA  
Last updated - 2012-12-06  
Corporate institution author - Toccalino, Patricia L; Norman, Julia E; Scott, Jonathon C  
DOI - OB-cfdc3f74-c5da-4aee-9091csamfg201; 16881475; 0048-9697 English

1384. Toma, L.; Menegon, M.; Romi, R.; De Matthaeis, E.; Montanari, M., and Severini, C. Status of insecticide resistance in Culex pipiens field populations from north-eastern areas of Italy before the withdrawal of OP compounds. 2011; 67, (1): 100-106.   
Rec #: 70689  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: Heavy and constant use of organophosphorus (OP) larvicides selected Culex pipiens L. resistant populations through two main mechanisms of genetic resistance, the increased activity of detoxifying esterase and the production of alterate acetylcholinesterase-1 (AChE1) by G119S mutation. The aim of this study was the assessment of the distribution of Cx. pipiens populations resistant to temephos and chlorpyrifos in the north-eastern regions of Italy and the occurrence of the insensitive AChE in these populations. Data describe the situation in the last years before European legislation prohibited the use of OP larvicides in mosquito control, up until 2007. RESULTS: For the first time a high level of OP resistance in the samples from Ravenna (182-fold, 80% A4/B4 or A5/B5 esterases and 38.3% Ester(5)), Emilia Romagna region, was detected; therefore, new data from the Veneto and Friuli Venezia Giulia regions were obtained and reinforced existing knowledge about resistance previously studied along the Adriatic coast. Nearby, in the Villa Verucchio locality, the highest (87.5%) AChE1R was found. CONCLUSION: Cx. pipiens resistance esterases A5/B5 and A4/B4 spread southward along the Adriatic coastal plain while OPs were being used in mosquito control, as confirmed by the first molecular screening of the AChE1 gene in these populations. (C) 2010 Society of Chemical Industry  
Keywords: insecticide resistance, Culex pipiens, esterases, acetylcholinesterase,  
ISI Document Delivery No.: 701TV

1385. Tomkins, A. R.; Wilson, D. J., and Thomson, C. Thrip Control with Fluvalinate on Kiwifruit. SOIL; 1992; 45, 162-166.   
Rec #: 1500  
Keywords: MIXTURE  
Call Number: NO MIXTURE (CPY,FYC,PSM,TAUF)  
Notes: Chemical of Concern: CPY,FYC,PSM,TAUF

1386. Tope, A. M. and Rogers, P. F. Evaluation of protective effects of sulforaphane on DNA damage caused by exposure to low levels of pesticide mixture using comet assay. 2009; 44, (7): 657-662.   
Rec #: 70709  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The objective of the study was to evaluate the potential risk of DNA damage due to exposure to a mixture of the most widely used pesticides, namely endosulfan, chlorpyriphos and thiram at an environmentally relevant concentration (5 mu M each) and the DNA protective capacity of sulforaphane (SFN) (10-30 mu g/mL). DNA damage in human lymphocytes was ascertained with Single Cell Gel Electrophoresis (SCGE), also called Comet Assay. For positive control, H(2)O(2) at 100 mM was used. The pesticide mixture produced DNA damage at the concentration used in the lymphocytes. SFN was able to offer a statistically significant (P < 0.01), concentration-dependant protection to DNA damage between 10-20 mu g/mL in both the pre-incubation and co-incubation strategies. The results indicate that exposure to low levels of these pesticide mixtures can induce DNA damage, and the presence of SFN in diet may reduce the incidence of genetic damage, especially in farm workers. However, it is not clear whether SFN is involved in quenching of the free radicals generated by the pesticide mixture or it is involved in DNA repair mechanism.  
Keywords: Pesticide mixture, DNA damage, human lymphocytes, sulforaphane, DNA  
ISI Document Delivery No.: 535VY

1387. Toprak Karaman, Zerrin. Participation to the public life and becoming organized at local level in Romani settlements in Izmir. 2009 Apr; 26, (2): 308-321.   
Rec #: 3870  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: There are more than 20 million Romani residents in many countries around the world. Due to social and economic reasons, many Romanies do not declare their ethnic origins; therefore, it is not possible to obtain any exact figures from official records. Romanies may have a preference of not defining themselves openly as ÇŁRomaniesÇĄ. However, it is thought that they are distinguished from non-Romanies with their unique behavior and speech. Actually, physical features cannot be used as a definite distinctive feature in identifying Romanies. As a matter of fact, the first Romanies who had entered Europe were identified by their dark skin color and black hair, whereas today, it is possible to see Romanies with light skin and hair color. Romanies and music are often considered together; they have trained numerous accomplished musicians.   
  
zmir Metropolitan Municipality Area is covered as research area. -\_zmir provincial population was 3,370,866 in 2000. The population of -\_zmir Metropolitan Municipality Area (nine sub-provincial areas) was 2,232,265 in the 2000s. Gypsies/ Romani people/ Participation to the public life at local level/ Willingness of becoming organized/ Voting and the use of the right to be elected/ Cultural identities

1388. Torregrossa, M. M.; Corlett, P. R., and Taylor, J. R. Aberrant Learning and Memory in Addiction.   
Rec #: 49899  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Psychol Rev. 1982 Sep;89(5):529-72 (medline /7178332)  
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ABSTRACT: Over the past several years, drug addiction has increasingly been accepted to be a disease of the brain as opposed to simply being due to a lack of willpower or personality flaw. Exposure to addictive substances has been shown to create enduring changes in brain structure and function that are thought to underlie the transition to addiction. Specific genetic and environmental vulnerability factors also influence the impact of drugs of abuse on the brain and can enhance the likelihood of becoming an addict. Long-lasting alterations in brain function have been found in neural circuits that are known to be responsible for normal appetitive learning and memory processes and it has been hypothesized that drugs of abuse enhance positive learning and memory about the drug while inhibiting learning about the negative consequences of drug use. Therefore, the addict's behavior becomes increasingly directed towards obtaining and using drugs of abuse, while at the same time developing a poorer ability to stop using, even when the drug is less rewarding or interferes with functioning in other facets of life. In this review we will discuss the clinical evidence that addicted individuals have altered learning and memory and describe the possible neural substrates of this dysfunction. In addition, we will explore the pre-clinical evidence that drugs of abuse cause a progressive disorder of learning and memory, review the molecular and neurobiological changes that may underlie this disorder, determine the genetic and environmental factors that may increase vulnerability to addiction, and suggest potential strategies for treating addiction through manipulations of learning and memory.  
MESH HEADINGS: Brain/\*physiopathology  
MESH HEADINGS: Humans  
MESH HEADINGS: Learning/\*physiology  
MESH HEADINGS: Memory/\*physiology  
MESH HEADINGS: Reward  
MESH HEADINGS: Substance-Related Disorders/\*physiopathology/psychology eng

1389. Torres-Altoro, M. I.; Mathur, B. N.; Drerup, J. M.; Thomas, R.; Lovinger, D. M.; O'Callaghan, J. P., and Bibb, J. A. Organophosphates dysregulate dopamine signaling, glutamatergic neurotransmission, and induce neuronal injury markers in striatum. 2011; 119 , (2): 303-313.   
Rec #: 70719  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The neurological effects of organophosphate (OP) pesticides, commonly used on foods and in households, are an important public health concern. Furthermore, subclinical exposure to combinations of organophosphates is implicated in Gulf War illness. Here, we characterized the effects of the broadly used insecticide chlorpyrifos (CPF) on dopamine and glutamatergic neurotransmission effectors in corticostriatal motor/reward circuitry. CPF potentiated protein kinase A (PKA)-dependent phosphorylation of the striatal protein dopamine-and cAMP-regulated phosphoprotein of M(r) 32 kDa (DARPP-32) and the glutamate receptor 1 (GluR1) subunit of alpha-amino-3-hydroxy-5methyl- 4-isoxazolepropionic acid (AMPA) receptors in mouse brain slices. It also increased GluR1 phosphorylation by PKA when administered systemically. This correlated with enhanced glutamate release from cortical projections in rat striatum. Similar effects were induced by the sarin congener, diisopropyl fluorophosphate, alone or in combination with the putative neuroprotectant, pyridostigmine bromide and the pesticide N,N-diethyl-meta-toluamide (DEET). This combination, meant to mimic the neurotoxicant exposure encountered by veterans of the 1991 Persian Gulf War, also induced hyperphosphorylation of the neurofibrillary tangle-associated protein tau. Diisopropyl fluorophosphate and pyrodostigmine bromide, alone or in combination, also increased the aberrant activity of the protein kinase, Cdk5, as indicated by conversion of its activating cofactor p35 to p25. Thus, consistent with recent findings in humans and animals, organophosphate exposure causes dysregulation in the motor/reward circuitry and invokes mechanisms associated with neurological disorders and neurodegeneration.  
Keywords: chlorpyrifos, dopamine, Gulf War illness, insecticide, neurotoxicity,  
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Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: The biomixture is a principal element controlling the degradation efficacy of the biobed. The maturity of the biomixture used in the biobed affects its overall performance of the biobed, but this is not well studied yet. The aim of this research was to evaluate the effect of using a typical composition of Swedish biomixture at different maturity stages on the degradation of chlorpyrifos. Tests were made using biomixture at three maturity stages: 0 d (BC0), 15 d (BC15) and 30 d (BC30); chlorpyrifos was added to the biobeds at final concentration of 200, 320 and 480 mg kgęĆ1. Chlorpyrifos degradation in the biomixture was monitored over time. Formation of TCP (3,5,6-trichloro-2-pyrinidol) was also quantified, and hydrolytic and phenoloxidase activities measured. The biomixture efficiently degraded chlorpyrifos (degradation efficiency &gt;50%) in all the evaluated maturity stages. However, chlorpyrifos degradation decreased with increasing concentrations of the pesticide. TCP formation occurred in all biomixtures, but a major accumulation was observed in BC30. Significant differences were found in both phenoloxidase and hydrolytic activities in the three maturity stages of biomixture evaluated. Also, these two biological activities were affected by the increase in pesticide concentration. In conclusion, our results demonstrated that chlorpyrifos can be degraded efficiently in all the evaluated maturity stages. Biobeds/ Maturity stage/ Chlorpyrifos/ Biological activity

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Keywords: PUBL AS,SEDIMENT CONC  
Call Number: NO PUBL AS (ATZ,BFT,CPY,CYF,CYP,DCT,DEATZ,DIATZ,DM,EFV,ES1,ES2,ESS,LCYT,PMR,PMT,PPZ,PRO,SZ), NO SEDIMENT CONC (ATZ,BFT,CPY,CYF,CYP,DCT,DEATZ,DIATZ,DM,EFV,ES1,ES2,ESS,LCYT,PMR,PMT,PPZ,PRO,SZ)  
Notes: Chemical of Concern: AMTR,ATZ,BFT,CPY,CYF,CYP,CZE,DCT,DDE,DDT,DEATZ,DIATZ,DLD,DM,EFV,EN,ES1,ES2,ESS,HCCH,HPT,KCl,LCYT,MXC,PMR,PMT,PPCP,PPZ,PRO,SZ

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Rec #: 1510  
Keywords: MIXTURE,REFS CHECKED,REVIEW  
Call Number: NO MIXTURE (BFT,CPY,CYF,CYP,DM,EFV,ES1,ES2,ESS,LCYT,PMR), NO REFS CHECKED (BFT,CPY,CYF,CYP,DM,EFV,ES1,ES2,ESS,LCYT,PMR), NO REVIEW (BFT,CPY,CYF,CYP,DM,EFV,ES1,ES2,ESS,LCYT,PMR)  
Notes: Chemical of Concern: BFT,CPY,CYF,CYP,DDT,DLD,DM,EFV,EN,ES1,ES2,ESS,LCYT,MXC,PMR

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COMMENTS: Comment in: Am J Respir Cell Mol Biol. 2010 Mar;42(3):255-6 (medline /20156978)  
ABSTRACT: Mast cells make and secrete an abundance of peptidases, which are stored in such large amounts in granules that they comprise a high fraction of all cellular protein. Perhaps no other immune cell is so generously endowed with peptidases. For many years after the main peptidases were first described, they were best known as markers of degranulation, for they are released locally in response to mast cell stimulation and can be distributed systemically and detected in blood. The principal peptidases are tryptases, chymases, carboxypeptidase A3, and dipeptidylpeptidase I (cathepsin C). Numerous studies suggest that these enzymes are important and even critical for host defense and homeostasis. Endogenous and allergen or pathogen-associated targets have been identified. Belying the narrow notion of peptidases as proinflammatory, several of the peptidases limit inflammation and toxicity of endogenous peptides and venoms. The peptidases are interdependent, so that absence or inactivity of one enzyme can alter levels and activity of others. Mammalian mast cell peptidases--chymases and tryptases especially--vary remarkably in number, expression, biophysical properties, and specificity, perhaps because they hyper-evolved under pressure from the very pathogens they help to repel. Tryptase and chymase involvement in some pathologies stimulated development of therapeutic inhibitors for use in asthma, lung fibrosis, pulmonary hypertension, ulcerative colitis, and cardiovascular diseases. While animal studies support the potential for mast cell peptidase inhibitors to mitigate certain diseases, other studies, as in mice lacking selected peptidases, predict roles in defense against bacteria and parasites and that systemic inactivation may impair host defense.  
MESH HEADINGS: Animals  
MESH HEADINGS: Host-Pathogen Interactions/\*immunology  
MESH HEADINGS: Humans  
MESH HEADINGS: Immunity, Innate/\*immunology  
MESH HEADINGS: Mast Cells/\*enzymology/\*immunology  
MESH HEADINGS: Peptide Hydrolases/\*immunology eng

1395. Tsiplakou, E; Anagnostopoulos, C J; Liapis, K; Haroutounian, Sa; Zervas, G, and Tsiplakou, E. Pesticides Residues in Milks and Feedstuff of Farm Animals Drawn From Greece. 2010 Jul; 80, (5): 504-512.   
Rec #: 47839  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The objective of this study was to investigate if milk from dairy sheep and goats, fed mainly with supplementary feed during the winter months, was contaminated with pesticides residues. Two hundred milk samples from sheep and goats were collected from 10 farms of each animals. The sheep and goats farms were selected from those which represent common conventional production and feeding systems in Greece. Milk and feed samples (alfalfa hay, wheat straw, shrubs, pasture and concentrates) were taken from each farm to analyze for pesticides residues. The results showed that the capital sigma endosulfan was the main pesticide residue which was detected in all the concentrates samples at a mean concentration of 5.36 mg kg super(-1), which is much higher from the maximum residue level (MRL). In addition, the capital sigma endosulfan was also detected in all the alfalfa hay samples but at a mean concentration of 0.10 mg kg super(-1) which is lower than the MRL. The mean concentrations of endosulfan alpha and beta were 2.82 and 2.39 mg kg super(-1) in the concentrates samples and 0.08 and 0.02 mg kg super(-1) respectively in alfalfa hay samples. In the wheat straw, shrubs and pasture samples no pesticides residues were detected. No pesticide residues were also detected in milk samples of sheep and goats. Thus, this milk from the farms sampled presents no human health risks as far as the contaminants analyzed concerned.  
Keywords: wheat  
Keywords: Milk  
Keywords: Greece  
Keywords: Feed  
Keywords: Pesticide residues  
Keywords: alfalfa  
Keywords: Q5 01502:Methods and instruments  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Pasture  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Public health  
Keywords: Feed composition  
Keywords: Triticum aestivum  
Keywords: farms  
Keywords: Pesticides  
Keywords: hay  
Keywords: Environment Abstracts; Pollution Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: sheep  
Keywords: Feeds  
Date revised - 2011-10-01  
Language of summary - English  
Location - Greece  
Pages - 504-512  
ProQuest ID - 813723319  
SubjectsTermNotLitGenreText - Feed; Pesticides; Feed composition; Public health; wheat; Milk; Pesticide residues; farms; hay; alfalfa; sheep; Pasture; Feeds; Triticum aestivum; Greece  
Last updated - 2011-12-07  
Corporate institution author - Tsiplakou, E; Anagnostopoulos, C J; Liapis, K; Haroutounian, SA; Zervas, G  
DOI - OB-ee8e5764-d1a2-481a-8ffdcsaobj202; 13146528; CS1115603; 0045-6535 English

1396. Tulve, N. S.; Egeghy, P. P.; Fortmann, R. C.; Xue, J. P.; Evans, J.; Whitaker, D. A., and Croghan, C. W. Methodologies for estimating cumulative human exposures to current-use pyrethroid pesticides. 2011; 21, (3): 317-327.   
Rec #: 70839  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We estimated cumulative residential pesticide exposures for a group of nine young children (4-6 years) using three different methodologies developed by the US Environmental Protection Agency and compared the results with estimates derived from measured urinary metabolite concentrations. The Standard Operating Procedures (SOPs) for Residential Exposure Assessment are intended to provide a screening-level assessment to estimate exposure for regulatory purposes. Nonetheless, dermal exposure estimates were typically lower from the SOP (1-1300 nmol/day) than from SHEDS (5-19,000 nmol/day) or any of the four different approaches for estimating dermal exposure using the Draft Protocol for Measuring Children's Non-Occupational Exposure to Pesticides by all Relevant Pathways (Draft Protocol) (5-11,000 nmol/day). Indirect ingestion exposure estimates ranged from 0.02 to 21.5 nmol/day for the SOP, 0.5 to 188 nmol/day for SHEDS, and 0 to 3.38 nmol/day for the Draft Protocol. Estimates of total absorbed dose ranged from 3 to 37 nmol/day for the SOPs, 0.5 to 100 nmol/day for SHEDS, and 1 to 216 nmol/day for the Draft Protocol. The concentrations estimated using the Draft Protocol and SHEDS showed strong, positive relationships with the 3-phenoxybenzoic acid metabolite measured in the children's urine samples (R(2) = 0.90 for the Draft Protocol; R(2) = 0.92 for SHEDS). Analysis of different approaches for estimating dermal exposure suggested that the approach assuming an even distribution of pesticide residue on the child's body was most reasonable. With all three methodologies providing reasonable estimates of exposure and dose, selection should depend on the available data and the objectives of the analysis. Further research would be useful to better understand how best to estimate dermal exposure for children and what exposure factors (e.g., activities, transfer coefficients, measurement techniques) are most relevant in making dermal exposure estimates. Journal of Exposure Science and Environmental Epidemiology (2011) 21, 317-327; doi:10.1038/jes.2010.25; published online 21 April 2010  
Keywords: cumulative exposure, dermal, indirect ingestion, diet, inhalation,  
ISI Document Delivery No.: 752RY

1397. Turci, R.; Sturchio, E.; Businaro, J.; Casorri, L.; Imbriani, M., and Minoia, C. [The Endocrine Disruptors. Monographies. 6. Chlorpyrifos and Chlorpyrifos-Methyl].   
Rec #: 75279  
Keywords: NON-ENGLISH  
Notes: Chemical of Concern: CPY  
Abstract: MESH HEADINGS: Animals  
MESH HEADINGS: Chlorpyrifos/analogs &amp  
MESH HEADINGS: derivatives/chemistry/\*toxicity/urine  
MESH HEADINGS: Endocrine Disruptors/chemistry/\*toxicity/urine  
MESH HEADINGS: \*Environmental Monitoring/legislation &amp  
MESH HEADINGS: jurisprudence/methods  
MESH HEADINGS: Evidence-Based Medicine  
MESH HEADINGS: Humans  
MESH HEADINGS: Insecticides/chemistry/\*toxicity/urine  
MESH HEADINGS: Occupational Exposure/\*adverse effects/legislation &amp  
MESH HEADINGS: jurisprudence  
MESH HEADINGS: Risk Assessment  
MESH HEADINGS: Risk Factors ita. Interferenti i endocrini--Schede monografiche. 6. Clorpirifos e clorpirifos-metile.

1398. Turgut, C.; Ornek, H., and Cutright, T. J. Determination of pesticide residues in Turkey's table grapes: the effect of integrated pest management, organic farming, and conventional farming. 2011; 173, (1-4): 315-323.   
Rec #: 70899  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Turkey is one of the world's largest producers and exporters of table grapes. Growing social concerns over excessive pesticide use have led to farming to move from conventional to organic practices. Table grapes were collected from 99 different farms in three Aegean regions. Pesticide residues were only detected in farms using conventional agriculture practices while no pesticides were detected in grapes from farms using organic or integrated pest management. A risk assessment model indicated that lambda-cyhalothrin posed the most significant risk at conventional farms.  
Keywords: Pesticide residues, Table grapes, Organic farming, IPM, Conventional  
ISI Document Delivery No.: 729VY

1399. Turgut, Cafer; Ornek, Hakan, and Cutright, Teresa J. Pesticide Residues in Dried Table Grapes From the Aegean Region of Turkey. 2010 Aug; 167, (1-4): 143-9.   
Rec #: 43959  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Issue Title: Special Issue: Environmental monitoring of offshore drilling for petroleum exploration (MAPEM Project): shallow waters / Guest Edited by SĂ©rgio A. Netto and Elirio E. Toldo Jr Dried grapes make the ideal low-calorie snack. The formation of gray mold during the drying of the grapes can severely decrease production. Pesticides and fungicides are applied to prevent losses due to pests and mold. Dried grapes from 99 farms in the Aegean region were sampled for pesticide residues. Of the 26 pesticides analyzed for, chlorpyrifos methyl, chlorpyrifos ethyl, deltamethrin, lambda-cyolathrin, dichlofluanid, iprodione, and procymidone were detected in the dried grapes. Only seven samples contained residues above the maximum residue limit. It is important to note that pesticide residues were only present in samples originating from vineyards using conventional farming practices.[PUBLICATION ABSTRACT]  
Keywords: 8640:Chemical industry  
Keywords: decamethrin  
Keywords: dichlofluanid  
Keywords: Bicyclo Compounds -- analysis  
Keywords: 2600:Management science/operations research  
Keywords: Environmental Studies  
Keywords: 1540:Pollution control  
Keywords: Chlorpyrifos -- analysis  
Keywords: procymidone  
Keywords: Pyrethrins -- analysis  
Keywords: chlorpyrifos-methyl  
Keywords: Vitis -- chemistry  
Keywords: Nitriles -- analysis  
Keywords: Aniline Compounds -- analysis  
Keywords: Organothiophosphorus Compounds -- analysis  
Keywords: Organothiophosphorus Compounds  
Keywords: Food Contamination -- analysis  
Keywords: Aniline Compounds  
Keywords: Pesticide Residues  
Keywords: Turkey  
Keywords: 9130:Experimental/theoretical  
Keywords: Chlorpyrifos  
Keywords: Nitriles  
Keywords: 8400:Agriculture industry  
Keywords: Pyrethrins  
Keywords: chlorpyrifos-ethyl  
Keywords: Chlorpyrifos -- analogs & derivatives  
Keywords: Pesticide Residues -- analysis  
Keywords: Bicyclo Compounds  
Copyright - Springer Science+Business Media B.V. 2010  
Language of summary - English  
Pages - 143-9  
ProQuest ID - 609969247  
Last updated - 2012-03-05  
Place of publication - Dordrecht  
Corporate institution author - Turgut, Cafer; Ornek, Hakan; Cutright, Teresa J  
DOI - 2080632361; 53343771; 108264; EVMT; 19533395; SPVLEVMT106611671-41037 English

1400. U.S. Environmental Protection Agency. Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates. 1994: 133 p.   
Rec #: 2400  
Keywords: METHODS  
Call Number: NO METHODS (CPY,Cu,CuS,HCL,MOL,Zn,Zn element)  
Notes: Chemical of Concern: 1Major ions,CF,CPY,Cu,CuS,DDE,DDT,DLD,FML,HCL,KCl,MOL,Zn

1401. Uygun, Umran; Senoz, Berrin; Oeztuerk, Serpil; Koksel, Hamit, and Uygun, Umran. Degradation of Organophosphorus Pesticides in Wheat During Cookie Processing. 2009 Nov; 117 , (2): 261-264.   
Rec #: 44559  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: For investigating carryover of some organophosphorus pesticide residues in the cereal food chain from grain to consumer, a study was set up on wheat bran, flour and cookies, with and without bran. Special emphasis was given to malathion and chlorpyrifos-methyl residues in cookies for better protection of consumers. Pesticide-free wheat was placed in a small-scale model of a commercial storage vessel and treated with these pesticides. The residue levels of insecticides were determined in wheat, as well as in bran, flour and cookies produced from stored wheat at various time intervals during storage. A multiresidue analysis was performed using GC-NPD and GC-MS. Malathion and chlorpyrifos-methyl residue levels were higher than the maximum residue limits (MRLs) in wheat after 240 days of storage. MRLs established by the EC for malathion and chlorpyrifos-methyl in wheat are 8 and 3 mg kg super(-1), respectively. The residue levels of insecticides in flour samples also exceeded the MRL (2 mg kg super(-1) for both insecticides). Eight months of storage were not effective for reducing the residues in wheat to the levels below MRLs. Although, considerable amounts of the insecticides remained in the bran and flour, the cookie processing significantly reduced the concentrations in general. Chlorpyrifos-methyl was more persistent than was malathion and comparatively less degradation occurred during milling and cookie processing due to its physicochemical properties.  
Keywords: Food processing  
Keywords: Pesticides (organophosphorus)  
Keywords: Food chains  
Keywords: Physicochemical properties  
Keywords: Malathion  
Keywords: Models  
Keywords: Triticum aestivum  
Keywords: Insecticides  
Keywords: Cereals  
Keywords: Grain  
Keywords: Consumers  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Flour  
Date revised - 2009-07-01  
Language of summary - English  
Pages - 261-264  
ProQuest ID - 20681591  
SubjectsTermNotLitGenreText - Food processing; Pesticides (organophosphorus); Food chains; Insecticides; Cereals; Physicochemical properties; Grain; Consumers; Flour; Malathion; Models; Triticum aestivum  
Last updated - 2013-02-08  
British nursing index edition - Food Chemistry [Food Chem.]. Vol. 117, no. 2, pp. 261-264. Nov 2009.  
Corporate institution author - Uygun, Umran; Senoz, Berrin; Oeztuerk, Serpil; Koksel, Hamit  
DOI - MD-0009882199; 9454778; 0308-8146 English

1402. Valbonesi, P.; Brunelli, F.; Mattioli, M.; Rossi, T., and Fabbri, E. Cholinesterase Activities and Sensitivity to Pesticides in Different Tissues of Silver European Eel, Anguilla anguilla. University of Bologna, Interdepartmental Research Centre in Environmental Sciences, Laboratory of Environmental Physiology and Biochemistry, 163 via Sant'Alberto, I-48123, Ravenna, Italy.//: 2011; 154, (4): 353-359.   
Rec #: 2200  
Keywords: IN VITRO  
Call Number: NO IN VITRO (CBF,CBL,CPY,DZ)  
Notes: Chemical of Concern: CBF,CBL,CPY,DZ

1403. Valcke, M. and Bouchard, M. Determination of no-observed effect level (NOEL)-biomarker equivalents to interpret biomonitoring data for organophosphorus pesticides in children. 2009; 8, 5-5.   
Rec #: 70979  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Environmental exposure to organophosphorus pesticides has been characterized in various populations, but interpretation of these data from a health risk perspective remains an issue. The current paper proposes biological reference values to help interpret biomonitoring data related to an exposure to organophosphorus pesticides in children for which measurements of alkylphosphate metabolites are available. Methods: Published models describing the kinetics of malathion and chlorpyrifos in humans were used to determine no-observed effect level - biomarker equivalents for methylphosphates and ethylphosphates, respectively. These were expressed in the form of cumulative urinary amounts of alkylphosphates over specified time periods corresponding to an absorbed no-observed effect level dose (derived from a published human exposure dose) and assuming various plausible exposure scenarios. Cumulative amounts of methylphosphate and ethylphosphate metabolites measured in the urine of a group of Quebec children were then compared to the proposed biological reference values. Results: From a published no-observed effect level dose for malathion and chlorpyrifos, the model predicts corresponding oral biological reference values for methylphosphate and ethylphosphate derivatives of 106 and 52 nmol/kg of body weight, respectively, in 12-h nighttime urine collections, and dermal biological reference values of 40 and 32 nmol/kg of body weight. Out of the 442 available urine samples, only one presented a methylphosphate excretion exceeding the biological reference value established on the basis of a dermal exposure scenario and none of the methylphosphate and ethylphosphate excretion values were above the obtained oral biological reference values, which reflect the main exposure route in children. Conclusion: This study is a first step towards the development of biological guidelines for organophophorus pesticides using a toxicokinetic modeling approach, which can be used to provide a health-based interpretation of biomonitoring data in the general population.  
Keywords: BIOLOGICAL REFERENCE VALUES, PRESCHOOL-CHILDREN, WASHINGTON-STATE,  
ISI Document Delivery No.: 422BD

1404. Valencia, T. M. G. and de Llasera, M. P. G. Determination of organophosphorus pesticides in bovine tissue by an on-line coupled matrix solid-phase dispersion-solid phase extraction-high performance liquid chromatography with diode array detection method. 2011; 1218, (39): 6869-6877.   
Rec #: 70989  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A miniaturized method based on matrix solid-phase dispersion coupled to solid phase extraction and high performance liquid chromatography with diode array detection (MSPD-SPE-HPLC/DAD) was developed for the trace simultaneous determination of the following organophosphorus pesticides (OPPs) in bovine tissue: parathion-methyl, fenitrothion, parathion, chlorfenvinphos, diazinon, ethion, fenchlorphos, chlorpyrifos and carbophenothion. To perform the coupling between MSPD and SPE, 0.05 g of sample was dispersed with 0.2 g of C(18) silica sorbent and packed into a stainless steel cartridge containing 0.05 g of silica gel in the bottom. After a clean-up of high and medium polarity interferences with water and an acetonitrile:water mixture, the OPPs were desorbed from the MSPD cartridge with pure acetonitrile and directly transferred to a dynamic mixing chamber for dilution with water and preconcentration into an SPE 20 mm x 2.0 mm I.D. C(18) silica column. Subsequently, the OPPs were eluted on-line with the chromatographic mobile phase to the analytical column and the diode array detector for their separation and detection, respectively. The method was validated and yielded recovery values between 91% and 101% and precision values, expressed as relative standard deviations (RSD), which were less than or equal to 12%. Linearity was good and ranged from 0.5 to 10 mu g g(-1), and the limits of detection of the OPPs were in the range of 0.04-0.25 mu g g(-1). The method was satisfactorily applied to the analysis of real samples and is recommended for food control, research efforts when sample amounts are limited, and laboratories that have ordinary chromatographic instrumentation. (C) 2011 Elsevier B.V. All rights reserved.  
Keywords: Matrix solid-phase dispersion, Solid-phase extraction, On-line coupling  
ISI Document Delivery No.: 824ZU

1405. Valentine, G. W.; Mason, G. F.; Gomez, R.; Fasula, M.; Watzl, J.; Pittman, B.; Krystal, J. H., and Sanacora, G. The Antidepressant Effect of Ketamine Is Not Associated With Changes in Occipital Amino Acid Neurotransmitter Content as Measured by [(1)H]-Mrs.   
Rec #: 76099  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Psychopharmacology (Berl). 1992;106(2):285-7 (medline /1312732)  
COMMENTS: Cites: Am J Psychiatry. 1997 Jun;154(6):805-11 (medline /9167508)  
COMMENTS: Cites: Magn Reson Med. 1993 Dec;30(6):672-9 (medline /8139448)  
COMMENTS: Cites: J Neurosci. 1997 Apr 1;17(7):2492-8 (medline /9065509)  
COMMENTS: Cites: J Neurosci. 1997 Apr 15;17(8):2921-7 (medline /9092613)  
COMMENTS: Cites: Biol Psychiatry. 2000 Feb 15;47(4):351-4 (medline /10686270)  
COMMENTS: Cites: Behav Pharmacol. 1999 Feb;10(1):63-71 (medline /10780303)  
COMMENTS: Cites: Eur J Neurosci. 2001 Feb;13(3):512-20 (medline /11168558)  
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COMMENTS: Cites: Am J Psychiatry. 2003 Mar;160(3):577-9 (medline /12611844)  
COMMENTS: Cites: Arch Gen Psychiatry. 2004 Jul;61(7):705-13 (medline /15237082)  
COMMENTS: Cites: Biol Psychiatry. 2004 Sep 1;56(5):317-22 (medline /15336513)  
COMMENTS: Cites: J Magn Reson. 2004 Oct;170(2):290-8 (medline /15388093)  
COMMENTS: Cites: Am J Psychiatry. 2005 Feb;162(2):394-6 (medline /15677610)  
COMMENTS: Cites: Arch Gen Psychiatry. 2006 Aug;63(8):856-64 (medline /16894061)  
COMMENTS: Cites: Biol Psychiatry. 2008 Feb 15;63(4):349-52 (medline /17643398)  
COMMENTS: Cites: Prog Neuropsychopharmacol Biol Psychiatry. 2008 Jan 1;32(1):140-4 (medline /17884272)  
COMMENTS: Cites: Nat Rev Drug Discov. 2008 May;7(5):426-37 (medline /18425072)  
COMMENTS: Cites: J Clin Psychopharmacol. 2008 Dec;28(6):631-7 (medline /19011431)  
COMMENTS: Cites: Science. 2010 Aug 20;329(5994):959-64 (medline /20724638)  
COMMENTS: Cites: Neurosci Lett. 2006 Jan 9;392(1-2):5-9 (medline /16183195)  
COMMENTS: Cites: Magn Reson Med. 1994 Sep;32(3):294-302 (medline /7984061)  
ABSTRACT: The NMDA receptor antagonist ketamine can induce a rapid improvement in depressive symptoms that often endures for days after a single intravenous dose. The pharmacodynamic basis for this effect is poorly understood. Using a proton magnetic resonance spectroscopy ([(1)H]-MRS) method that previously detected a normalization of amino acid neurotransmitter (AANt) content after chronic treatment with conventional antidepressant treatments, we examined whether the acute action of ketamine is associated with alterations in AANt content as well. Ten subjects with major depressive disorder (MDD) received saline, then ketamine in a fixed order, one week apart, under single-blind conditions. Each infusion was associated with three [(1)H] MRS scans (baseline, 3h and 48 h post-infusion) that measured glutamate, GABA and glutamine within the occipital cortex. Rating scales were administered before, during and after each infusion. The rapid (1h) and sustained (at least 7 days) antidepressant effect we observed after ketamine infusion was not associated with either baseline measures of, or changes in, occipital AANt content. Dissociative symptoms were not correlated with changes in depression scores. While our results indicate that changes in occipital AANt content are not a correlate of ketamine's antidepressant action, this may only apply to the regional and temporal windows of our MRS measurements.  
MESH HEADINGS: Adult  
MESH HEADINGS: Aged  
MESH HEADINGS: Antidepressive Agents/\*pharmacology/therapeutic use  
MESH HEADINGS: Blood Pressure/drug effects  
MESH HEADINGS: Depressive Disorder, Major/drug therapy/pathology  
MESH HEADINGS: Dissociative Disorders/chemically induced  
MESH HEADINGS: Female  
MESH HEADINGS: Glutamic Acid/\*metabolism  
MESH HEADINGS: Heart Rate/drug effects  
MESH HEADINGS: Humans  
MESH HEADINGS: Ketamine/\*pharmacology/therapeutic use  
MESH HEADINGS: Magnetic Resonance Spectroscopy  
MESH HEADINGS: Male  
MESH HEADINGS: Middle Aged  
MESH HEADINGS: Occipital Lobe/\*drug effects/\*metabolism  
MESH HEADINGS: Protons/diagnostic use  
MESH HEADINGS: Psychiatric Status Rating Scales  
MESH HEADINGS: Psychometrics  
MESH HEADINGS: Retrospective Studies  
MESH HEADINGS: Single-Blind Method  
MESH HEADINGS: Statistics as Topic  
MESH HEADINGS: Time Factors  
MESH HEADINGS: Young Adult  
MESH HEADINGS: gamma-Aminobutyric Acid/\*metabolism eng

1406. Valiyaveettil, Manojkumar; Alamneh, Yonas; Biggemann, Lionel; Soojhawon, Iswarduth; Doctor, Bhupendra P., and Nambiar, Madhusoodana P. Efficient hydrolysis of the chemical warfare nerve agent tabun by recombinant and purified human and rabbit serum paraoxonase 1. 2010 Dec 3-; 403, (1): 97-102.   
Rec #: 2940  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Paraoxonase 1 (PON1) has been described as an efficient catalytic bioscavenger due to its ability to hydrolyze organophosphates (OPs) and chemical warfare nerve agents (CWNAs). It is the future most promising candidate as prophylactic medical countermeasure against highly toxic OPs and CWNAs. Most of the studies conducted so far have been focused on the hydrolyzing potential of PON1 against nerve agents, sarin, soman, and VX. Here, we investigated the hydrolysis of **tabun** by PON1 with the objective of comparing the hydrolysis potential of human and rabbit serum purified and recombinant human PON1. The hydrolysis potential of PON1 against tabun, sarin, and soman was evaluated by using an acetylcholinesterase (AChE) back-titration Ellman method. Efficient hydrolysis of tabun (100 nM) was observed with ę+25Çô40 mU of PON1, while higher concentration (80Çô250 mU) of the enzyme was required for the complete hydrolysis of sarin (11 nM) and soman (3 nM). Our data indicate that tabun hydrolysis with PON1 was ę+30Çô60 times and ę+200Çô260 times more efficient than that with sarin and soman, respectively. Moreover, the catalytic activity of PON1 varies from source to source, which also reflects their efficiency of hydrolyzing different types of nerve agents. Thus, efficient hydrolysis of tabun by PON1 suggests its promising potential as a prophylactic treatment against tabun exposure. Catalytic bioscavenger/ Paraoxonase 1/ Chemical warfare nerve agents/ Prophylaxis/ Medical chemical defense/ Tabun

1407. Valiyaveettil, Manojkumar; Alamneh, Yonas; Rezk, Peter; Biggemann, Lionel; Perkins, Michael W.; Sciuto, Alfred M.; Doctor, Bhupendra P., and Nambiar, Madhusoodana P. Protective efficacy of catalytic bioscavenger, paraoxonase 1 against sarin and soman exposure in guinea pigs. 2011 Mar 15-; 81, (6): 800-809.   
Rec #: 3490  
Keywords: INHALE  
Notes: Chemical of Concern: CPY  
Abstract: Human paraoxonase 1 (PON1) has been portrayed as a catalytic bioscavenger which can hydrolyze large amounts of chemical warfare nerve agents (CWNAs) and organophosphate (OP) pesticides compared to the stoichiometric bioscavengers such as butyrylcholinesterase. We evaluated the protective efficacy of purified human and rabbit serum PON1 against nerve agents sarin and soman in guinea pigs. Catalytically active PON1 purified from human and rabbit serum was intravenously injected to guinea pigs, which were 30 min later exposed to 1.2 +ů LCt50 **sarin or soman** using a microinstillation **inhalation** exposure technology. Pre-treatment with 5 units of purified human and rabbit serum PON1 showed mild to moderate increase in the activity of blood PON1, but significantly increased the survival rate with reduced symptoms of CWNA exposure. Although PON1 is expected to be catalytic, sarin and soman exposure resulted in a significant reduction in blood PON1 activity. However, the blood levels of PON1 in pre-treated animals after exposure to nerve agent were higher than that of untreated control animals. The activity of blood acetylcholinesterase and butyrylcholinesterase and brain acetylcholinesterase was significantly higher in PON1 pre-treated animals and were highly correlated with the survival rate. Blood O2 saturation, pulse rate and respiratory dynamics were normalized in animals treated with PON1 compared to controls. These results demonstrate that purified human and rabbit serum PON1 significantly protect against sarin and soman exposure in guinea pigs and support the development of PON1 as a catalytic bioscavenger for protection against lethal exposure to CWNAs. Chemical warfare nerve agents/ Sarin/ Soman/ Catalytic bioscavenger/ Paraoxonase 1

1408. Valiyaveettil, Manojkumar; Alamneh, Yonas A.; Doctor, Bhupendra P., and Nambiar, Madhusoodana P. Crossroads in the evaluation of paraoxonase 1 for protection against nerve agent and organophosphate toxicity. 2012 Apr 5-; 210, (1): 87-94.   
Rec #: 3180  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Human paraoxonase 1 (PON1), a 45 kDa arylesterase associated with circulating high density lipoproteins (HDL), has been described as an anti-atherogenic element in cardiovascular disorders. The efficacy of PON1 as a catalytic bioscavenger against OP and CWNA toxicity has been on debate for the last few decades. Hydrolysis of various organophosphates (OPs) and chemical warfare nerve agents (CWNAs) by PON1 has been demonstrated in both in vitro and in vivo experiments. Recently, we established the protective efficacy of human and rabbit serum purified PON1 as well as human recombinant PON1 expressed in Trichoplusia ni larvae against nerve agent toxicity in guinea pigs. Exogenous administration of purified PON1 was effective in protecting against 1.2 X LCt50 of sarin and soman administered endotracheally with microinstillation technology. However, the short half-life of exogenously administered PON1, probably due to poor association with circulating HDL, warrant alternative approaches for successful utility of PON1 in the treatment of OP/CWNA toxicity. In this mini review, we address the pros and cons of current PON1 prophylaxis and propose potential solutions for successful development of PON1 as an effective catalytic bioscavenger. Catalytic bioscavenger/ Paraoxonase 1/ Organophosphates/ Chemical warfare nerve agents/ Therapeutics/ Combination therapy

1409. Valles, N. B.; Retamal, M.; Mezcua, M., and Fernandez-Alba, A. R. A sensitive and selective method for the determination of selected pesticides in fruit by gas chromatography/mass spectrometry with negative chemical ionization. 2012; 1264, 110-116.   
Rec #: 71009  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Multiresidue methods (MRMs) for pesticides residues determination in fruit and vegetables, based on GC-MS, are mainly performed in electron impact ionization mode. However an important group of them provide much better response working in negative chemical ionization mode due to the elimination of a high percentage of background signal. Considering that a selective and sensitive method has been developed for the determination of multiclass pesticide residues in different commodities by GC-MS with a triple stage quadrupole analyzer (GC-TSQ-MS): the pesticide signal has been optimized in MS-MS whilst working in negative chemical ionization mode using methane as the reagent gas. The proposed method was fully validated for 53 compounds in tomato, apple and orange matrices. The obtained limits of determination were lower than 0.1 mu g/kg for more than 50% of the pesticides studied, and lower than 1 mu g/kg for all pesticides studied, except for cypermethrin, boscalid, bifenthrin and deltamethrin. Linearity was studied in the 0.5-50 mu g/kg range and a linear response was obtained for all pesticides in all matrices. Recoveries were evaluated at two different levels (1 and 50 mu g/kg) and recoveries were ranged between 70 and 120% in tomato, apple and orange, except in the cases of chlorfenapyr, ofurace, chlozolinate, chlorothalonil, tolylfluanid and dichlofluanid with recovery values close to 60% at 1 mu g/kg fortification levels. Repetitivity was evaluated and the relative standard deviation (RSD%) was lower than 10% in all cases. The developed method was employed in the analysis of real samples intended for baby food and the obtained results showed that 50% of the samples were positive for different pesticide residues. The concentration range detected was between 5 and 100 mu g/kg. The positive detection of OCs was particularly noticeable: these included chlorothalonil, fenhexamide, clorpyrifos and lambda cyhalothrin, which are very persistent and toxic with low acute reference dose. Endosulfan sulfate, which is not approved, was detected at a low concentration. (C) 2012 Elsevier B.V. All rights reserved.  
Keywords: Negative chemical ionization, GC-MS/MS triple-quadrupole, Pesticides,  
ISI Document Delivery No.: 034GW

1410. Valverde, B. E.; Merayo, A.; Rojas, C. E., and Alvarez, T. Interaction Between a Cover Crop (Mucuna sp.), a Weed (Rottboellia cochinchiensis) and a Crop (Maize). Vols. 1-3; International Conference, Brighton, England, UK, November 20-23, 1995. XXIII+419p.(Vol. 1); XXIII+359p.(Vol. 2); XXIII+421p.(Vol. 3) British Crop Protection Council (BCPC): Farnham, England, UK. ISBN 0-948404-89-2//: SOIL; 1995: 197-200.   
Rec #: 2240  
Keywords: NO EFFECT  
Call Number: NO EFFECT (CPY,NHN,PAQT,PDM,PQT)  
Notes: Chemical of Concern: CPY,NHN,PAQT,PDM,PQT

1411. Van Audenhaege, M.; Heraud, F.; Menard, C.; Bouyrie, J.; Morois, S.; Calamassi-Tran, G.; Lesterle, S.; Volatier, J. L., and Leblanc, J. C. Impact of food consumption habits on the pesticide dietary intake: Comparison between a French vegetarian and the general population. 2009; 26, (10): 1372-1388.   
Rec #: 71019  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This study aims to compare the pesticide residue dietary intake of the French general population and the vegetarian population, separated into five specific diets: omnivorous (OMN), lacto-vegetarian (LV), ovo-lacto-vegetarian (OLV), pesco-lacto-vegetarian (PLV) and vegan (VG). Theoretical Maximum Daily Intakes (TMDIs) based on Maximum Residue Levels (MRLs) were calculated as a percentage of the Acceptable Daily Intake (ADI). Among the 421 pesticides studied, only 48 had TMDI above ADI for at least one population subgroup. An excessive exposure was noticed for 44, 43, 42, 41 and 30 pesticides in the OLV, VG, OMN, LV and PLV groups, respectively, versus 29 in the general population. Meat and egg products consumption was responsible for higher intakes of organochlorine pesticides in the general population than in the vegetarian population (TMDI = 348% versus 146-183% ADI for aldrin). However, as the limited consumption of animal-origin commodities was largely offset by a higher fruit, vegetable and cereal intake in the vegetarian diets, vegetarians appear to be preferentially exposed to pesticides, for which fruit, vegetables and cereals are the main contributors, such as tri-allate, chlorpyrifos-methyl and diazinon. This study illustrates that consumption habits have a real impact on pesticide exposure in terms of intake levels, number and type of pesticides, representing a potential risk of dietary exposure. Except for organochlorine compounds, the vegetarian population may be more exposed to pesticide residues than the general population due to specific dietary habits. Thus, this population should be considered for risk assessment of pesticide residues.  
Keywords: exposure assessment, pesticide residues, vegetarian diet, consumption  
ISI Document Delivery No.: 492WQ

1412. Van Den Brink, Paul J. Ecological Risk Assessment: From Book-Keeping to Chemical Stress Ecology. 2008 Dec 15; 42, (24): 8999-9004.   
Rec #: 45319  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: 2921-88-2  
Keywords: Software  
Keywords: Animals  
Keywords: Daphnia -- drug effects  
Keywords: Environmental Pollutants -- toxicity  
Keywords: Endpoint Determination  
Keywords: Records as Topic  
Keywords: Environmental Pollutants  
Keywords: Risk Assessment  
Keywords: Chlorpyrifos  
Keywords: Ecology  
Keywords: 0  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Ecotoxicology  
Date completed - 2009-02-23  
Date created - 2009-01-29  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 8999-9004  
ProQuest ID - 66668595  
Last updated - 2013-01-19  
British nursing index edition - Environmental science & technology, December 15, 2008, 42(24):8999-9004  
Corporate institution author - Van den Brink, Paul J  
DOI - MEDL-19174864; 19174864; 0013-936X eng

1413. van der Schans, M. J.; Hulst, A. G.; van der Riet Çô van Oeveren, D.; Noort, D.; Benschop, H. P., and Dishovsky, Ch. New tools in diagnosis and biomonitoring of intoxications with organophosphorothioates: Case studies with chlorpyrifos and diazinon. (0).  
Rec #: 2200  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Organophosphate (OP) pesticides are neurotoxic compounds that are widely used in agriculture. Classical methods for monitoring OP exposure comprise the measurement of intact OP, its metabolites or cholinesterase activity. Newly developed methods focus on the analysis of the OP adduct bound to proteins such as butyrylcholinesterase (BuChE) and albumin. These adducts can be analyzed by means of fluoride reactivation or by analysis with LCÇôMS/MS of the pepsin or pronase digest of butyrylcholinesterase and albumin, respectively. The utility of these methods is illustrated through the analysis of plasma samples obtained from patients taken 1Çô49 days after ingestion of the organophosphate pesticides chlorpyrifos and/or diazinon. Thus, in this particular case several independent methodologies were applied to the biomedical samples, all pointing to the same exposure. Pesticides/ Diagnosis/ Organophosphates/ Adducts

1414. Van Dort, C. J.; Baghdoyan, H. A., and Lydic, R. Neurochemical Modulators of Sleep and Anesthetic States.   
Rec #: 51179  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Nat Rev Neurosci. 2008 May;9(5):370-86 (medline /18425091)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2008 Jan 29;105(4):1309-14 (medline /18195361)  
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COMMENTS: Cites: Sleep. 1996 Jan;19(1):65-71 (medline /8650466)  
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MESH HEADINGS: Acetylcholine  
MESH HEADINGS: \*Anesthesia, General  
MESH HEADINGS: Anesthetics/\*pharmacology  
MESH HEADINGS: Animals  
MESH HEADINGS: Consciousness/\*drug effects/\*physiology  
MESH HEADINGS: Humans  
MESH HEADINGS: Neurotransmitter Agents/\*physiology  
MESH HEADINGS: Sleep/\*physiology  
MESH HEADINGS: Unconsciousness/\*chemically induced  
MESH HEADINGS: Wakefulness/\*drug effects/\*physiology eng

1415. Van Emmerik, T. J.; Angove, M. J.; Johnson, B. B., and Wells, J. D. Sorption of chlorpyrifos to selected minerals and the effect of humic acid. 2007; 55, (18): 7527-7533.   
Rec #: 71039  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Sorption of chlorpyrifos (CPF) from 2.85 mu M (1 mg/L) aqueous solutions in 0.01 M NaCl to montmorillonite, kaolinite, and gibbsite was investigated at 25 degrees C. Uptake of CPF by kaolinite and gibbsite was generally < 10%, with pH having at most a small effect. Sorption to montmorillonite was significantly greater, with approximately 50% of the initial CPF being removed from solution below pH 5. Above pH 5 the sorption decreased to about 30%. About 70% of CPF was sorbed to kaolinite and gibbsite after 30 min, whereas on montmorillonite only 50% sorbed in an initial rapid uptake (-30 min) followed by slower sorption, with a maximum achieved by 24 h. Although CPF desorbed completely from kaolinite in methanol, only about two-thirds was desorbed from montmorillonite. CPF has only a weak affinity for the surfaces of kaolinite and gibbsite. In the case of montmorillonite, sorption is significantly stronger and may involve a combination of sorption to external surfaces and diffusion into microporous regions. At pH > 6 increased negative surface charge results in a lower affinity of CPF for the external surface. In the presence of 50 mg/L humic acid (HA) the amount of CPF sorbed on gibbsite and kaolinite was 3-4 times greater than that in the binary systems. The HA forms an organic coating on the mineral surface, providing a more hydrophobic environment, leading to enhanced CPF uptake. The HA coating on montmorillonite may reduce access of CPF to microporous regions, with CPF tending to accumulate within the HA coating.  
Keywords: chlorpyrifos, sorption, montmorillonite, kaolinite, gibbsite, humic acid  
ISI Document Delivery No.: 205YK

1416. Van Geen, A.; Zheng, Y.; Goodbred, S. Jr; Horneman, A.; Aziz, Z.; Cheng, Z.; Stute, M.; Mailloux, B.; Weinman, B.; Hoque, M. A.; Seddique, A. A.; Hossain, M. S.; Chowdhury, S. H., and Ahmed, K. M. Flushing History as a Hydrogeological Control on the Regional Distribution of Arsenic in Shallow Groundwater of the Bengal Basin.   
Rec #: 79849  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Proc Natl Acad Sci U S A. 2005 Dec 27;102(52):18819-23 (medline /16357194)  
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ABSTRACT: Whereas serious health consequences of widespread consumption of groundwater elevated in As have been documented in several South Asian countries, the mechanisms responsible for As mobilization in reducing aquifers remain poorly understood. We document here a previously unrecognized and consistent relationship between dissolved As concentrations in reducing groundwater and the phosphate-mobilizable As content of aquifer sediment for a set of precisely depth-matched samples from across Bangladesh. The relationship holds across nearly 3 orders of magnitude in As concentrations and suggests that regional as well as local patterns of dissolved As in shallow groundwater are set by the solid phase according to a remarkably constant ratio of approximately 250 microg/L dissolved As per 1 mg/kg P-mobilizable As. We use this relationship in a simple model of groundwater recharge to propose that the distribution of groundwater As in shallow aquifers of the Bengal Basin could primarily reflect the different flushing histories of sand formations deposited in the region over the past several thousand years.  
MESH HEADINGS: Arsenic/\*analysis  
MESH HEADINGS: Geologic Sediments/chemistry  
MESH HEADINGS: Geological Phenomena  
MESH HEADINGS: \*Geology  
MESH HEADINGS: Iron/analysis  
MESH HEADINGS: Oxidation-Reduction  
MESH HEADINGS: Water Pollutants, Chemical/\*analysis eng

1417. Van Toor, R. F.; Viljanen-Rollinson, S. L. H., and Teulon, D. A. J. Benchmarking of Potato Pesticide Use in Canterbury. SOIL; 2008; 61, 137-146.   
Rec #: 1520  
Keywords: NO TOX DATA  
Call Number: NO TOX DATA (ACP,ALSV,AZX,CBD,CPY,CTN,CYH,Cu2O,CuOH,DCF,DDAC,DMT,DZ,GYP,LNR,MTM,MZB,PAQT,PRT,TBZ)  
Notes: Chemical of Concern: ACP,ALSV,AZX,CBD,CPY,CTN,CYH,Cu2O,CuOH,DCF,DDAC,DMT,DZ,EDT,FZF,FZN,GYP,IVC,LNR,MBZ,MTM,MZB,PAQT,PIM,PMZ,PRT,TBA,TBZ

1418. van Vliet, E.; Stoppini, L.; Balestrino, M.; Eskes, C. ; Griesinger, C.; Sobanski, T.; Whelan, M.; Hartung, T., and Coecke, S. Electrophysiological recording of re-aggregating brain cell cultures on multi-electrode arrays to detect acute neurotoxic effects. 2007; 28, (6): 1136-1146.   
Rec #: 71069  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Neurotoxicity aims to understand how xenobiotics interfere with the function of the nervous system and to unravel their mechanisms of action. Neuronal activity is the primary functional output of the nervous system and deviations from its resting level may indicate toxicity. Consequently, the monitoring of electrophysiological activity in complex cell culture systems appears particularly promising for neurotoxicity assessment. To detect acute neurotoxic effects of chemicals we developed a test system based on the electrophysiological recordings from neural networks in re-aggregating brain cell cultures using multi-electrode arrays. We characterised the electrophysiological properties of the cultures and, using known neurotoxicants, evaluated their usefulness to predict neurotoxic effects. Aggregates displayed evoked field potentials and spontaneous neural activity involving glutamatergic and GABAergic synaptic transmission. Paired pulse inhibition indicated the presence of short-term synaptic plasticity via functional inhibitory networks. Cultures were treated with 0.1-100 mu M of **trimethyltin chloride (TMT), methyl mercury chloride (MeHgCl), parathion or paraoxon,** and with 0.1-100 mM of **ethanol** for up to 100 min. TMT (10 mu M), MeHgCl (1 mu M) and ethanol (100 mM) all decreased the amplitude of evoked field potential. The effect of ethanol was reversible. In contrast paraoxon (10 mu M) increased the amplitudes of evoked field potentials while parathion showed no significant effects. The effects of TMT and ethanol on the frequency of spontaneous activity were consistent with those obtained for evoked field potentials. All effects occurred at levels at which cytotoxic injuries were not detectable. Taken together our system expressed electrophysiological properties similar to those of established slice culture preparations. It detected known neurotoxicants at subcytotoxic levels and therefore appears suitable for the assessment of toxic insults specifically interfering with nervous system function, e.g. neuronal activity, synaptic transmission and short-term plasticity. If incorporated into testing strategies, it might represent a valuable tool for the mechanistic assessment of neurotoxic effects. (c) 2007 Elsevier Inc. All rights reserved.  
Keywords: In vitro, aggregating brain cell cultures, multi-electrode array, neural  
ISI Document Delivery No.: 239SJ

1419. van Wendel de Joode, Berna; Barraza, Douglas; Ruepert, Clemens; Mora, Ana Mar+ a; C+¦rdoba, Leonel; +ûberg, Mattias; Wesseling, Catharina; Mergler, Donna, and Lindh, Christian H. Indigenous children living nearby plantations with chlorpyrifos-treated bags have elevated 3,5,6-trichloro-2-pyridinol (TCPy) urinary concentrations. 2012 Aug; 117, (0): 17-26.   
Rec #: 290  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Background Children/ Pesticides/ Chlorpyrifos/ Biomarkers/ Banana/ Developing countries

1420. Varshney, M. K.; Rastogi, S.; Khan, S. A., and Trikha, V. Is Sclerotherapy Better Than Intralesional Excision for Treating Aneurysmal Bone Cysts?   
Rec #: 50569  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Skeletal Radiol. 1985;13(1):21-5 (medline /3969573)  
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COMMENTS: Cites: Clin Orthop Relat Res. 1973 Nov-Dec;(97):52-63 (medline /4590226)  
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ABSTRACT: BACKGROUND: Minimally invasive approaches such as sclerotherapy have been introduced to treat aneurysmal bone cysts. Sclerotherapy has been associated with reasonable healing rates during the past two decades. However, it is unclear whether sclerotherapy compares with the more traditional extended curettage and bone grafting.  
ABSTRACT: QUESTIONS/PURPOSES: We therefore compared the healing rates and functional scores in patients having percutaneous repetitive sclerotherapy using polidocanol (Group 1) with those with intralesional excision (extended curettage with a high-speed burr) and bone grafting (Group 2) for treatment of aneurysmal bone cyst.  
ABSTRACT: PATIENTS AND METHODS: We randomly divided 94 patients into two treatment groups. We assessed healing rates (primary outcome measure), pain relief, time to healing and recurrence, hospital stay, and the Enneking functional score. Forty-five patients from Group 1 and 46 from Group 2 were available for study. The minimum followup was 3.2 years (mean, 4.4 years; range, 3.2-6.1 years).  
ABSTRACT: RESULTS: At last followup, 93.3% in Group 1 and 84.8% in Group 2 had achieved healing. Complications in Group 1 were minor and resolved. In Group 2, three patients had deep infections and five had superficial infections, and two had growth disturbances. Although the healing rates were similar, we found higher rates of clinically important complications, worse functional outcomes, and higher hospital burden associated with intralesional excision.  
ABSTRACT: CONCLUSIONS: Repetitive sclerotherapy using polidocanol is a minimally invasive, safer method of treatment for aneurysmal bone cysts compared with intralesional excision and bone grafting. In this preliminary study, we found similar recurrence rates for the two treatment methods, however, this will require confirmation in larger studies.  
ABSTRACT: LEVEL OF EVIDENCE: Level II, therapeutic study. See Guidelines for Authors for a complete description of levels of evidence.  
MESH HEADINGS: Adolescent  
MESH HEADINGS: Adult  
MESH HEADINGS: Bone Cysts, Aneurysmal/physiopathology/radiography/surgery/\*therapy  
MESH HEADINGS: \*Bone Transplantation/adverse effects  
MESH HEADINGS: Child  
MESH HEADINGS: \*Curettage/adverse effects  
MESH HEADINGS: Female  
MESH HEADINGS: Humans  
MESH HEADINGS: Length of Stay  
MESH HEADINGS: Logistic Models  
MESH HEADINGS: Male  
MESH HEADINGS: Pain Measurement  
MESH HEADINGS: Pain, Postoperative/prevention &amp  
MESH HEADINGS: control  
MESH HEADINGS: Polyethylene Glycols/adverse effects/\*therapeutic use  
MESH HEADINGS: Recovery of Function  
MESH HEADINGS: Recurrence  
MESH HEADINGS: Risk Assessment  
MESH HEADINGS: Risk Factors  
MESH HEADINGS: Sclerosing Solutions/adverse effects/\*therapeutic use  
MESH HEADINGS: \*Sclerotherapy/adverse effects  
MESH HEADINGS: Time Factors  
MESH HEADINGS: Treatment Outcome  
MESH HEADINGS: Wound Healing  
MESH HEADINGS: Young Adult eng

1421. Vasquez-Castro, J. A.; de Baptista, G. C.; Junior, C. D. G., and Trevizan, L. R. P. Effect of spray volume on the moisture of stored corn and wheat grains. 2008; 51, (3): 453-456.   
Rec #: 71129  
Keywords: FOOD  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: The goal of this work was to evaluate the effect of spray volume on the moisture of the stored grains of the corn and wheat. Two kg of each type of the grain were placed into the plastic bags and sprayed with the theoretical doses of 0, 1, 3, 5, 8, and 10 liters of water / ton of the grain. The grain moisture content was evaluated 24 h after the spray operation by the oven method. The increase in the grain moisture was quadratic and showed the same trend in both the corn and wheat. The grain moisture after spraying 10 L.t(-1) showed little increase (0.8%) as compared to the initial moisture content. Thus, the application of any spray volume as used in this study made no difference for a possible better uniformity in the distribution of insecticide throughout the sprayed material.  
Keywords: stored products, chemical control, application technology, desorption,  
ISI Document Delivery No.: 330ZY

1422. Vega, L.; Valverde, M.; Elizondo, G.; Leyva, J. F., and Rojas, E. Diethylthiophosphate and diethyldithiophosphate induce genotoxicity in hepatic cell lines when activated by further biotransformation via Cytochrome P450. 2009; 679, (1-2): 39-43.   
Rec #: 71189  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Organophosphorous (OP) compounds are the most commonly used pesticides. There are several published reports on the direct toxicity of OP pesticides, but few data on the toxicity of their metabolites. To determine if diethylthiophosphate (DETP) and diethyldithiophosphate (DEDTP), two of the major OP metabolites, demonstrate genotoxicity, and to elucidate the possible genotoxic mechanisms, we treated WRL68, HepG2, HeLa and human blood cells with different concentrations of DETP and DEDTP. We evaluated the possible contribution of oxidative stress generation and P450 enzymes to the genotoxicity of the OP metabolites, as determined using the comet assay. Our results showed that both OP metabolites (DETP and DEDTP) induce DNA damage only in the hepatic cell lines, and this effect could be related to a secondary non-diffusible metabolite generated by the activity of P450 enzymes since P450 enzyme inhibitors also inhibited the induction of DNA damage in hepatic cells. These secondary metabolites should be taken into account when assessing risk to human populations exposed to OP pesticides. (C) 2009 Elsevier B.V. All rights reserved.  
Keywords: Organophosphorous pesticide metabolites, DNA damage, Sulconazole,  
ISI Document Delivery No.: 523JO

1423. Venerosi, A.; Ricceri, L.; Tait, S., and Calamandrei, G. Sex dimorphic behaviors as markers of neuroendocrine disruption by environmental chemicals: The case of chlorpyrifos . 2012; 33, (6): 1420-1426.   
Rec #: 71239  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The complexity of the neuroendocrine level of investigation requires the assessment of behavioral patterns that extend beyond the reproductive functions, which are age- and sex-specific in rodents, described by defined clusters of behavioral items regulated by genetic, hormonal, and epigenetic factors. The study of social behavior in laboratory rodents reveals sex-dimorphic effects of environmental chemicals that may be undetected either by a traditional neurotoxicological approach or referring to the classical definition of endocrine disrupting chemicals. **Here we review data on the neurobehavioral effects of developmental exposure to the non-persistent organophosphorus insecticide chlorpyrifos, whose neurotoxic activity at low doses is currently a matter of concern for children's health.** In mice exposed to chlorpyrifos in utero and/or in early development social/emotional responses are differently affected in the two sexes in parallel with sex-dependent interference on hypothalamic neuroendocrine pathways regulating social behaviors (vasopressin, oxytocin, and steroid regulated systems). Through the analysis of complex sex-dimorphic behavioral patterns we show that neurotoxic and endocrine disrupting activities of CPF overlap. This widely diffused organophosphorus pesticide might thus be considered as a neuroendocrine disruptor possibly representing a risk factor for sex-biased neurodevelopmental disorders in children. (C) 2012 Elsevier Inc. All rights reserved.  
Keywords: Chlorpyrifos, Social behavior, Anxiety, Oxytocin, Vasopressin, Steroids,  
ISI Document Delivery No.: 063UI

1424. Venkateswarlu, P.; Mohan, K. R.; Kumar, C. R., and Seshaiah, K. Monitoring of multi-class pesticide residues in fresh grape samples using liquid chromatography with electrospray tandem mass spectrometry. 2007; 105, (4): 1760-1766.   
Rec #: 71249  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A sensitive and selective liquid chromatography-electrospray ionization-tandem mass spectrometry (LC-ESI-MS-MS) method was developed for the routine analysis of 10 multi-class pesticides residues (imidacloprid, thiamethoxam, chlorpyrifos, dimethoate, monocrotophos, metalaxyl, methomyl, hexaconazole, myclobutanil, carbendazim) in fresh grape samples. A miniaturized extraction-partition procedure that requires small amounts of non-chlorinated solvents was used. The extracts were analyzed by LC-ESI-MS-MS without any further cleanup step. The pesticides are separated on a reversed phase non-polar column using a gradient elution. Mean recoveries obtained at fortification levels of 0.010-0.100 mg/kg were 78-104% for all compounds, with relative standard deviations (RSDs) of <= 15%. The LC-MS-MS method allowed sensitive and selective quantification and identification at low levels in different matrices. The method was applied for analysis of fresh grape samples collected from an agricultural area in Hyderabad, South India. The results revealed that the concentrations of studied pesticide residues in grape samples were in the permissible limits except monocrotophos. (C) 2007 Elsevier Ltd. All rights reserved.  
Keywords: pesticide residues, grapes, non-chlorinated solvents, LC-ESI-MS-MS  
ISI Document Delivery No.: 204XV

1425. Ventura, C.; N+¦+\_ez, M. A.; Gaido, V.; Lamas, D. Martinel; Randi, A. S.; Venturino, A.; Rivera, E. S., and Cocca, C. M. Effects of chlorpyrifos on growth of estrogen-dependent human breast cancer cell line: Abstracts of the 47th Congress of the European Societies of Toxicology (EUROTOX). 2011 Aug 28-; 205, Supplement, (0): S80.   
Rec #: 2530  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY

1426. Ventura, Clara; N+¦+\_ez, Mariel; Miret, Noelia; Martinel Lamas, Diego; Randi, Andrea; Venturino, Andr+ s; Rivera, Elena, and Cocca, Claudia . Differential mechanisms of action are involved in chlorpyrifos effects in estrogen-dependent or -independent breast cancer cells exposed to low or high concentrations of the pesticide. 2012 Sep 3-; 213, (2): 184-193.   
Rec #: 1630  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: It has reported that many environmental compounds may display estrogenic actions and these findings led to researchers to associate breast cancer risk with the use of some pesticides. The aim of this work was to investigate the effect of chlorpyrifos (CPF) on cell proliferation and the ER+\_-dependence of this action employing MCF-7 and MDA-MB-231 breast cancer cell lines. We have also analyzed CPF action on the cell cycle distribution and the cyclins that are implicated in G1-S and intra-S checkpoints. Finally, the action on cell death and ROS production were studied. We demonstrated the ability of CPF 0.05 ++M to induce cell proliferation through ER+\_ in hormone-dependent breast cancer cells. In contrast, CPF 50 ++M induces intra-S arrest modifying checkpoints proteins, through a mechanism that may involve changes in redox balance in MCF-7. In MDA-MB-231, we have found that CPF 50 ++M produces an arrest in G2/M phase which could be related to the capacity of the pesticide for binding to tubulin sites altering microtubules polymerization. Altogether, our results provide new evidences on the action of the pesticide CPF as an environmental breast cancer risk factor due to the effects that causes on the mechanisms that modulate breast cell proliferation. Chlorpyrifos/ Cell proliferation/ Endocrine disruptors/ Cell death/ Breast cancer cells

1427. Ventura, F. D.; de Oliveira, J.; Pedreira, W. D., and Ribeiro, M. G. GC-MS quantification of organophosphorous pesticides extracted from XAD-2 sorbent tube and foam patch matrices. 2012; 4, (11): 3666-3673.   
Rec #: 71269  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This work presents a simple extraction procedure and a sensitive and simultaneous gas chromatography-mass spectrometry (GC-MS) method for quantifying five organophosphorous pesticides - chlorpyrifos, dichlorvos, fenchlorphos, parathion-methyl and prothiofos - currently used in flower and ornamental plant greenhouses, extracted from polyurethane foam dermal patches and sampling tubes packed with XAD-2 sorbent and quartz fiber filter. Analytical performance of the optimized method was evaluated taking into account specificity, selectivity, sensitivity, linearity, matrix effects, recovery and repeatability. Extraction procedures were made by addition of pure toluene to the spiked matrices, followed by gentle stirring or ultrasonic bath immersion. Analytes were eluted with a good resolution between 3.4 min and 13.1 min. Linearity responses were determined within the ranges of 25-550 mu g L(-1) for XAD-2 (R(2) > 0.990) and 40-320 mu g L(-1) for PUF (R(2) > 0.990). The ANOVA for linear regression (p < 0.001), White test for homoscedasticity (p > 0.05) and t-test for fitting parameters (p < 0.001) indicated that the linear regression model provides a good interpolation of the experimental data. LOD and LOQ values were below 15.70 eta g per sample and 47.56 hg per sample, respectively. Recoveries ranged from 81.17% to 114.48% with RSD <5%. The absence of significant matrix effects was statistically demonstrated by applying an F-test of equality of variances (p > 0.05), and a two sample t-test assuming equal variances (p > 0.05). The optimized method represents a useful tool for quantification of pesticides at low concentration levels for occupational matrices, allowing the future evaluation of occupational exposure from both inhaling and dermal routes.  
Keywords: CHROMATOGRAPHY-MASS SPECTROMETRY, POTENTIAL DERMAL EXPOSURE,  
ISI Document Delivery No.: 026MA

1428. Verma, Anoop; Poonam, and Dixit, Divya. Photocatalytic Degradability of Insecticide Chlorpyrifos Over Uv Irradiated Titanium Dioxide in Aqueous Phase. 2012; 3, (2): 743-755.   
Rec #: 39139  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Photocatalytic degradation of Chlorpyrifos in aqueous phase by using photocatalyst TiO^sub 2^ in the presence of artificial UV-light and sunlight was reported. Experiments were performed in both UV and solar light at optimized conditions. The degradation of insecticide was investigated in terms of reduction in COD. The effect of catalyst loading, pH, addition of oxidant on the reaction rate was ascertained and optimum conditions for maximum degradation were determined. In this case catalyst concentration was optimized at 4.0 gL^sup -1^, pH 6.5 and oxidant concentration at 3.0 gL^sup -1^, where 90% degradation of the insecticide was observed. Treatment under natural solar conditions showed better results as compared with UV treatment. The effect of sonication on the catalyst slurry was also studied for the better dispersion of the catalyst. The complete mineralization of pesticide from water or waste water followed first-order Langmuir-Hinshelwood (L-H) kinetic model. [PUBLICATION ABSTRACT]  
Keywords: Environmental Studies  
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Pages - 743-755  
ProQuest ID - 1269083085  
Document feature - Illustrations; Equations; Graphs; References  
Last updated - 2013-01-14  
Place of publication - Kangayam  
Corporate institution author - Verma, Anoop; Poonam; Dixit, Divya  
DOI - 2864339521; 74748492; 149129; NJVS; INNNNJVS0001136462  
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1429. Verstappen, D. R. W.; Hulst, A. G.; Fidder, A.; Vermeulen, N. P. E., and Noort, D. Interactions of organophosphates with keratins in the cornified epithelium of human skin. 2012; 197, (2-3): 93-102.   
Rec #: 71339  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Methods to unequivocally assess and quantify exposure to organophosphate anti-cholinesterase agents are highly valuable, either from a biomonitoring or a forensic perspective. Since for both OP pesticides and various nerve agents the skin is a predominant route of entry, we hypothesized that proteins in the skin might represent an ideal source of unequivocal and persistent biomarkers for exposure to these compounds. In this exploratory study we show that keratin proteins in human skin are relevant binding sites for organophosphates. The thick cornified epithelium of human plantar skin (callus) was exposed to a selection of relevant organophosphorus compounds and keratin proteins were subsequently extracted. After carboxymethylation of cysteine residues, enzymatic digestion of the keratins with pronase and trypsin was performed and the resulting amino acid and peptides were analyzed to assess whether covalent adducts had formed. LC-tandem MS analysis of the pronase digests demonstrated that tyrosine and to a lesser extent serine residues were selectively modified by organophosphate pesticides (both phosphorothioates and the corresponding oxon forms) under physiological conditions. In addition, modification of tyrosine with the nerve agent VX was unequivocally assessed. In order to elucidate specific binding sites, LC-tandem MS analysis of trypsin digests showed two separate tryptic keratin fragments, i.e. LASY\*LDK and SLY\*GLGGSK, with Y\* the modified tyrosine residues, originating from keratin 1/6 and keratin 10, respectively. These preliminary findings, revealing novel binding targets for anti-cholinesterase organophosphates, will form a firm basis for the development of novel (non-invasive) methods for assessment of exposure to organophosphates. Whether this binding will also have biological implications remains an issue for further investigations. (C) 2012 Elsevier Ireland Ltd. All rights reserved.  
Keywords: Adducts, Biomarkers, Keratin, Nerve agents, Organophosphates, Pesticides  
ISI Document Delivery No.: 956PL

1430. Villaverde, J; Hildebrandt, a; Martinez, E; Lacorte, S; Morillo, E; Maqueda, C; Viana, P; Barcelo, D, and Villaverde, J. Priority Pesticides and Their Degradation Products in River Sediments From Portugal. 2008 Feb 15; 390, (2-3): 507-513.   
Rec #: 49739  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A multiresidue gas chromatography-mass spectrometry method was developed to determine 28 priority pesticides of different chemical families (organochlorine, organophosphorus, triazines, anilides) together with some of their transformation products in river sediment. Ultrasonic, Soxhlet and pressurized liquid extraction (PLE) methods were compared in spiking experiments using acetone:hexane (1:1) followed by alumina solid phase extraction cartridges or in-cell alumina clean-up for PLE. All extraction techniques produced acceptable recoveries for the pesticides under study, although Soxhlet extraction produced the lowest recoveries for 2,4-DDE, trifluralin, lindane, and hexachlorobenzene (<50%) whereas ultrasonic extraction resulted in low recoveries for hexachlorobenzene and lindane (<50%). However, PLE using in-cell alumina clean-up produced an overestimation of more apolar compounds, given the amount of coextracted compounds. Limits of detection at the low kg L super(-) super(1)-ng L super(-) super(1) levels were obtained with Soxhlet and ultrasonic extraction, while PLE produced higher variability due to the lack of exhaustive clean-up. Given the simplicity of ultrasonic extraction, this method was further employed to determine target compounds in river sediments collected in Portugal. Lindane was detected in practically all samples, followed by trace levels of the pesticides simazine, diazinon, fenitrothion, and parathion-methyl.  
Keywords: Molecular structure  
Keywords: Portugal  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Variability  
Keywords: Organochlorine compounds  
Keywords: Degradation  
Keywords: Fluvial Sediments  
Keywords: SW 3030:Effects of pollution  
Keywords: Q2 02264:Sediments and sedimentation  
Keywords: Freshwater  
Keywords: Environmental Studies  
Keywords: Agricultural Chemicals  
Keywords: Rivers  
Keywords: Sediment chemistry  
Keywords: Sediment pollution  
Keywords: Chlorine compounds  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Simazine  
Keywords: ASFA 2: Ocean Technology Policy & Non-Living Resources; ASFA 3: Aquatic Pollution & Environmental Quality; Pollution Abstracts; Aqualine Abstracts; Water Resources Abstracts  
Keywords: Lindane  
Keywords: Herbicides  
Keywords: AQ 00003:Monitoring and Analysis of Water and Wastes  
Keywords: Sediments  
Keywords: Spectrometry  
Keywords: Ultrasonics  
Keywords: Pesticides  
Keywords: Priorities  
Keywords: Trifluralin  
Keywords: Organic Compounds  
Keywords: Diazinon  
Keywords: Pollution control  
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SubjectsTermNotLitGenreText - Rivers; Molecular structure; Sediment chemistry; Sediment pollution; Degradation; Ultrasonics; Chlorine compounds; Pesticides; Sediments; Pollution control; Organochlorine compounds; Trifluralin; Herbicides; Simazine; Lindane; Diazinon; Spectrometry; Hexachlorobenzene; Variability; Agricultural Chemicals; Fluvial Sediments; Priorities; Organic Compounds; Portugal; Freshwater  
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Corporate institution author - Villaverde, J; Hildebrandt, A; Martinez, E; Lacorte, S; Morillo, E; Maqueda, C; Viana, P; Barcelo, D  
DOI - OB-MD-0008081754; 8183199; CS0820511; 0048-9697 English

1431. Visan, Anke; Hayess, Katrin; Sittner, Dana; Pohl, Elena E.; Riebeling, Christian; Slawik, Birgitta; Gulich, Konrad; Oelgeschl+ńger, Michael; Luch, Andreas, and Seiler, Andrea E. M. Neural differentiation of mouse embryonic stem cells as a tool to assess developmental neurotoxicity in vitro. 2012 Oct; 33, (5): 1135-1146.   
Rec #: 4520  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Mouse embryonic stem cells (mESCs) represent an attractive cellular system for in vitro studies in developmental biology as well as toxicology because of their potential to differentiate into all fetal cell lineages. **The present study aims to establish an in vitro system for developmental neurotoxicity testing employing mESCs.** We developed a robust and reproducible protocol for fast and efficient differentiation of the mESC line D3 into neural cells, optimized with regard to chemical testing. Embryonic stem cells/ Developmental neurotoxicity/ In vitro developmental neurotoxicity testing

1432. Vischetti, C; Cardinali, a; Monaci, E; Nicelli, M; Ferrari, F; Trevisan, M; Capri, E, and Vischetti, C. Measures to Reduce Pesticide Spray Drift in a Small Aquatic Ecosystem in Vineyard Estate. 2008 Jan 25; 389, (2-3): 497-502.   
Rec #: 46179  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A field experiment is reported to ascertain the drift of two pesticides (chlorpyrifos and metalaxyl) in a vineyard in Italian climatic conditions and the effect of mitigation measures, such as buffer zones and tree rows, on pesticide drift contamination in a small aquatic system located inside the field. Results indicated that, in typical Italian agricultural conditions, spray drift in vineyards occurs at a distance of more than 24 m and adequate buffer zones are required to protect surface water bodies from direct contamination. The presence of tree rows in front of the water body inside the agricultural field, against the main wind direction, resulted in a very high reduction of the spray drift and of the ecotoxicological risk for aquatic ecosystem. In addition, a comparison between the data obtained in the experiment and the Drift Calculator procedure showed that the model failed when the procedure is used for short distances. However, concordance was found in terms of maximum drift distances.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Contamination  
Keywords: Ecosystems  
Keywords: water bodies  
Keywords: Trees  
Keywords: Surface water  
Keywords: buffers  
Keywords: Agricultural pollution  
Keywords: SW 3030:Effects of pollution  
Keywords: climatic conditions  
Keywords: Surface Water  
Keywords: Field Tests  
Keywords: Water quality  
Keywords: Freshwater  
Keywords: Wind fields  
Keywords: mitigation  
Keywords: Agricultural Chemicals  
Keywords: R2 23050:Environment  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Sprays  
Keywords: AQ 00008:Effects of Pollution  
Keywords: agricultural land  
Keywords: Toxicity  
Keywords: Inland water environment  
Keywords: Aquatic environment  
Keywords: Chlorpyrifos  
Keywords: vineyards  
Keywords: Pesticides  
Keywords: Risk Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Pollution Abstracts; Aqualine Abstracts; Water Resources Abstracts  
Keywords: aquatic ecosystems  
Keywords: Environment management  
Keywords: Pollution control  
Date revised - 2008-05-01  
Language of summary - English  
Pages - 497-502  
ProQuest ID - 20044483  
SubjectsTermNotLitGenreText - Agricultural pollution; Pesticides; Water quality; Inland water environment; Wind fields; Environment management; Pollution control; water bodies; Trees; Surface water; buffers; Sprays; agricultural land; climatic conditions; Aquatic environment; Chlorpyrifos; mitigation; vineyards; aquatic ecosystems; Agricultural Chemicals; Contamination; Ecosystems; Surface Water; Field Tests; Toxicity; Freshwater  
Last updated - 2011-12-14  
British nursing index edition - Science of the Total Environment [Sci. Total Environ.]. Vol. 389, no. 2-3, pp. 497-502. 25 Jan 2008.  
Corporate institution author - Vischetti, C; Cardinali, A; Monaci, E; Nicelli, M; Ferrari, F; Trevisan, M; Capri, E  
DOI - MD-0008080925; 8182370; CS0820441; 0048-9697 English

1433. Vischetti, C.; Coppola, L.; Monaci, E.; Cardinali, A., and Castillo, M. D. Microbial impact of the pesticide chlorpyrifos on Swedish and Italian biobeds. 2007; 27, (3): 267-272.   
Rec #: 71409  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Biobeds provide a simple and cheap solution to reducing point- source contamination by pesticides from farm activities. In its original design, the Swedish biobed is a clay- lined pit in the ground filled with a biomixture of topsoil, peat and straw and covered with a grass layer. The straw stimulates the growth of lignin- degrading fungi and the formation and activity of ligninolytic enzymes which can degrade many different pesticides. Here we compared the behaviour of the chlorpyrifos pesticide in two biobeds of different composition: a Swedish biobed composed of 50% v vine straw, 25% v peat and 25% v Swedish soil; and an Italian biobed composed of 40% v vine straw, 40% v green compost and 20% v Italian soil. Microbial biomass was measured in the Italian biomix by the fumigation- extraction method. The microbial activity was estimated by measuring mineralisation of a synthetic lignin, (14)C- de- hydrogenative polymerisate ((14)C- DHP) in the Swedish biomix. Microbial respiration was followed over time in both biomixes. Our results show that the chlorpyrifos half- lives were similar in both biomixes. The microbial biomass content was reduced by 25 and 50% with, respectively, 10 and 50 mg kg(-1) chlorpyrifos in the Italian biomix. The respiration activity was affected only at 50 mg kg(-1) chlorpyrifos in the Italian biomix. No effect was observed in the Swedish biomix despite the higher chlorpyrifos concentration of 100 mg kg(-1). The mineralisation of (14)C- DHP was not affected by the presence of chlorpyrifos in the Swedish biomix. These findings could be explained by the presence of chlorpyrifos- sensitive microorganisms in the Italian biomix and chlorpyrifos-resitant microorganisms in the Swedish biomix. The more robust microflora developed in the Swedish biomix may be explained by its lower nitrogen content, higher C/ N ratio and lower pH, all of which are favourable for the development of lignin- degrading fungi and their activity. In Sweden more than 1000 biobeds are in practical use on farms and they have been shown to be efficient at reducing pesticide water- body contamination. The present study compares the capability of an Italian biomix for degrading pesticides to that shown by the Swedish original biomix in order to introduce this biological system for a sustainable Italian agriculture.  
Keywords: chlorpyrifos, organic biomixes, pesticide biodegradation, ligninolytic  
ISI Document Delivery No.: 189DB

1434. Vischetti, C; Monaci, E; Cardinali, a; Casucci, C; Perucci, P, and Vischetti, C. The Effect of Initial Concentration, Co-Application and Repeated Applications on Pesticide Degradation in a Biobed Mixture. 2008 Aug; 72, (11): 1739-1743.   
Rec #: 45669  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A 180d laboratory experiment was conducted to investigate the degradation rates of chlorpyrifos (10 and 50mgkg super(-) super(1)) and metalaxyl (100mgkg super(-) super(1)) separately and co-applied in a biomix constituted by topsoil, vine-branches and urban-waste-garden compost. The effect of repeated application of metalaxyl was also investigated. Microbial biomass-C (MBC) content and metabolic quotient (qCO sub(2)) were measured to evaluate changes in microbial biomass size and activity induced by the presence of the two pesticides. Degradation rate decreased with increasing concentration of chlorpyrifos in all treatments. Metalaxyl half-life was significantly reduced in co-application with chlorpyrifos indicating a synergic interaction between the two pesticides in favour of enhanced degradation rate for metalaxyl but not for chlorpyrifos. Furthermore, repeated application resulted in a sharp reduction of metalaxyl half-life from 37d after first application to 4d after third application. MBC content was negatively influenced by the addition of pesticides but it started to recover immediately, in both separate and co-applied treatments, reaching the control value when pesticide residues were about 50% of the initial concentration. The qCO sub(2) reached a steady-state after about 20d in separately applied and 40d in co-applied treatments, indicating a tendency to arrive at a new metabolic equilibrium. In conclusion, the biomix tested has been shown to degrade pesticides relatively fast and to have a microbial community that is varied enough to allow selection of those microorganisms able to degrade metalaxyl and chlorpyrifos.  
Keywords: A 01380:Plant Protection, Fungicides & Seed Treatments  
Keywords: Chlorpyrifos  
Keywords: Metalaxyl  
Keywords: Biodegradation  
Keywords: Composts  
Keywords: Pesticide residues  
Keywords: Pesticides  
Keywords: Microorganisms  
Keywords: Microbiology Abstracts A: Industrial & Applied Microbiology; Biotechnology and Bioengineering Abstracts  
Keywords: W 30965:Miscellaneous, Reviews  
Keywords: Biomass  
Keywords: Environmental Studies  
Date revised - 2008-10-01  
Language of summary - English  
Pages - 1739-1743  
ProQuest ID - 290172605  
SubjectsTermNotLitGenreText - Metalaxyl; Pesticides; Chlorpyrifos; Biodegradation; Composts; Microorganisms; Biomass; Pesticide residues  
Last updated - 2011-11-04  
Corporate institution author - Vischetti, C; Monaci, E; Cardinali, A; Casucci, C; Perucci, P  
DOI - OB-MD-0008364018; 8400253; 0045-6535 English

1435. Viswanath, Gunda; Chatterjee, Shamba; Dabral, Swati; Nanguneri, Siddharth R.; Divya, Gunda, and Roy, Partha. Anti-androgenic endocrine disrupting activities of chlorpyrifos and piperophos. 2010 May 1-; 120, (1): 22-29.   
Rec #: 2050  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: The present work describes the screening and characterization of some common endocrine disrupting chemicals for their (anti)androgenic activities. Various chemicals (mostly pesticides and pharmaceuticals) were screened with the **NIH3T3 cell line** stably expressing human androgen receptor (hAR) and luciferase reporter gene for their ability to stimulate luciferase activity or inhibit the response that was evoked by 0.4 nM testosterone. The most potent anti-androgenic compounds identified in our assay included chlorpyrifos, endosulfan and piperophos. Finally, the chemicals were analyzed for their effects on steriodogenesis in rat Leydig cells. Piperophos and chlorpyrifos showed a significant decrease in testosterone biosynthesis by Leydig cells. RT-PCR studies showed decrease in the expression of key steroidogenic enzymes: cytochrome P450scc, 3+\_-HSD and 17+\_-HSD and immunoblot analysis demonstrated a decrease in steroidogenic acute regulatory (StAR) protein expression by both these chemicals. Chlorpyrifos also showed a decrease in LH receptor stimulated cAMP production. In conclusion, we demonstrate that commonly used pesticides like chlorpyrifos and piperophos pose serious threat to male reproductive system by interfering at various levels of androgen biosynthesis. Endocrine disruptors/ Anti-androgenic/ StAR/ Steroidogenic enzymes/ Androgen receptor

1436. Viswanathan, S; Radecka, H; Radecki, J, and Viswanathan, S. Electrochemical Biosensor for Pesticides Based on Acetylcholinesterase Immobilized on Polyaniline Deposited on Vertically Assembled Carbon Nanotubes Wrapped With Ssdna. 2009 May 15; 24, (9): 2772-2777.   
Rec #: 44749  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An electrochemical biosensor for the determination of pesticides: methyl parathion and chlorpyrifos, two of the most commonly used organophosphorous insecticides in vegetable crops, is described. The self-assembled monolayers (SAMs) of single walled carbon nanotubes (SWCNT) wrapped by thiol terminated single strand oligonucleotide (ssDNA) on gold was utilized to prepare nano size polyaniline matrix for acetylcholinesterase (AChE) enzyme immobilization. The key step of this biosensor was AChE-acetylcholine enzymatic reaction which causes the small changes of local pH in the vicinity of an electrode surface. The pesticides were determined through inhibition of enzyme reaction. The dynamic range for the determination of methyl parathion and chlorpyrifos was found to be in between 1.0x10 super(-) super(1) super(1) and 1.0x10 super(-) super(6)M (0.6<SD<3.5) with good reproducibility and stability. The detection limit of the biosensor for both pesticides was found to be 1x10 super(-) super(1) super(2)M. The biosensor has been applied for the determination of methyl parathion and chlorpyrifos in spiked river water samples.  
Keywords: Rivers  
Keywords: Crop  
Keywords: Vegetables  
Keywords: Acetylcholinesterase  
Keywords: Enzymes  
Keywords: N 14845:Miscellaneous  
Keywords: Oligonucleotides  
Keywords: Biochemistry Abstracts 2: Nucleic Acids; Biotechnology and Bioengineering Abstracts  
Keywords: Crops  
Keywords: Chlorpyrifos  
Keywords: Biosensors  
Keywords: Insecticides  
Keywords: Carbon  
Keywords: Thiols  
Keywords: Pesticides  
Keywords: Electrodes  
Keywords: W 30955:Biosensors  
Keywords: Gold  
Keywords: nanotubes  
Keywords: Methyl parathion  
Keywords: pH effects  
Keywords: Immobilization  
Date revised - 2009-05-01  
Language of summary - English  
Pages - 2772-2777  
ProQuest ID - 20521080  
SubjectsTermNotLitGenreText - Rivers; Vegetables; Crop; Acetylcholinesterase; Enzymes; Oligonucleotides; Crops; Biosensors; Chlorpyrifos; Carbon; Insecticides; Thiols; Pesticides; Electrodes; Gold; nanotubes; Methyl parathion; pH effects; Immobilization  
Last updated - 2011-12-14  
British nursing index edition - Biosensors and Bioelectronics [Biosensors Bioelectron.]. Vol. 24, no. 9, pp. 2772-2777. 15 May 2009.  
Corporate institution author - Viswanathan, S; Radecka, H; Radecki, J  
DOI - MD-0009542873; 9212948; 0956-5663 English

1437. Vogel, J. R.; Majewski, M. S., and Capel, P. D. Pesticides in Rain in Four Agricultural Watersheds in the United States. 2008; 37, 1101-1115.   
Rec #: 1530  
Keywords: FATE,NO SPECIES  
Call Number: NO FATE (34DAH,ACR,ATZ,AZ,CBL,CPY,CYF,CYP,DCPA,DCTP,DDVP,DMT,DZ,FMP,FPN,IPD,MDT,MLN,MLX,MP,MTL,MYC,NATL,PDM,PMR,PMT,PRO,PRT,PSM,PZM,SZ,TBO,TBZ,TET,TFN), NO SPECIES (34DAH,ACR,ATZ,AZ,CBL,CPY,CYF,CYP,DCPA,DCTP,DDVP,DMT,DZ,FMP,FPN,IPD,MDT,MLN,MLX,MP,MTL,MYC,NATL,PDM,PMR,PMT,PRO,PRT,PSM,PZM,SZ,TBO,TBZ,TET,TFN)  
Notes: Chemical of Concern: 34DAH,ACO,ACR,ATZ,AZ,BFL,CBL,CPY,CYF,CYP,DCPA,DCTP,DDVP,DMT,DZ,ETN,FFC,FMP,FNF,FPN,IFP,IPD,MBZ,MDT,MLN,MLX,MP,MTL,MYC,NATL,PCH,PDM,PMR,PMT,PRO,PRT,PSM,PZM,SZ,TBO,TBZ,TET,TFN

1438. Vogt, Rainbow; Bennett, Deborah; Cassady, Diana; Frost, Joshua; Ritz, Beate, and Hertz-Picciotto, Irva. Cancer and Non-Cancer Health Effects From Food Contaminant Exposures for Children and Adults in California: a Risk Assessment. 2012; 11, (1): 83.   
Rec #: 46969  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Doc number: 83 Abstract Background: In the absence of current cumulative dietary exposure assessments, this analysis was conducted to estimate exposure to multiple dietary contaminants for children, who are more vulnerable to toxic exposure than adults. Methods: We estimated exposure to multiple food contaminants based on dietary data from preschool-age children (2-4 years, n=207), school-age children (5-7 years, n=157), parents of young children (n=446), and older adults (n=149). We compared exposure estimates for eleven toxic compounds (acrylamide, arsenic, lead, mercury, chlorpyrifos, permethrin, endosulfan, dieldrin, chlordane, DDE, and dioxin) based on self-reported food frequency data by age group. To determine if cancer and non-cancer benchmark levels were exceeded, chemical levels in food were derived from publicly available databases including the Total Diet Study. Results: Cancer benchmark levels were exceeded by all children (100%) for arsenic, dieldrin, DDE, and dioxins. Non-cancer benchmarks were exceeded by >95% of preschool-age children for acrylamide and by 10% of preschool-age children for mercury. Preschool-age children had significantly higher estimated intakes of 6 of 11 compounds compared to school-age children (p<0.0001 to p=0.02). Based on self-reported dietary data, the greatest exposure to pesticides from foods included in this analysis were tomatoes, peaches, apples, peppers, grapes, lettuce, broccoli, strawberries, spinach, dairy, pears, green beans, and celery. Conclusions: Dietary strategies to reduce exposure to toxic compounds for which cancer and non-cancer benchmarks are exceeded by children vary by compound. These strategies include consuming organically produced dairy and selected fruits and vegetables to reduce pesticide intake, consuming less animal foods (meat, dairy, and fish) to reduce intake of persistent organic pollutants and metals, and consuming lower quantities of chips, cereal, crackers, and other processed carbohydrate foods to reduce acrylamide intake.  
Keywords: California  
Keywords: United States--US  
Keywords: Environmental Studies  
Name - Environmental Protection Agency--EPA  
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Language of summary - English  
Location - United States--US; California  
Pages - 83  
ProQuest ID - 1271876572  
SubjectsTermNotLitGenreText - United States--US; California  
Last updated - 2013-01-29  
Place of publication - London  
Corporate institution author - Vogt, Rainbow; Bennett, Deborah; Cassady, Diana; Frost, Joshua; Ritz, Beate; Hertz-Picciotto, Irva  
DOI - 2871295361; 67725392; 58366; ENVH; 23140444; BMDDENVH201201011476069X1183  
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1439. Volz, D. C.; Belanger, S.; Embry, M.; Padilla, S.; Sanderson, H.; Schirmer, K.; Scholz, S., and Villeneuve, D. Adverse Outcome Pathways During Early Fish Development: A Conceptual Framework for Identification of Chemical Screening and Prioritization Strategies. 2011; 123, (2): 349-358.   
Rec #: 2190  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (CPY), NO REVIEW (CPY)  
Notes: Chemical of Concern: ABSA,CPY,DXN,TCDD

1440. Von Der Ohe, Peter Carsten; Dulio, Valeria; Slobodnik, Jaroslav; De Deckere, Eric; Kuhne, Ralph; Ebert, Ralf-Uwe; Ginebreda, Antoni; De Cooman, Ward; Schuurmann, Gerrit; Brack, Werner, and von der Ohe, Peter Carsten. A New Risk Assessment Approach for the Prioritization of 500 Classical and Emerging Organic Microcontaminants as Potential River Basin Specific Pollutants Under the European Water Framework Directive. 2011 May 1; 409 , (11): 2064-2077.   
Rec #: 47349  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Given the huge number of chemicals released into the environment and existing time and budget constraints, there is a need to prioritize chemicals for risk assessment and monitoring in the context of the European Union Water Framework Directive (EU WFD). This study is the first to assess the risk of 500 organic substances based on observations in the four European river basins of the Elbe, Scheldt, Danube and Llobregat. A decision tree is introduced that first classifies chemicals into six categories depending on the information available, which allows water managers to focus on the next steps (e.g. derivation of Environmental Quality Standards (EQS), improvement of analytical methods, etc.). The priority within each category is then evaluated based on two indicators, the Frequency of Exceedance and the Extent of Exceedance of Predicted No-Effect Concentrations (PNECs). These two indictors are based on maximum environmental concentrations (MEC), rather than the commonly used statistically based averages (Predicted Effect Concentration, PEC), and compared to the lowest acute-based (PNECacute) or chronic-based thresholds (PNECchronic). For 56% of the compounds, PNECs were available from existing risk assessments, and the majority of these PNECs were derived from chronic toxicity data or simulated ecosystem studies (mesocosm) with rather low assessment factors. The limitations of this concept for risk assessment purposes are discussed. For the remainder, provisional PNECs (P-PNECs) were established from **read-across models for acute toxicity to the standard test organisms Daphnia magna, Pimephales promelas and Selenastrum capricornutum.** On the one hand, the prioritization revealed that about three-quarter of the 44 substances with MEC/PNEC ratios above ten were pesticides. On the other hand, based on the monitoring data used in this study, no risk with regard to the water phase could be found for eight of the 41 priority substances, indicating a first success of the implementation of the WFD in the investigated river basins.  
Keywords: Chemicals  
Keywords: Risk assessment  
Keywords: acute toxicity  
Keywords: test organisms  
Keywords: M2 556:General (556)  
Keywords: Europe, Danube R.  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Statistical analysis  
Keywords: River basins  
Keywords: Toxicity  
Keywords: Risk Abstracts; Environment Abstracts; Meteorological & Geoastrophysical Abstracts; Pollution Abstracts  
Keywords: Daphnia magna  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: ANE, Netherlands, Scheldt Estuary  
Keywords: Pimephales promelas  
Keywords: European Union  
Keywords: Pesticides  
Keywords: Pesticides in river water  
Keywords: Environmental quality  
Keywords: R2 23050:Environment  
Keywords: budgets  
Keywords: Europe, Elbe R.  
Keywords: Selenastrum capricornutum  
Date revised - 2011-10-01  
Language of summary - English  
Location - ANE, Netherlands, Scheldt Estuary; European Union; Europe, Danube R.; Europe, Elbe R.  
Pages - 2064-2077  
ProQuest ID - 886064311  
SubjectsTermNotLitGenreText - Statistical analysis; Pesticides in river water; Environmental quality; River basins; Risk assessment; Chemicals; acute toxicity; test organisms; Pesticides; Toxicity; budgets; Pimephales promelas; Daphnia magna; Selenastrum capricornutum; ANE, Netherlands, Scheldt Estuary; European Union; Europe, Danube R.; Europe, Elbe R.  
Last updated - 2012-08-02  
Corporate institution author - Dulio, Valeria; Slobodnik, Jaroslav; De Deckere, Eric; Kuhne, Ralph; Ebert, Ralf-Uwe; Ginebreda, Antoni; De Cooman, Ward; Schuurmann, Gerrit; Brack, Werner  
DOI - OB-cc4c5ff5-5d4c-4655-a988csaobj201; 14882440; 0048-9697 English

1441. Vryzas, Z; Alexoudis, C; Vassiliou, G; Galanis, K; Papadopoulou-Mourkidou, E, and Vryzas, Z. Determination and Aquatic Risk Assessment of Pesticide Residues in Riparian Drainage Canals in Northeastern Greece. 2011 Feb; 74, (2): 174-181.   
Rec #: 47439  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: An approach combining monitoring and ecotoxicological data has been undertaken to assess pesticide loading in the drainage canals of two transboundary rivers of northeastern Greece near the Greek/Bulgarian/Turkish borders as well as the subsequent risk to non-target aquatic organisms. Aquatic risk assessment was based on the Risk Quotient (RQ=MEC/PNEC) regarding three trophic levels, algae, aquatic invertebrates and fish. Alachlor, atrazine, carbaryl, carbofuran, cypermethrin, DEA, DIA, diazinon, dimethoate, endosulfan, metolachlor, monilate, prometryn and trifluralin were the compounds detected at the highest concentrations on a regular basis. Extreme concentrations were observed just after high rainfall events during the month of pesticide application. Aquatic risk assessment revealed non-acceptable risk for 10 compounds when median concentrations were used as IoeEC values. However, should extreme concentrations be taken into account, 15 compounds were considered as likely to pose a threat to aquatic organisms. Conformity to EC environmental quality standards is also discussed.  
Keywords: Risk assessment  
Keywords: Aquatic organisms  
Keywords: Health & Safety Science Abstracts; Environment Abstracts; Toxicology Abstracts; Pollution Abstracts  
Keywords: Pesticide residues  
Keywords: Rainfall  
Keywords: Carbaryl  
Keywords: Pesticide applications  
Keywords: H 5000:Pesticides  
Keywords: X 24330:Agrochemicals  
Keywords: Algae  
Keywords: Metolachlor  
Keywords: Rivers  
Keywords: Data processing  
Keywords: Carbofuran  
Keywords: Cypermethrin  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Environmental Studies--Toxicology And Environmental Safety  
Keywords: Drainage  
Keywords: Alachlor  
Keywords: Herbicides  
Keywords: Trophic levels  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Endosulfan  
Keywords: MED, Greece  
Keywords: Canals  
Keywords: Atrazine  
Keywords: Pesticides  
Keywords: Trifluralin  
Keywords: Environmental quality  
Keywords: Dimethoate  
Keywords: Diazinon  
Date revised - 2011-10-01  
Language of summary - English  
Location - MED, Greece  
Pages - 174-181  
ProQuest ID - 852232742  
SubjectsTermNotLitGenreText - Metolachlor; Rivers; Risk assessment; Aquatic organisms; Data processing; Cypermethrin; Carbofuran; Pesticide residues; Drainage; Rainfall; Alachlor; Carbaryl; Trophic levels; Pesticide applications; Endosulfan; Canals; Pesticides; Atrazine; Environmental quality; Trifluralin; Dimethoate; Diazinon; Algae; Herbicides; MED, Greece  
Last updated - 2011-12-12  
Corporate institution author - Vryzas, Z; Alexoudis, C; Vassiliou, G; Galanis, K; Papadopoulou-Mourkidou, E  
DOI - OB-4b265a13-f2e9-4ca7-b1d5csamfg201; 14198972; 0147-6513 English

1442. Vryzas, Z.; Vassiliou, G.; Alexoudis, C., and Papadopoulou-Mourkidou, E. Spatial and Temporal Distribution of Pesticide Residues in Surface Waters in Northeastern Greece. 2009; 43, 1-10.   
Rec #: 1540  
Keywords: SURVEY  
Call Number: NO SURVEY (ACR,ATZ,CPY,DZ,MLT,MP,MTL,PDM,PMT,SZ,TFN)  
Notes: Chemical of Concern: ACR,ATZ,CPY,DDT,DZ,EFS,HCB,MLT,MP,MTL,PDM,PMT,SZ,TFN

1443. Wacksman, M. Impact of Atrazine on Chlorpyrifos Toxicity to Four Aquatic Vertebrates. 2005: 38 p.   
Rec #: 1850  
Keywords: PUBL AS,REFS CHECKED  
Call Number: NO PUBL AS (ATZ,CPY), NO REFS CHECKED (ATZ,CPY)  
Notes: Chemical of Concern: ATZ,CPY

1444. Walker, P. W. and Allsopp, P. G. Factors Influencing Populations of Eumargarodes laingi and Promargarodes spp. (Hemiptera: Margarodidae) in Australian Sugarcane. 1993; 22, (2): 362-367.   
Rec #: 2460  
Keywords: NO CONC  
Call Number: NO CONC (CPY)  
Notes: Chemical of Concern: CPY,DLD

1445. Walorczyk, S. and Drozdzynski, D. Improvement and extension to new analytes of a multi-residue method for the determination of pesticides in cereals and dry animal feed using gas chromatography-tandem quadrupole mass spectrometry revisited. 2012; 1251, 219-231.   
Rec #: 71479  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This article describes a substantially improved multi-residue method for the determination of a large number of pesticides in cereal samples (wheat, rye, barley, oats, maze, buckwheat etc.) and various animal feeds. The sample preparation method and the GC-MS/MS acquisition method were modified to accommodate new complex cereal and feed matrices and to extend the existing analytical scope to 167 pesticides. The co-extractives were reduced by the joint use of primary secondary amine (PSA) and octadecyl (C18), 75 mg and 50 mg/1 mL of acetonitrile extract, in the presence of MgSO(4), and thus the optimal recovery and analytical selectivity were obtained simultaneously. The new cleanup procedure was faster and easier to handle than our previously applied cleanup procedure. The overall recoveries of the pesticides from buckwheat and rye at the three spiking levels of 0.01, 0.05 and 0.25 mg kg(-1) were 96 +/- 9% with relative standard deviations of 10 +/- 4% on average. At the lowest spiking level of 0.01 mg kg(-1), 137 of 167 pesticide residues (82%) fulfilled the validation criteria with recoveries in the range of 70-120% and RSDs less or equal 20% whereas in the previous approach it was 93 out of 140 analytes (66%). The developed method was implemented in a routine analysis of approximately 900 real samples, providing an increased scope of the analysis, improved analytical performance parameters and improved ruggedness versus the previous approach. A total of 17% analyzed samples contained pesticide residues. There were 24 different compounds encountered in the samples, of which pirimiphos-methyl, tebuconazole. deltamethrin, and chlorpyrifos-methyl were the most frequent ones. (C) 2012 Elsevier B.V. All rights reserved.  
Keywords: Pesticide residue analysis, Gas chromatography, Tandem quadrupole mass  
ISI Document Delivery No.: 987PE

1446. Walsh, G. E.; Deans, C. H., and McLaughlin, L. L. Comparison of the EC50s of Algal Toxicity Tests Calculated by Four Methods. 1987; 6, (10): 767-770.   
Rec #: 1720  
Keywords: NO DURATION  
Call Number: NO DURATION (CPY,MP,PMR,PRT,TBC,TBF,TBTF,TBTO,TDC)  
Notes: Chemical of Concern: CHD,CPY,HCCP,HMN,HPT,MP,PMR,PRT,TBC,TBF,TBTA,TBTCl,TBTF,TBTO,TDC,TPTH

1447. Walz, I. and Schwack, W. Cutinase inhibition by means of insecticidal organophosphates and carbamates - Part 1: Basics in development of a new enzyme assay. 2007; 225, (3-4): 593-601.   
Rec #: 71509  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Due to the extensive use of pesticides in agriculture there is an increasing demand for fast performable methods for residue analysis at official food control. This report is concerned with the development of a spectrophotometric enzyme assay in 96-well plate format, with the aim to enable simultaneous screening of multiple samples for organophosphorus and carbamate insecticides by means of their inhibitory effect on cutinase from Fusarium solani pisi. Reaction time of the assay is 30 min. The influence of various solvents on cutinase activity was studied in order to optimize the loss of enzyme activity under organic solvent conditions with respect to pesticide solubility. Methanol concentrations of up to 2.5% in the inhibition batch exhibit negligible influence on cutinase activity. Aqueous mixtures of 10% methanol and 40% diethylene glycol are advantageously bridging restricted pesticide solubility with maintenance of enzyme activity. The detection limit of paraoxon, a potent cutinase inhibitor with an inhibitory rate constant of 1.6 x 10(4) L/(mol min), was determined to 0.04 mg/L. For chlorpyrifos, the most often detected pesticide on fruit and vegetables, the detection limit was 2.6 mg/L with an inhibition constant of 2.0 x 10(3) L/(mol min). Working principle and efficiency of the assay are discussed in detail in terms of enzyme kinetics.  
Keywords: enzyme assay, cutinase from Fusarium solani pisi, inhibition, pesticide,  
ISI Document Delivery No.: 182JX

1448. ---. Cutinase inhibition by means of insecticidal organophosphates and carbamates Part 2: screening of representative insecticides on cutinase activity. 2008; 226, (5): 1135-1143.   
Rec #: 71519  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Representative organophosphorus and carbamate insecticides were subjected to a recently developed, efficient spectrophotometric cutinase assay. The inactivation ability of ten organophosphate oxons [chlorpyrifos oxon, chlorpyrifos-methyl oxon, paraoxon, paraoxon-methyl, malaoxon, dichlorvos, monocrotophos, chlorfenvinphos, demeton-S-methyl, acephate], five organophosphate thions [chlorpyrifos, chlorpyrifos-methyl, parathion, parathion-methyl, malathion] and six carbamates [methomyl, carbaryl, propoxur, carbofuran, ethiofencarb, pirimicarb] was examined and characterized in terms of inhibitory rate constants. Regarding their strengths as cutinase inhibitors, organophosphate oxons were found to exceed by far the corresponding thions, whereas ethyl esters proved to be superior to their methyl analogues. Chlorpyrifos oxon with an inhibition constant k (i) of 9.4 x 10(5) L/(mol min) was identified as strongest cutinase inhibitor, resulting in a detection limit of 2 mu g/L (standard solution/sample extract). As novel result it is established that also carbamates are cutinase inhibitors, though of minor strength as compared to organophosphate oxons. Most efficient carbamates are methomyl and carbaryl with inhibition constants of 7.5 x 10(2) and 2.6 x 10(2) L/(mol min), respectively, i.e., well in the range of organophosphorous insecticides.  
Keywords: enzyme assay, pesticide, organophosphate, carbamate, cutinase from  
ISI Document Delivery No.: 259MD

1449. ---. Reflectometric Cutinase Assay for Rapid Screening of Contaminants and Residues of Insecticidal Organophosphates and Carbamates. 2008; 91, (5): 1130-1137.   
Rec #: 71529  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Because of the extensive use of insecticides in agriculture, there is an increasing demand for rapid analytical methods for residues in food and feed control. To meet this need, a completely new application of the reflectometric lipase test (Reflectoquant (R), Merck) was developed. By using the cutinase-induced reaction of the substrate 5-bromo-4-chloro-3-indoxyl caprylate on the test strips, residues of organophosphates and carbamates can be determined on the basis of enzyme inhibition in a fast and inexpensive way. With this technique, we investigated the inhibition effects of representative insecticides, i.e., chlorpyrifos oxon, paraoxon, and carbaryl. The bimolecular inhibitory rate constants (k(i)) were found to agree well with those obtained by a previously described spectrophotometric cutinase assay in the microtiter-plate format. Recoveries determined with the strip test from spiked samples compared well with those obtained by both the cutinase microtiter-plate assay and liquid chromatography/mass spectrometry.  
Keywords: LIPOLYTIC ENZYME, INHIBITION, EXTRACTION, SUBSTRATE, LIPASE, MILK, FOOD  
ISI Document Delivery No.: 362XB

1450. Wang, C. M.; Li, X. B.; Liu, Y. H.; Guo, Y. R.; Xie, R.; Gui, W. J., and Zhu, G. N. Development of a Mab-Based Heterologous Immunoassay for the Broad-Selective Determination of Organophosphorus Pesticides. 2010; 58, (9): 5658-5663.   
Rec #: 71569  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A broad-selective monoclonal antibody (Mat)) for organophosphorus (OP) pesticides was raised using heterologous indirect enzyme-linked immunosorbent assay (ELISA) to screen hybridomas. On the basis of this Mab, five coating antigens were used to develop homologous and heterologous indirect competitive ELISAs. With the most suitable competitor, a sensitive and broad-selective ELISA was developed. The IC(50) values were estimated to be 20.32 ng/mL for parathion, 21.44 ng/mL for methyl-parathion, 42.15 ng/mL for fenitrothion, and 58.85 ng/mL for isocarbophos. Spike recoveries were between 70.52 and 103.27% for the detection of single pesticide residues of the four OP pesticides in purple-clayed paddy soil. Moreover, the chosen ELISA was then applied to the detection of mixtures of parathion and methyl-parathion in soil samples. The average recovery and coefficient of variation were 80.91 and 4.82%, respectively. Results proved that this broad-selective ELISA would be useful for the multiresidue determination of OP pesticides.  
Keywords: Heterologous, monoclonal antibody (Mab), organophosphorus (OP)  
ISI Document Delivery No.: 590OW

1451. Wang, Dongli; Weston, Donald P, and Lydy, Michael J. Method Development for the Analysis of Organophosphate and Pyrethroid Insecticides at Low Parts Per Trillion Levels in Water. 2009 Jun 15; 78, (4-5): 1345-1351.   
Rec #: 48489  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the current study, organophosphate and pyrethroid insecticides including diazinon, chlorpyrifos, bifenthrin, fenpropathrin, permethrin, lambda-cyhalothrin, cyfluthrin, cypermethrin, esfenvalerate and deltamethrin were analyzed in laboratory and field-collected water samples. Water samples were extracted and analyzed by gas chromatography/electron capture detector (GC/ECD) and gas chromatography/nitrogen-phosphorous detector (GC/NPD). Comparison of results from liquid-liquid extraction and subsequent normal phase solid-phase extraction cleanup (LLE-NPSPE), and reversed phase solid-phase extraction (RPSPE) showed that LLE-NPSPE was the better choice to extract trace amounts of pesticides from water. Pesticide recoveries from four spiked water samples using LLE-NPSPE ranged from 63.2 to 148.8% at four spiking concentrations. Method detection limits were 0.72-1.69 ng/L using four different water sources. The stability of the target pesticides in lake water was investigated at 4 degrees C for 1h, 1d, 4d, and 7d under three conditions: (1) water samples only; (2) with 20 mL hexane used as a keeper solvent; and (3) with acidification to pH 2 with HCl. Results showed that water storage without treatment resulted in slow degradation of some pesticides with storage time, storage using water acidification led to significant degradation and loss of diazinon and chlorpyrifos, while water storage with hexane as a keeper solvent showed good stability for all of the target pesticides over the 7d storage period.  
Keywords: Pesticides -- analysis  
Keywords: Water Pollutants, Chemical -- analysis  
Keywords: Organophosphates  
Keywords: Methods  
Keywords: Organophosphates -- isolation & purification  
Keywords: Solvents  
Keywords: Pyrethrins -- isolation & purification  
Keywords: Solid Phase Extraction  
Keywords: Chromatography, Gas -- methods  
Keywords: Pesticides -- isolation & purification  
Keywords: 0  
Keywords: Pyrethrins -- analysis  
Keywords: Fresh Water -- analysis  
Keywords: Pyrethrins  
Keywords: Pesticides  
Keywords: Water Pollutants, Chemical  
Keywords: Organophosphates -- analysis  
Keywords: Water Pollutants, Chemical -- isolation & purification  
Date completed - 2009-07-30  
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Language of summary - English  
Pages - 1345-1351  
ProQuest ID - 67125582  
Last updated - 2013-01-19  
British nursing index edition - Talanta, June 15, 2009, 78(4-5):1345-1351  
Corporate institution author - Wang, Dongli; Weston, Donald P; Lydy, Michael J  
DOI - MEDL-19362199; 19362199; 1873-3573 eng

1452. Wang, Fei; Yao, Jun; Chen, Huilun; Chen, Ke; Treb+íe, Polonca, and Zaray, Gyula. Comparative toxicity of chlorpyrifos and its oxon derivatives to soil microbial activity by combined methods. 2010 Jan; 78, (3): 319-326.   
Rec #: 670  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: The inhibitory effects of the pesticide Chlorpyrifos (CPF) and its oxon derivative (CPO) on soil microbial activity were evaluated through the measurement of metabolic parameters and the microbial urease enzyme. The thermodynamic parameters related to microbial activity were measured and recorded as powerÇôtime curves. Microbial growth rate constant k, total heat evolution QT, metabolic enthalpy +öHmet, mass specific heat rate JQ/S, microbial biomass C and inhibitory ratio I were calculated. They showed the linear relationship with doses of CPF and CPO. Thereinto, the linear correlations, k versus biomass C and +öHmet versus biomass C, elucidated that k and +öHmet were growth yield dependent. In this work, 20% inhibitory ratio IC20 was obtained with 9.8 ++g gęĆ1 for CPF and 0.37 ++g gęĆ1 CPO, meaning that the acute toxicity of CPO was 26 times that of CPF, since the CPO had more potent toxicity to living organism due to its active functional group. Comparing the change tendency of +öHmet and other parameter, the values almost kept constant when exposure to CPF (&lt;5.0 ++g gęĆ1). It illustrates that individual reacted to stress resulted from environment change by shifting resources from other biological activities (such as reproduction or growth) toward survival to some extent. Urease activity responses in relation to the CPF and CPO exposure were observed and consistent with above thermodynamic parameters. Chlorpyrifos/ Chlorpyrifos-oxon/ Microcalorimetry/ Microbial activity/ Urease activity/ Toxic effect

1453. Wang, G. L.; Liang, B.; Li, F., and Li, S. P. Recent Advances in the Biodegradation of Chlorothalonil. 2011; 63, (5): 450-457.   
Rec #: 71599  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorothalonil (TPN; 2,4,5,6-tetrachloroisophthalonitrile) has been widely used as a broad-spectrum chlorinated aromatic fungicide and its application resulted in global pollution commonly detected in the diverse ecosystems. Recently, microbial degradation of TPN has been studied extensively as an effective and environmental-friendly method to reduce TPN residue levels in the environment. This review summarizes the current knowledge of recent developments in the biodegradation of TPN. Diverse pure culture strains capable of degrading TPN were widely distributed among Proteobacteria and several metabolic pathways of TPN biotransformation were discovered. The two key genes (glutathione S-transferase and chlorothalonil hydrolytic dehalogenase coding gene) responsible for the conversion of TPN and recent findings for future practical bioremediation of TPN-contaminated ecosystem are also discussed.  
Keywords: GLUTATHIONE-S-TRANSFERASE, FUNGICIDE CHLOROTHALONIL,  
ISI Document Delivery No.: 823YL

1454. Wang, H. L.; Xu, S. X.; Hu, J., and Wang, X. D. Effect of Potassium Dihydrogen Phosphate and Bovine Manure Compost on the Degradation of Chlorothalonil in Soil. 2009; 18, (2): 195-204.   
Rec #: 71609  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effects of potassium dihydrogen phosphate (KH2PO4) and bovine manure compost (BMC) on the degradation and metabolism of chlorothalonil were examined in a sandy loam soil under laboratory conditions. In non-sterilized, non-amended soil, chlorothalonil degradation half-life was 8.8 days. However, it was up to 19.0 days in sterilized non-amended soil, suggesting that the degradation rate was about 2-fold slower than that in non-sterilized non-amended soil. Biological mechanisms accounted for 54.7% of chlorothalonil degradation in non-sterilized soil, indicating that the indigenous microorganisms in soil play an important role in the degradation process. In non-sterilized soil, the more acutely toxic metabolite, 4-OH-chlorothalonil (HTI), of chlorothalonil started forming after the second day of incubation. The concentration of HTI reached its maximum level (2.9 g g- 1) at 10 days after treatment, and no further degradation of HTI was observed in the following span of 20 days (10-30 days of incubation). However, the degradation rate of chlorothalonil was decreased substantially by the addition of KH2PO4 with a half-life of 17.5 days. No formation of HTI was observed before 10 days of incubation and no significant difference of the metabolite concentration at the end of experiment was observed between KH2PO4-amended and non-amended treatments, which denoted that the addition of KH2PO4 did not reduce the formation of HTI in the longer incubation course. In BMC-amended soil, the degradation rate was about 1.8 times faster than in non-amended soil. At 30 days of incubation, both chlorothalonil and HTI were degraded to a lower level in BMC-amended soil than in non-amended soil. The application of farm litter is a common fertilizing practice in vegetable fields in China, and thus this practice could not only improve soil fertility but also promote the removal of chlorothalonil and its metabolite HTI to further increase safety in crop rotations.  
Keywords: 4-OH-chlorothalonil (HTI), KH2PO4, Bovine manure compost (BMC)  
ISI Document Delivery No.: 400ZA

1455. Wang, J.; Timchalk, C., and Lin, Y. H. Carbon nanotube-based electrochemical sensor for assay of salivary cholinesterase enzyme activity: An exposure biomarker of organophosphate pesticides and nerve agents. 2008; 42, (7 ): 2688-2693.   
Rec #: 71649  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Certain saliva enzymes may be useful biomarkers for detecting exposures to organophosphate pesticides and chemical nerve agents. In this regard, saliva biomonitoring offers a simple and noninvasive approach for rapidly evaluating those exposures in real time. An electrochemical sensor coupled with a microflow injection system was developed for a simple, rapid, and sensitive characterization of cholinesterase (ChE) enzyme activities in rat saliva. The electrochemical sensor is based on a carbon nanotube (CNT)-modified screen-printed carbon electrode (SPE), which is integrated into a flow cell. Because of the excellent electrocatalytic activity of the CNTs, the sensor can detect electroactive species that are produced from enzymatic reactions with extremely high sensitivity and at low potentials. The electrochemical properties of acetylcholinesterase (AChE) enzymatic products were studied using a CNT-modified SPE, and the operation parameters such as the applied potential and substrate concentration were optimized to achieve the best performance. The AChE enzyme activity was further investigated using the CNT-based electrochemical sensor with commercially available purified AChE and ChE in saliva obtained from nave rats. It is found that the calibration curve is linear over a wide range of AChE concentrations from 5 pM to 0.5 nM, and the sensor is very sensitive with the detection limit down to 2 pM. The dynamics of the ChE enzyme activity in saliva with organophosphate pesticides was further studied using this sensor. The results show that the senor can be used to characterize salivary enzyme activity and to detect the exposure to organophosphate compounds. **This new CNT-based electrochemical sensor thus provides a sensitive and quantitative tool for noninvasive biomonitoring of the exposure to organophosphate pesticides and nerve agents.**  
Keywords: CHEMICAL WARFARE NERVE, ACETYLCHOLINESTERASE ACTIVITY, FLUORESCENCE  
ISI Document Delivery No.: 281JN

1456. Wang, Li; Wen, Yang; Guo, Xinqing; Wang, Guangli; Li, Shunpeng; Jiang, Jiandong, and Jiang, Jiandong. Degradation of Methamidophos by Hyphomicrobium Species Map-1 and the Biochemical Degradation Pathway. 2010 Jul; 21, (4): 513-523.   
Rec #: 47819  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: **Methamidophos** is one of the most widely used organophosphorus insecticides usually detectable in the environment. A facultative methylotroph, Hyphomicrobium sp. MAP-1, capable of high efficiently degrading methamidophos, was isolated from methamidophos-contaminated soil in China. It was found that the addition of methanol significantly promoted the growth of strain MAP-1 and enhanced its degradation of methamidophos. Further, this strain could utilize methamidophos as its sole carbon, nitrogen and phosphorus source for growth and could completely degrade 3,000mgl super(-1) methamidophos in 84h under optimal conditions (pH 7.0, 30 degree C). The enzyme responsible for methamidophos degradation was mainly located on the cell inner membrane (90.4%). During methamidophos degradation, three metabolites were detected and identified based on tandem mass spectrometry (MS/MS) and gas chromatography-mass spectrometry (GC-MS) analysis. Using this information, a biochemical degradation pathway of methamidophos by Hyphomicrobium sp. MAP-1 was proposed for the first time. Methamidophos is first cleaved at the P-N bond to form O,S-dimethyl hydrogen thiophosphate and NH sub(3). Subsequently, O,S-dimethyl hydrogen thiophosphate is hydrolyzed at the P-O bond to release -OCH sub(3) and form S-methyl dihydrogen thiophosphate. O,S-dimethyl hydrogen thiophosphate can also be hydrolyzed at the P-S bond to release -SCH sub(3) and form methyl dihydrogen phosphate. Finally, S-methyl dihydrogen thiophosphate and methyl dihydrogen phosphate are likely transformed into phosphoric acid.  
Keywords: A 01380:Plant Protection, Fungicides & Seed Treatments  
Keywords: Biodegradation  
Keywords: methamidophos  
Keywords: Methanol  
Keywords: Phosphorus  
Keywords: Enzymes  
Keywords: Metabolites  
Keywords: Hydrogen  
Keywords: Hyphomicrobium  
Keywords: Mass spectroscopy  
Keywords: Environmental Studies  
Keywords: Soil  
Keywords: Carbon  
Keywords: Insecticides  
Keywords: Phosphate  
Keywords: Gas chromatography  
Keywords: Thiophosphate  
Keywords: Inner membranes  
Keywords: Pesticides  
Keywords: Microbiology Abstracts A: Industrial & Applied Microbiology; Biotechnology and Bioengineering Abstracts  
Keywords: pH effects  
Keywords: phosphoric acid  
Keywords: Nitrogen  
Date revised - 2010-02-01  
Language of summary - English  
Pages - 513-523  
ProQuest ID - 810789871  
SubjectsTermNotLitGenreText - Biodegradation; methamidophos; Methanol; Phosphorus; Enzymes; Metabolites; Hydrogen; Mass spectroscopy; Soil; Carbon; Insecticides; Phosphate; Gas chromatography; Thiophosphate; Inner membranes; Pesticides; pH effects; phosphoric acid; Nitrogen; Hyphomicrobium  
Last updated - 2011-11-03  
Corporate institution author - Wang, Li; Wen, Yang; Guo, Xinqing; Wang, Guangli; Li, Shunpeng; Jiang, Jiandong  
DOI - OB-c9a8e414-d441-4acd-9c08mfgefd108; 13094097; 0923-9820; 1572-9729 English

1457. Wang, Ligang; Liang, Yongchao; Jiang, Xin, and Jiang, Xin. Analysis of Eight Organophosphorus Pesticide Residues in Fresh Vegetables Retailed in Agricultural Product Markets of Nanjing, China. 2008 Oct; 81, (4): 377-382.   
Rec #: 49119  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A method to effectively remove pigments in fresh vegetables using activated carbon followed cleanup through solid phase extraction (SPE) cartridge to further reduce matrix interference and contamination, was established to determine eight organophosphorous pesticides (OPPs) by gas chromatography (GC) with nitrogen-phosphorus detection (NPD) in this study, and it has been successfully applied for the determination of eight OPPs in various fresh vegetables with the recoveries ranging from 61.8% to 107%. To evaluate eight OPPs residue level, some fresh vegetables retailed at three agricultural product markets (APM) of Nanjing in China were detected, the results showed that phorate in Shanghai green (0.0257 mu gg super(-1)) and Chinese cabbage (0.0398 mu gg super(-1)), dimethoate in Shanghai green (0.0466-0.0810 mu gg super(âˆ’ ; 1)), Chinese cabbage (0.077 mu gg super(-1)), and spinach (0.118-0.124 mu gg super(-1 )), methyl-parathion in Shanghai green (0.0903 mu gg super(-1)), Chinese cabbage (0.157 mu gg super(-1)), and spinach (0.0924 mu gg super(-1)), malathion in Shanghai green (0.0342-0.0526 mu gg super(âˆ’ ; 1)), chorpyrifos in spinach (0.106-0.204 mu gg super(-1 )), and Chinese cabbage (0.149 mu gg super(-1)), chlorfenvinfos in carrot (0.094-0.131 mu gg super(-1 )), were found. However, fonofos and fenthion were not detected in all the collected vegetable samples.  
Keywords: Vegetables  
Keywords: Contamination  
Keywords: phorate  
Keywords: Pesticide residues  
Keywords: China, People's Rep., Jiangsu Prov., Nanjing  
Keywords: Daucus  
Keywords: Carbon (activated)  
Keywords: EE 10:General Environmental Engineering  
Keywords: Malathion  
Keywords: Environmental Studies  
Keywords: Gas chromatography  
Keywords: Pigments  
Keywords: Spinacia oleracea  
Keywords: X 24330:Agrochemicals  
Keywords: Environment Abstracts; Environmental Engineering Abstracts; Toxicology Abstracts  
Keywords: Pesticides (organophosphorus)  
Keywords: Activated carbon  
Keywords: Agricultural products  
Keywords: Fenthion  
Keywords: Brassica  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: China, People's Rep., Shanghai  
Keywords: China, People's Rep.  
Keywords: Dimethoate  
Keywords: dimethoate  
Date revised - 2010-02-01  
Language of summary - English  
Location - China, People's Rep., Jiangsu Prov., Nanjing; China, People's Rep.; China, People's Rep., Shanghai  
Pages - 377-382  
ProQuest ID - 809589433  
SubjectsTermNotLitGenreText - Pesticides (organophosphorus); Vegetables; Contamination; Gas chromatography; phorate; Pigments; Agricultural products; Carbon (activated); Dimethoate; Fenthion; Malathion; Pesticide residues; Activated carbon; dimethoate; Daucus; Spinacia oleracea; Brassica; China, People's Rep., Jiangsu Prov., Nanjing; China, People's Rep.; China, People's Rep., Shanghai  
Last updated - 2011-10-24  
Corporate institution author - Wang, Ligang; Liang, Yongchao; Jiang, Xin  
DOI - OB-MD-0010968728; 11766985; 0007-4861; 1432-0800 English

1458. Wang, Na; Yi, Li; Shi, Lili; Kong, Deyang; Cai, Daoji; Wang, Donghua; Shan, Zhengjun, and Wang, Na. Pollution Level and Human Health Risk Assessment of Some Pesticides and Polychlorinated Biphenyls in Nantong of Southeast China. 2012 Oct 1; 24, (10): 1854-1860.   
Rec #: 42539  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Food consumption is one of the key exposure routes of humans to contaminants. This article evaluated the residue levels of 51 pesticides and 16 polychlorinated biphenyls (PCBs) in selected fish and food items which were commonly consumed in the Nantong area of Jiangsu Province, Southeast China. The 51 pesticides and 16 PCBs were analyzed by highly sensitive gas chromatographytandem mass spectrometry (GC-MS/MS). The results showed that organochlorine pesticides such as dichlorodiphenyltrichloroethanes (DDTs), hexachlorocyclohexanes (HCHs), hexachlorobenzene (HCB) and mirex and other pesticides including chlorpyrifos, pyrethroid pesticides, metolachlor, pyridaben and trifluralin were frequently detected in the samples, which was consistent with the accumulation level and characteristics of these toxic chemicals in human adipose tissue of people living in Nantong. Meanwhile, correlation of the residue level of toxic chemicals with their physical chemical properties and historic use pattern in Nantong area was observed. Combined with dietary survey results at the same sampling locations, human health risk assessment of ingestion through the dietary route was performed. The results suggested that the non-cancer risks of the chemicals investigated can be considered negligible in the Nantong area, however, the cancer risks from lifetime dietary exposure to DDTs and HCB have exceeded the acceptable levels.  
Keywords: Risk assessment  
Keywords: Chemicals  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Mass spectroscopy  
Keywords: China, People's Rep., Jiangsu Prov.  
Keywords: Environmental Studies  
Keywords: Food consumption  
Keywords: H 5000:Pesticides  
Keywords: R2 23060:Medical and environmental health  
Keywords: Sampling  
Keywords: Pyrethroids  
Keywords: X 24330:Agrochemicals  
Keywords: PCB compounds  
Keywords: PCB  
Keywords: Metolachlor  
Keywords: Diets  
Keywords: Residues  
Keywords: pyridaben  
Keywords: Pesticides (organochlorine)  
Keywords: Cancer  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Pollution Abstracts; Risk Abstracts; Health & Safety Science Abstracts; Toxicology Abstracts; Environment Abstracts  
Keywords: Food selection  
Keywords: Chlorpyrifos  
Keywords: Health risks  
Keywords: polychlorinated biphenyls  
Keywords: Pesticides  
Keywords: DDT  
Keywords: Trifluralin  
Keywords: Adipose tissue  
Keywords: Hexachlorocyclohexane  
Keywords: Contaminants  
Keywords: Hexachlorobenzene  
Date revised - 2013-01-01  
Language of summary - English  
Location - China, People's Rep., Jiangsu Prov.  
Pages - 1854-1860  
ProQuest ID - 1270229947  
SubjectsTermNotLitGenreText - Metolachlor; Risk assessment; pyridaben; Pesticides (organochlorine); Mass spectroscopy; Cancer; Food selection; Chlorpyrifos; Food consumption; polychlorinated biphenyls; DDT; Adipose tissue; Trifluralin; Hexachlorocyclohexane; Sampling; Pyrethroids; Contaminants; PCB; Hexachlorobenzene; Chemicals; Diets; Health risks; Residues; Pesticides; PCB compounds; China, People's Rep., Jiangsu Prov.  
Last updated - 2013-02-05  
Corporate institution author - Wang, Na; Yi, Li; Shi, Lili; Kong, Deyang; Cai, Daoji; Wang, Donghua; Shan, Zhengjun  
DOI - OB-c28f2ba0-6194-4862-b900-36551cc510ef; 17311173; 1001-0742 English

1459. Wang, P.; Tian, Y.; Wang, X. J.; Gao, Y.; Shi, R.; Wang, G. Q.; Hu, G. H., and Shen, X. M. Organophosphate pesticide exposure and perinatal outcomes in Shanghai, China. 2012; 42, 100-104.   
Rec #: 71709  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Although pesticide use is widespread in China, little is known about levels of exposure to organophosphate pesticides in the population and its potential adverse health effects. We investigated levels of organophosphate exposure in pregnant women and the association between organophosphate exposure and perinatal outcomes in Shanghai, China, by enrolling 187 healthy pregnant women between September 2006 and January 2007. Pesticide exposure was assessed by a questionnaire administered to the mothers in the hospital after delivery as well as by analyses of maternal urinary nonspecific metabolites of organophosphate pesticides (dimethyl and diethyl phosphates). Information on birth weight and length was collected from medical records. Geometric means of metabolites were 25.75 mu g/L for dimethylphosphate (DMP); 11.99 mu g/L for dimethylthiophosphate (DMTP); 9.03 mu g/L for diethylphosphate (DEP); and 9.45 mu g/L for diethyldithiophosphate (DETP). We found that a log unit increase in urinary DEP was associated with a decrease in gestational duration in girls by 1.79 weeks. [beta(adjusted) = 1.79 weeks per log(10) unit increase; 95% confidence interval (CI), -2.82 to -0.76: p = 0.001]. These data suggest that high pesticide level might adversely affect duration of gestation although this association was not present among boys. No associations for any of the organophosphate exposure measures were present for birth weight and length, suggesting that organophosphate pesticides may have no effects on fetal growth. Given that maternal urine pesticide levels in Shanghai were much higher than those reported in developed countries, more studies on the effects of in utero organophosphate exposure on fetal growth and child neurodevelopment are warranted. (C) 2011 Elsevier Ltd. All rights reserved.  
Keywords: Birth outcome, Birth weight, Gestational age, Organophosphate pesticide,  
ISI Document Delivery No.: 931NL

1460. Wang, P. P.; Dai, W. J.; Ge, L.; Yan, M.; Ge, S. G., and Yu, J. H. Visible light photoelectrochemical sensor based on Au nanoparticles and molecularly imprinted poly(o-phenylenediamine)-modified TiO(2) nanotubes for specific and sensitive detection chlorpyrifos. 2013; 138, (3): 939-945.   
Rec #: 71719  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A molecular imprinted polymer thin film for photoelectrochemical (PEC) sensing of chlorpyrifos molecules was first constructed by electropolymerizing the o-phenylenediamine (o-PD) monomer and chlorpyrifos template molecule on gold nanoparticles-modified titanium dioxide nanotubes. The resulting PEC sensors were characterized by scanning electron microscopy, ultraviolet (UV)-vis spectra and electrochemical impedance spectra. Clearly, the imprinted film showed high selectivity to chlorpyrifos in our case. Under visible light irradiation, poly(o-phenylenediamine) (PoPD) can generate the photoelectric transition from the highest occupied molecular orbital (HOMO) to the lowest unoccupied molecular orbital (LUMO), delivering the excited electrons to the AuNPs, and then to the conduction band (CB) of the titanium dioxide nanotubes (TiO(2) NTs). Simultaneously, it is believed that a positively charged hole (h(+)) of PoPD that took part in the oxidation process was consumed to promote the amplification of photocurrent response. Under the optimal experimental conditions, the photocurrents were proportional to the concentrations of chlorpyrifos ranging from 0.05 to 10 mu mol L(-1) with the detection limit of 0.96 nmol L(-1). The PEC sensor had an excellent specificity and could be successfully applied to the detection of reduced chlorpyrifos in green vegetables, indicating a promising application in PEC sensing.  
Keywords: PHOTOCATALYSIS, PESTICIDES, FILMS, NANOSTRUCTURES, DECOMPOSITION,  
ISI Document Delivery No.: 062TD

1461. Wang, Q. H.; Yang, J.; Wu, J. Y.; Zhang, G. A., and Li, R. H. Phytoremediation of Chlorpyrifos in Aquatic Environment by Three Emergent Macrophytes. Beijing Research & Development Center for Grass and Environment, Beijing Academy of Agriculture and Forestry Sciences, Beijing 100097, China, Journal of Agro-Environment Science//: SOIL; 2010; 29, (4): 769-772(CHI) (ENG ABS).   
Rec #: 2660  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

1462. Wang, Shenghui; Zhang, Chen; Yan, Yanchun, and Wang, Shenghui. Biodegradation of Methyl Parathion and P-Nitrophenol by a Newly Isolated Agrobacterium Sp. Strain Yw12. 2012 Feb; 23, (1): 107-116.   
Rec #: 46879  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Strain Yw12, isolated from activated sludge, could completely degrade and utilize methyl parathion as the sole carbon, phosphorus and energy sources for growth in the basic salt media. It could also completely degrade and utilize p-nitrophenol as the sole carbon and energy sources for growth in the minimal salt media. Phenotypic features, physiological and biochemical characteristics, and phylogenetic analysis of 16S rRNA sequence showed that this strain belongs to the genus of Agrobacterium sp. Response surface methodology was used to optimize degradation conditions. Under its optimal degradation conditions, 50 mg l super(-1) MP was completely degraded within 2 h by strain Yw12 and the degradation product PNP was also completely degraded within 6 h. Furthermore, strain Yw12 could also degrade phoxim, methamidophos, chlorpyrifos, carbofuran, deltamethrin and atrazine when provided as the sole carbon and energy sources. Enzymatic analysis revealed that the MP degrading enzyme of strain Yw12 is an intracellular enzyme and is expressed constitutively. These results indicated that strain Yw12 might be used as a potential and effective organophosphate pesticides degrader for bioremediation of contaminated sites.  
Keywords: Environmental Engineering Abstracts (EN); CSA / ASCE Civil Engineering Abstracts (CE)  
Date revised - 2012-06-01  
Language of summary - English  
Pages - 107-116  
ProQuest ID - 954649339  
Last updated - 2012-12-05  
British nursing index edition - Biodegradation [Biodegradation]. Vol. 23, no. 1, pp. 107-116. Feb 2012.  
Corporate institution author - Wang, Shenghui; Zhang, Chen; Yan, Yanchun  
DOI - 57e5dd8f-0505-44b5-9b0amfgefd101; 16398953; 0923-9820; 1572-9729 English

1463. Wang, Shumei; Wang, Zhilun; Zhang, Yibei; Wang, Jiang , and Guo, Rong. Pesticide residues in market foods in Shaanxi Province of China in 2010. 2013 Jun 1-; 138, (2Çô3): 2016-2025.   
Rec #: 5820  
Keywords: FOOD  
Notes: Chemical of Concern: CPY   
Abstract: The aim of this study was to investigate the pesticide residues in market vegetables in Shaanxi Province of China. The concentrations of 33 pesticides were determined by gas chromatography (GC) in 285 samples. Ten organophosphorus pesticides (OPs) were found in concentrations ranging from 0.004 to 0.257 mg/kg. The mean levels of omethoate, phorate, chlorpyrifos, methidathion, ethoprophos in vegetables exceeded the maximum residue limits (MRLs) allowed by the Ministry of Health, of China. Other detectable OP pesticide residues levels were below their MRLs. Dicofol were detectable in green pepper and chives samples. Five pyrethroid pesticides (PYRs) were detectable in vegetable samples respectively. The results provide useful information on the current contamination status of a key agricultural area in China, and point to the need for urgent action to control the excessive use of some chemicals. Vegetables/ Pesticide/ Residues/ Analytical performance criteria/ Food safety

1464. Wang, X. G.; Revskaya, E.; Bryan, R. A.; Strickler, H. D.; Burk, R. D.; Casadevall, A., and Dadachova, E. Treating Cancer as an Infectious Disease--Viral Antigens as Novel Targets for Treatment and Potential Prevention of Tumors of Viral Etiology.   
Rec #: 51399  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: BACKGROUND: Nearly 20% of human cancers worldwide have an infectious etiology with the most prominent examples being hepatitis B and C virus-associated hepatocellular carcinoma and human papilloma virus-associated cervical cancer. There is an urgent need to find new approaches to treatment and prevention of virus-associated cancers.  
ABSTRACT: METHODOLOGY/PRINCIPAL FINDINGS: Viral antigens have not been previously considered as targets for treatment or prevention of virus-associated cancers. We hypothesized that it was possible to treat experimental HPV16-associated cervical cancer (CC) and Hepatitis B-associated hepatocellular carcinoma (HCC) by targeting viral antigens expressed on cancer cells with radiolabeled antibodies to viral antigens. Treatment of experimental CC and HCC tumors with (188)Re-labeled mAbs to E6 and HBx viral proteins, respectively, resulted in significant and dose-dependent retardation of tumor growth in comparison with untreated mice or mice treated with unlabeled antibodies.  
ABSTRACT: CONCLUSIONS/SIGNIFICANCE: This strategy is fundamentally different from the prior uses of radioimmunotherapy in oncology, which targeted tumor-associated human antigens and promises increased specificity and minimal toxicity of treatment. It also raises an exciting possibility to prevent virus-associated cancers in chronically infected patients by eliminating cells infected with oncogenic viruses before they transform into cancer.  
MESH HEADINGS: Animals  
MESH HEADINGS: Antigens, Viral/chemistry  
MESH HEADINGS: Carcinoma, Hepatocellular/virology  
MESH HEADINGS: Cell Line, Tumor  
MESH HEADINGS: Female  
MESH HEADINGS: Hepatitis/complications  
MESH HEADINGS: Humans  
MESH HEADINGS: Medical Oncology/methods  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Nude  
MESH HEADINGS: Models, Biological  
MESH HEADINGS: Neoplasms/\*pathology/\*virology  
MESH HEADINGS: Papillomaviridae/metabolism  
MESH HEADINGS: Radioimmunotherapy/methods  
MESH HEADINGS: Uterine Cervical Neoplasms/virology eng

1465. WANG, Xu; LI, Jilong; XING, Houjuan, and XU, Shiwen. Review of Toxicology of Atrazine and Chlorpyrifos on Fish. 2011 Dec; 18, (4): 88-92.   
Rec #: 1150  
Keywords: REVIEW  
Notes: Chemical of Concern: CPY  
Abstract: Atrazine (ATR) and chlorpyrifos (CPF) are widely used in agriculture, but have resulted in a series of toxicological and environmental problems. They were heavily used which have potential threat to fish and rodents. Several recent laboratory studies have shown ATR and CPF could lead to oxidative damage, immunocyte reduced and inhibit acetylcholinesterase (AChE). In order to clarify the toxicity of ATR and CPF, this paper summarized the adverse effects of ATR and CPF on reproduction, nerve and immune systems in fish. atrazine/ chlorpyrifos/ toxicity

1466. Wang, Y.; Dawson, V. L., and Dawson, T. M. Poly(Adp-Ribose) Signals to Mitochondrial Aif: a Key Event in Parthanatos.   
Rec #: 50799  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Biol Cell. 2003 Dec;95(9):635-44 (medline /14720466)  
COMMENTS: Cites: Am J Physiol Cell Physiol. 2003 Dec;285(6):C1483-93 (medline /12930708)  
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COMMENTS: Cites: Science. 2002 Jul 12;297(5579):259-63 (medline /12114629)  
COMMENTS: Cites: Nat Struct Biol. 2002 Jun;9(6):442-6 (medline /11967568)  
COMMENTS: Cites: J Neurosci. 2000 Nov 1;20(21):8005-11 (medline /11050121)  
COMMENTS: Cites: Stroke. 2002 Apr;33(4):1101-6 (medline /11935067)  
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COMMENTS: Cites: J Biol Chem. 2001 May 11;276(19):16391-8 (medline /11278689)  
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COMMENTS: Cites: J Biol Chem. 2005 Dec 9;280(49):40632-41 (medline /16216885)  
COMMENTS: Cites: Biochem Biophys Res Commun. 2005 Dec 16;338(2):1241-7 (medline /16259951)  
COMMENTS: Cites: J Neurosci. 2005 Nov 2;25(44):10262-72 (medline /16267234)  
COMMENTS: Cites: Cell Death Differ. 2005 Nov;12 Suppl 2:1463-7 (medline /16247491)  
COMMENTS: Cites: Pharmacol Res. 2005 Jul;52(1):15-24 (medline /15911330)  
COMMENTS: Cites: Pharmacol Res. 2005 Jul;52(1):5-14 (medline /15911329)  
COMMENTS: Cites: EMBO J. 2005 Apr 6;24(7):1375-86 (medline /15775970)  
COMMENTS: Cites: Cell Mol Life Sci. 2005 Apr;62(7-8):760-8 (medline /15868401)  
COMMENTS: Cites: Cell Mol Life Sci. 2005 Apr;62(7-8):739-50 (medline /15868399)  
COMMENTS: Cites: Mol Cell Biol. 2005 Dec;25(23):10261-72 (medline /16287843)  
COMMENTS: Cites: J Am Soc Nephrol. 2005 Mar;16(3):712-9 (medline /15677308)  
COMMENTS: Cites: J Neurosci. 2005 Feb 9;25(6):1324-34 (medline /15703386)  
COMMENTS: Cites: J Biol Chem. 2005 Feb 25;280(8):6447-54 (medline /15590628)  
COMMENTS: Cites: J Pharmacol Exp Ther. 2005 Feb;312(2):449-57 (medline /15452194)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2004 Dec 21;101(51):17699-704 (medline /15591342)  
COMMENTS: Cites: Mol Cell Biol. 2005 Jan;25(1):294-302 (medline /15601850)  
COMMENTS: Cites: EMBO J. 2004 Nov 24;23(23):4679-89 (medline /15526035)  
COMMENTS: Cites: J Neurosci. 2004 Dec 1;24(48):10963-73 (medline /15574746)  
COMMENTS: Cites: Curr Opin Cell Biol. 2004 Dec;16(6):663-9 (medline /15530778)  
COMMENTS: Cites: Biochem J. 1999 Sep 1;342 ( Pt 2):249-68 (medline /10455009)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1999 May 11;96(10):5774-9 (medline /10318960)  
COMMENTS: Cites: J Cereb Blood Flow Metab. 1997 Nov;17(11):1143-51 (medline /9390645)  
COMMENTS: Cites: Cytogenet Cell Genet. 1999;85(3-4):269-70 (medline /10449915)  
COMMENTS: Cites: Trends Pharmacol Sci. 1999 Apr;20(4):171-81 (medline /10322503)  
COMMENTS: Cites: Exp Cell Res. 1999 Feb 1;246(2):395-8 (medline /9925755)  
COMMENTS: Cites: Nature. 1999 Feb 4;397(6718):441-6 (medline /9989411)  
COMMENTS: Cites: Nat Med. 1997 Oct;3(10):1089-95 (medline /9334719)  
COMMENTS: Cites: J Biol Chem. 1997 May 2;272(18):11895-901 (medline /9115250)  
COMMENTS: Cites: Cancer Res. 1995 Sep 1;55(17):3697-701 (medline /7641178)  
COMMENTS: Cites: Science. 1994 Feb 4;263(5147):687-9 (medline /8080500)  
COMMENTS: Cites: Mol Cell Biochem. 1993 May 26;122(2):171-93 (medline /8232248)  
COMMENTS: Cites: J Biol Chem. 1984 Apr 25;259(8):4770-6 (medline /6325408)  
COMMENTS: Cites: J Bioenerg Biomembr. 2004 Aug;36(4):287-94 (medline /15377859)  
COMMENTS: Cites: Oncogene. 2004 Aug 19;23(37):6282-91 (medline /15286713)  
COMMENTS: Cites: Mol Cell Biol. 2004 Aug;24(16):7163-78 (medline /15282315)  
COMMENTS: Cites: Exp Cell Res. 2004 Jul 15;297(2):521-32 (medline /15212953)  
COMMENTS: Cites: Trends Pharmacol Sci. 2004 May;25(5):259-64 (medline /15120492)  
COMMENTS: Cites: J Cereb Blood Flow Metab. 2004 Apr;24(4):458-66 (medline /15087715)  
COMMENTS: Cites: Int J Mol Med. 2004 Mar;13(3):373-82 (medline /14767566)  
COMMENTS: Cites: Diabetes. 2004 Feb;53 Suppl 1:S12-8 (medline /14749260)  
ABSTRACT: Poly(ADP-ribose) polymerase-1 (PARP-1) plays a pivotal role in multiple neurologic diseases by mediating caspase-independent cell death, which has recently been designated parthanatos to distinguish it from other forms of cell death such as apoptosis, necrosis and autophagy. Mitochondrial apoptosis-inducing factor (AIF) release and translocation to the nucleus is the commitment point for parthanatos. This process involves a pathogenic role of poly(ADP-ribose) (PAR) polymer. It generates in the nucleus and translocates to the mitochondria to mediate AIF release following lethal PARP-1 activation. PAR polymer itself is toxic to cells. Thus, PAR polymer signaling to mitochondrial AIF is the key event initiating the deadly crosstalk between the nucleus and the mitochondria in parthanatos. Targeting PAR-mediated AIF release could be a potential approach for the therapy of neurologic disorders.  
MESH HEADINGS: Animals  
MESH HEADINGS: Apoptosis Inducing Factor/\*metabolism  
MESH HEADINGS: \*Cell Death  
MESH HEADINGS: Cell Nucleus/\*metabolism  
MESH HEADINGS: Humans  
MESH HEADINGS: Mitochondria/\*metabolism  
MESH HEADINGS: Poly Adenosine Diphosphate Ribose/\*metabolism  
MESH HEADINGS: Poly(ADP-ribose) Polymerases/metabolism  
MESH HEADINGS: \*Signal Transduction eng

1467. Wang, Z. W.; Li, F. L.; He, A. F.; Tang, Y. L., and Qiu, Y. P. The Distribution and Degradation of Chlorthalonil and Chlorpyrifos in Tomatoes in Greenhouse. College of Biological and Environmental Engineering, Zhejiang University of Technology, Hangzhou 310032, China,//: SOIL; 2011; 30, (6): 1076-1081(CHI) (ENG ABS).   
Rec #: 2640  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY,CTN)  
Notes: Chemical of Concern: CPY,CTN

1468. Wang, Zhuang and Huang, Li Ping. Mixture Toxicity Effects of Organic Pollutants. 2008.  
Rec #: 51889  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Mixtures of organic pollutants frequently expose in the realistic environment. Ecological toxicologists historically have assessed the risks associated with exposure to single chemicals in laboratory, including acute and chronic toxicity test. However, based on the experiment for single chemicals, it is difficult to reflect the ecological behavior and environmental harmfulness. Increasing awareness of the extent of mixture contamination, therefore, has brought into sharp focus on developing computational models for quantificationally predicting the toxicity of chemical mixtures. This thesis studied whether the observed toxicity of mixture composed of components with different dose-level or toxicity degree deviate the conception of concentration addition (CA) and independent action (IA). The **single toxicity of Chlorpyrifos, Diazinon and Malathion and joint toxicity of ternary mixtures of organophosphate insecticides to photobacterium phosphoreum were determined. The result showed** that CA and IA models produced the deviations while synergistic/antagonistic, dose level-dependent and dose ratio-dependent effects occurred in this mixture with the result of significance testing. When all the mixtures mixed the chemicals in their EC1 and EC50, the overall effects of the mixture mainly performed synergistic. However, since the dose level of mixture varied and the single toxicity of mixture components was different, antagonistic also occured. Based on the analysis, the relationship of mixture components was quantified, and the transformation between antagonistic and synergistic was demonstrated. Because it is difficult to predict these complex modes of action for mixtures using CA and IA model, this study verified an effective toxicity prediction approach for complex mixtures under the condition of unknown MOA. Mixture toxicities were determined for 12 industrial organic chemicals bearing four different modes of toxic actions (MOAs) to Photobacterium phosphoreum in order to compare the predictability of the integrated fuzzy concentration addition-independent action model (INFCIM) with two-stage prediction (TSP) model. Three mixtures were designed, with the first and second mixtures based on the ratios at the 1% and 50% effect concentration (EC1 and EC50) of each component, respectively, and the third mixture equimolar ratio of individual components. For the EC1, EC50 and equimolar ratio, prediction errors from the INFCIM at the 50% combination effects in all the validation sets were 0.3%, 6% and 0.6%, respectively. While for the TSP model, the corresponding errors were 2.8%, 19% and 24% respectively. Thus the INFCIM performed better than the TSP model. INFCIM calculated two weight coefficients from molecular structural descriptors, which weigh the relationship between concentration addition (CA) and independent action (IA) through fuzzy membership functions. Thus MOAs are not pre-requisitions for mixture toxicity prediction by the INFCIM approach, implying the practicability of this method in risk assessment of mixtures.  
Keywords: 0768:Environmental science  
Keywords: Health and environmental sciences  
Keywords: (UMI)AAIH264348  
2008  
Wang, Zhuang  
Chinese  
n/a  
(UMI)AAIH264348  
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1026700358  
70561192  
169031  
2713295121  
H264348  
0768: Environmental science  
Health and environmental sciences  
2012-07-18 ZH

1469. Ward, T. R. and Mundy, W. R. Organophosphorus Compounds Preferentially Affect Second Messenger Systems Coupled to M2/M4 Receptors in Rat Frontal Cortex. 1996; 39, (1): 49-55.   
Rec #: 1550  
Keywords: IN VITRO  
Call Number: NO IN VITRO (CPYO,MLO)  
Notes: Chemical of Concern: CPYO,MLO

1470. Warne, M. St. J.; Westbury, A. M., and Sunderam, R. I. M. A Compilation of Data on the Toxicity of Chemicals to Species in Australasia. Part 1: Pesticides. M.St.J.Warne, Ecotoxicology Section, Environment Protection Authority of New South Wales, EPA/UTS Centre for Ecotoxicology, University of Technology Sydney, Gore Hill, 2065, Australia//: 1998; 4, (2): 93-144.   
Rec #: 1630  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (CPY), NO REVIEW (CPY)  
Notes: Chemical of Concern: CPY

1471. Warner, R. W. Water Pollution: Freshwater Macroinvertebrates. 1974; 46, (6): 1341-1350.   
Rec #: 2020  
Keywords: REVIEW  
Call Number: NO REVIEW (CPY)  
Notes: EcoReference No.: 65094  
Chemical of Concern: CPY

1472. Wason, S. C.; Smith, T. J.; Perry, M. J., and Levy, J. I. Using Physiologically-Based Pharmacokinetic Models to Incorporate Chemical and Non-Chemical Stressors into Cumulative Risk Assessment: A Case Study of Pesticide Exposures. 2012; 9, (5): 1971-1983.   
Rec #: 71759  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Cumulative risk assessment has been proposed as an approach to evaluate the health risks associated with simultaneous exposure to multiple chemical and non-chemical stressors. Physiologically based pharmacokinetic/pharmacodynamic (PBPK/PD) models can allow for the inclusion and evaluation of multiple stressors, including non-chemical stressors, but studies have not leveraged PBPK/PD models to jointly consider these disparate exposures in a cumulative risk context. In this study, we focused on exposures to organophosphate (OP) pesticides for children in urban low-income environments, where these children would be simultaneously exposed to other pesticides (including pyrethroids) and non-chemical stressors that may modify the effects of these exposures (including diet). We developed a methodological framework to evaluate chemical and non-chemical stressor impacts on OPs, utilizing an existing PBPK/PD model for chlorpyrifos. We evaluated population-specific stressors that would influence OP doses or acetylcholinesterase (AChE) inhibition, the relevant PD outcome. We incorporated the impact of simultaneous exposure to pyrethroids and dietary factors on OP dose through the compartments of metabolism and PD outcome within the PBPK model, and simulated combinations of stressors across multiple exposure ranges and potential body weights. Our analyses demonstrated that both chemical and non-chemical stressors can influence the health implications of OP exposures, with up to 5-fold variability in AChE inhibition across combinations of stressor values for a given OP dose. We demonstrate an approach for modeling OP risks in the presence of other population-specific environmental stressors, providing insight about co-exposures and variability factors that most impact OP health risks and contribute to children's cumulative health risk from pesticides. More generally, this framework can be used to inform cumulative risk assessment for any compound impacted by chemical and non-chemical stressors through metabolism or PD outcomes.  
Keywords: cumulative exposure, risk assessment, pesticides, health disparities,  
ISI Document Delivery No.: 948ZJ

1473. Wasswa, J. ; Nkedi-Kizza, P., and Kiremire, B. T. Characterization of Sorption of Endosulfan Isomers and Chlorpyrifos on Container Walls Using Mixed Solvent Systems. 2010; 58, (13): 7902-7907.   
Rec #: 71769  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The reliability of sorption data for organic contaminants with low water solubility has generated great concern because of the variability in the literature of the soil water partition coefficient (K(OC)) values for these compounds. In particular, sorption on container walls in aqueous systems when measuring the sorption coefficient, K(D) (used to calculate K(OC) values), for strongly hydrophobic compounds (SHOCs) is a potential source for discrepancies in the K(OC) values. In this study, we eliminated sorption on container walls when measuring sorption of three halogenated compounds (alpha-endosulfan, beta-endosulfan, and chlorpyrifos) using mixed solvents. Various mixtures of methanol and water were used. Sorption experiments were designed using polytetrafluoroethylene (Teflon)-lined centrifuge tubes and a high-performance liquid chromatography (HPLC) syringe. Solution sample analysis was performed using HPLC equipped with a UV diode array detector and C-18 column at a wavelength of 214 nm, with acetonitrile/water (80:20, v/v) as the mobile phase. The solvophobic model was used to calculate the percent recovery (% R(M)) in water of the test compounds. Our results show that there is considerable sorption on container walls for the three chemicals at volume fractions of methanol (f(c) < 0.4). The data show that, in aqueous systems, percent recoveries for alpha-endosulfan, beta-endosulfan, and chlorpyrifos are 48, 45, and 61, respectively. Thus, to generate reliable sorption data for alpha-endosulfan, beta-endosulfan, and chlorpyrifos and other SHOCs, experiments may be conducted using Teflon-lined centrifuge tubes and HPLC syringes at volume fractions of methanol (f(c) >= 0.5).  
Keywords: Solvophobic model, aqueous systems, percent recovery, Teflon-lined  
ISI Document Delivery No.: 621JX

1474. Watkins, Christopher B. and Nock, Jacqueline F. Rapid 1-methylcyclopropene (1-MCP) treatment and delayed controlled atmosphere storage of apples. 2012 Jul; 69, (0): 24-31.   
Rec #: 3740  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: The quality of Ç˙McIntoshÇÖ and Ç˙EmpireÇÖ apples [Malus +ů sylvestris (L.) Mill. var. domestica (Borkh.) Mansf.] after treatment with 1-methylcyclopropene (1-MCP) and delayed controlled atmosphere (CA) storage has been investigated. For each cultivar, fruit from three orchard blocks were harvested in two growing regions. 1-MCP was applied after overnight cooling to 2 -\_C and CA conditions applied 2, 7 and 14 d after harvest. Quality of fruit was assessed after CA storage for 6 months plus 1 and 7 d at 20 -\_C. 1-MCP suppressed the internal ethylene concentrations (IECs) of the fruit during the14 d period before CA conditions were applied, but the extent of suppression was lower in fruit with high IECs at harvest. Untreated fruit of both Ç˙McIntoshÇÖ and Ç˙EmpireÇÖ exposed to CA storage after 2 d maintained firmness levels similar to 1-MCP treated fruit, but only for 1 d of shelf life. 1-MCP treatment resulted in firm fruit after delayed CA up to 14 d, but the most consistent effects were found in Ç˙EmpireÇÖ which has lower IECs than Ç˙McIntoshÇÖ. Orchard block differences in IEC affected the persistence of 1-MCP effects on firmness. Effects of 1-MCP treatment on storage disorders were inconsistent, although slight increases in risk of external carbon dioxide injury were detected. Rapid treatment of fruit with 1-MCP after harvest can afford storage operators more freedom to delay CA storage application, but attention to cultivar, fruit maturity and susceptibility of fruit to storage disorders must be considered. Malus&#xa0;+ů&#xa0;domestica Borkh/ Storage/ Ethylene/ Firmness/ Physiological disorders/ Carbon dioxide injury

1475. Weerasekera, G.; Smith, K. D.; Quiros-Alcala, L.; Fernandez, C.; Bradman, A.; Eskenazi, B.; Needham, L. L., and Barr, D. B. A mass spectrometry-based method to measure dialkylphosphate degradation products of organophosphorous insecticides in dust and orange juice. 2009; 11, (7): 1345-1351.   
Rec #: 71779  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Dialkylphosphates (DAPs) are urinary metabolites and breakdown products of organophosphorous (OP) pesticides. Urinary DAPs are widely used to assess exposure to OP pesticides in epidemiologic studies. Recent evidence suggests that preformed DAPs are present in food and that they may also be present in other parts of the environment. Thus, DAP concentrations observed in urine may reflect a person's exposure to both parent OP pesticides and preformed DAPs in food and other environmental media. The presence of preformed DAPs in multiple media may indicate that previous studies have overestimated exposure to OP pesticides and that the use of urinary DAPs as biomarkers of exposure for OP pesticides may not accurately characterize exposure in non-acute settings. To establish the presence of DAPs in environmental and food media, we developed analytical methods to measure six DAPs in dust and orange juice. The limits of detection (LOD) for the dimethyl phosphates (dimethylphosphate (DMP), dimethylthiophosphate, and dimethyldithiophosphate) ranged from 2.8-9.9 ng g(-1) and 0.2-0.4 ng mL(-1) in dust and juice, respectively. The LODs for the diethyl phosphates (diethylphosphate (DEP), diethylthiophosphate, diethyldithiophosphate) ranged from 5.2-10.4 ng g(-1) and 0.5-3.0 ng mL(-1) in dust and juice, respectively. The extraction efficiencies for the analytes ranged from 23% to 91% and from 41% to 85% in dust and orange juice, respectively. DMP was detected in about half of the dust samples whereas DEP was detected in 80% of the dust samples tested. Other DAPs were less frequently detected in dust. Less than 3% of intact pesticide present in the matrices was converted to their respective DAPs during the pre-analytic and analytic process. Evaluation of the conversion of intact pesticides in the samples to DAPs will help us to better understand the contribution of preformed DAPs to urinary DAP concentrations.  
Keywords: DIALKYL PHOSPHATE METABOLITES, PESTICIDE EXPOSURE, PRESCHOOL-CHILDREN,  
ISI Document Delivery No.: 468HR

1476. Wei, W.; Zong, X. M.; Wang, X.; Yin, L. H.; Pu, Y. P., and Liu, S. Q. A disposable amperometric immunosensor for chlorpyrifos-methyl based on immunogen/platinum doped silica sol-gel film modified screen-printed carbon electrode. 2012; 135, (3): 888-892.   
Rec #: 71789  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: A disposable amperometric immunosensor for sensitive detection of chlorpyrifos-methyl (CM) has been developed by combining dual signal amplification of platinum colloid with an enzymatic catalytic reaction. The immunosensor was fabricated by modification of the screen-printed carbon electrodes (SPCE) with nanocomposites made by skillful doping of bovine serum albumin conjugated chlorpyrifos-methyl antigen (BSA-Ag) and platinum colloid into silica sol-gel. The scanning electron microscope (SEM) images and electrochemical measurements showed that platinum colloid domains in the nanocomposite material could enhance electron transfer and change the brittleness of the silica sol-gel. The immobilisation of BSA-Ag on the nanocomposite retained its immunoactivities, which allowed the immobilised BSA-Ag to effectively capture unbound Ab-HRP in the detection solution. A linear response to CM concentration was exhibited, ranging from 0.4 to 20 ng/mL. Detection of CM with the presented method in soil or grape samples treated with CM matched the reference values well, which indicated that the proposed disposable immunosensor hold promising applications in environmental and food monitoring. (C) 2012 Elsevier Ltd. All rights reserved.  
Keywords: Chlorpyrifos-methyl, Platinum colloid, Silica sol-gel, Competitive  
ISI Document Delivery No.: 028BB

1477. Weichenthal, Scott; Moase, Connie; Chan, Peter, and Weichenthal, Scott. A Review of Pesticide Exposure and Cancer Incidence in the Agricultural Health Study Cohort. 2010 May 5; 118, (8): 1117-1125.   
Rec #: 47909  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: We reviewed epidemiologic evidence related to occupational pesticide exposures and cancer incidence in the Agricultural Health Study (AHS) cohort. Studies were identified from the AHS publication list available at http://aghealth.nci.nih.gov as well as through a Medline/PubMed database search in March 2009. We also examined citation lists. Findings related to lifetime-days and/or intensity-weighted lifetime-days of pesticide use are the primary focus of this review, because these measures allow for the evaluation of potential exposure-response relationships. We reviewed 28 studies; most of the 32 pesticides examined were not strongly associated with cancer incidence in pesticide applicators. Increased rate ratios (or odds ratios) and positive exposure-response patterns were reported for 12 pesticides currently registered in Canada and/or the United States (alachlor, aldicarb, carbaryl, chlorpyrifos, diazinon, dicamba, S-ethyl-N,N-dipropylthiocarbamate, imazethapyr, metolachlor, pendimethalin, permethrin, trifluralin). However, estimates of association for specific cancers were often imprecise because of small numbers of exposed cases, and clear monotonic exposure-response patterns were not always apparent. Exposure misclassification is also a concern in the AHS and may limit the analysis of exposure-response patterns. Epidemiologic evidence outside the AHS remains limited with respect to most of the observed associations, but animal toxicity data support the biological plausibility of relationships observed for alachlor, carbaryl, metolachlor, pendimethalin, permethrin, and trifluralin. Continued follow-up is needed to clarify associations reported to date. In particular, further evaluation of registered pesticides is warranted.  
Keywords: Environmental Engineering Abstracts (EN); CSA / ASCE Civil Engineering Abstracts (CE)  
Date revised - 2010-12-01  
Language of summary - English  
Pages - 1117-1125  
ProQuest ID - 818834532  
Last updated - 2013-02-05  
British nursing index edition - Environmental Health Perspectives [Environ. Health Perspect.]. Vol. 118, no. 8, pp. 1117-1125. 5 May 2010.  
Corporate institution author - Weichenthal, Scott; Moase, Connie; Chan, Peter  
DOI - 8e69aa22-d7fb-410e-a382csactrl101v; 13748320; 0091-6765; 1552-9924 English

1478. Weinhold, B and Weinhold, B. New Pesticides, Old Problems: Despite Warnings, Use During Pregnancy Persists. 2008 Dec; 116, (12): A 533.   
Rec #: 45359  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The sight of scurrying cockroaches trumps warnings against using pesticides during pregnancy. That's one insight from a study of pesticide use before and after the U.S. Environmental Protection Agency's 2001 and 2002 retail sales restrictions of chlorpyrifos and diazinon [EHP 116:1681-1688; Williams et al.]. The team of U.S. researchers also found that use of replacement pesticides is steadily increasing to fill the void, that the air the test subjects breathed remains surprisingly contaminated with chlorpyrifos and diazinon up to 5 years after the restrictions went into effect, and that household use of pesticide spray cans and bug bombs contaminated the air far more than did use of bait traps or boric acid or spraying by professional exterminators.  
Keywords: Sprays  
Keywords: Z 05350:Medical, Veterinary, and Agricultural Entomology  
Keywords: Spraying  
Keywords: Public health  
Keywords: Pregnancy  
Keywords: Chlorpyrifos  
Keywords: Cans  
Keywords: EPA  
Keywords: households  
Keywords: USA  
Keywords: H 5000:Pesticides  
Keywords: Pesticides  
Keywords: Traps  
Keywords: R2 23060:Medical and environmental health  
Keywords: boric acid  
Keywords: Entomology Abstracts; Risk Abstracts; Environment Abstracts; Health & Safety Science Abstracts  
Keywords: Diazinon  
Keywords: ENA 01:Air Pollution  
Date revised - 2009-01-01  
Language of summary - English  
Location - USA  
Pages - A 533  
ProQuest ID - 20243163  
SubjectsTermNotLitGenreText - USA; Pesticides; Public health; Pregnancy; Sprays; Diazinon; Chlorpyrifos; households; EPA; Spraying; Traps; boric acid; Cans  
Last updated - 2011-12-14  
British nursing index edition - Environmental Health Perspectives [Environ. Health Perspect.]. Vol. 116, no. 12, p. A 533. Dec 2008.  
Corporate institution author - Weinhold, B  
DOI - MD-0009045638; 8859414; 0091-6765 English

1479. Weis, J. S. and Weis, P. Effects of Environmental Pollutants on Early Fish Development. 1989; 1, (1): 45-73.   
Rec #: 1800  
Keywords: REVIEW  
Call Number: NO REVIEW (AMSV,CPY)  
Notes: EcoReference No.: 65053  
Chemical of Concern: AMSV,CPY

1480. Weiwei, G; Changyi, G; Hong, L, and Weiwei, G. Time-Series Analysis and Human Dietary Exposure Assessment on Chlorpyrifos Pesticide Residue in Leafy Vegetables. 2010 Sep; 20, (9): 719-720.   
Rec #: 40359  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: Chlorpyrifos  
Keywords: Diets  
Keywords: Pesticide residues  
Keywords: time series analysis  
Keywords: Pesticides  
Keywords: Pollution Abstracts  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Date revised - 2010-10-01  
Language of summary - English  
Pages - 719-720  
ProQuest ID - 759317140  
SubjectsTermNotLitGenreText - Chlorpyrifos; Diets; Pesticide residues; time series analysis; Pesticides  
Last updated - 2012-03-29  
British nursing index edition - Annals of Epidemiology [Ann. Epidemiol.]. Vol. 20, no. 9, pp. 719-720. Sep 2010.  
Corporate institution author - Weiwei, G; Changyi, G; Hong, L  
DOI - 32cb88a2-ecbe-4261-9f25csamfg201; 13717910; 1047-2797 English

1481. Weldon, R H; Barr, D B; Trujillo, C; Bradman, a; Holland, N; Eskenazi, B, and Weldon, R H. A Pilot Study of Pesticides and Pcbs in the Breast Milk of Women Residing in Urban and Agricultural Communities of California. 2011 Nov; 13, (11): 3136-3144.   
Rec #: 43059  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Currently, there is no nationally representative human milk biomonitoring program in the United States (U.S.) and no studies have reported non-persistent pesticides in the milk of U.S. women. In this pilot study we developed a multiresidue laboratory method to measure non-persistent and persistent pesticides and polychlorinated biphenyl (PCB) congeners in human milk samples from women residing in the agricultural region of Salinas, CA (n = 13) and the urban San Francisco Bay Area, CA (n = 21). Samples were collected from 2002-2007. Median concentrations in pg g super(-1) milk among urban and agricultural women, respectively were reported for: chlorpyrifos (24.5 and 28.0), cis-permethrin (81.9 and 103), trans-permethrin (93.1 and 176), hexachlorobenzene (191 and 223), beta -hexachlorocyclohexane (220 and 443), o, p'-DDT (36.6 and 62.4), p, p'-DDT,(107 and 102), o, p'-DDE (5.65 and 5.17), p, p'-DDE (3170 and 3490), dacthal (2.79 and 3.43), PCB 118 (92.8 and 17.0), PCB 138 (183 and 38.2), PCB 153 (242 and 43.6) and PCB 180 (239 and 683). Among urban women, median concentrations were 4.02 and 4.32 pg g super(-1) milk for chlorpyrifos-methyl and propoxur, respectively. These results suggest that neonates and young children may be exposed to persistent and non-persistent pesticides and PCBs via breast milk.  
Keywords: Bioindicators  
Keywords: Milk  
Keywords: ENA 12:Oceans & Estuaries  
Keywords: Environmental Studies  
Keywords: breast milk  
Keywords: Chlorpyrifos  
Keywords: Laboratory methods  
Keywords: Pesticides  
Keywords: P 1000:MARINE POLLUTION  
Keywords: INE, USA, California, San Francisco Bay  
Keywords: Environment Abstracts; Pollution Abstracts  
Keywords: Neonates  
Keywords: PCB compounds  
Keywords: Urban areas  
Date revised - 2012-01-01  
Language of summary - English  
Location - INE, USA, California, San Francisco Bay  
Pages - 3136-3144  
ProQuest ID - 915409125  
SubjectsTermNotLitGenreText - Chlorpyrifos; Bioindicators; Milk; Laboratory methods; Pesticides; Neonates; PCB compounds; Urban areas; breast milk; INE, USA, California, San Francisco Bay  
Last updated - 2012-01-12  
Corporate institution author - Weldon, R H; Barr, D B; Trujillo, C; Bradman, A; Holland, N; Eskenazi, B  
DOI - OB-MD-0017932884; 16129382; 1464-0325 English

1482. Weldon, Rosana Alysia Hernandez and Eskenazi, Brenda Holland Nina. Biomonitoring Persistent and Non-Persistent Chemicals in Human Breast Milk and Endocrine Disruption of Lactation. 2010.  
Rec #: 51719  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Breastfeeding has numerous benefits to mother and child including improved maternal post-partum health, maternal/child bonding, and infant neurodevelopment and immune function. However, concern has been expressed about potential health risks posed to infants from environmental chemicals in human milk. The Food Quality Protection Act of 1996 requires the United States Environmental Protection Agency to set pesticide tolerance levels in food that ensure the safety of sensitive sub-populations, particularly pregnant women and children. Maternal dietary and environmental exposures to organophosphate (OP), organochlorine (OC), carbamate, and pyrethroid pesticides and polychlorinated biphenyls (PCBs) may lead to measurable levels of these chemicals in breast milk and because some of these chemicals interfere with hormone regulation, a mother's ability to lactate may be compromised by exposure. Lactational exposures to infants are of particular concern because infants' metabolic, neurologic and other systems are developing leading children to be more susceptible to the hazards of pesticides than adults. Although persistent pesticides, such as dichlorodiphenyltrichloroethane (DDT), have been biomonitored in human milk for decades, there are few studies measuring non-persistent pesticides in milk and no studies examining potential sources of non-persistent pesticides in milk. Using data and samples from the Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS), another study on peripartum pesticide excretion, and a study of breast milk samples collected from San Francisco Bay Area women, this research aimed to: (1) to determine whether persistent organic pollutants measured in the blood of CHAMACOS participants are associated with shortened lactation duration; (2) to measure and compare the chemical concentrations of OPs, OCs, carbamates, pyrethroids, and PCBs in the milk of women residing in an rural area with those of women residing in an urban region; and (3) to investigate whether concentrations of two non-persistent pesticides highly detected in milk are correlated with concentrations measured in other biological samples and determine the potential predictors or sources of maternal exposure. Maternal concentrations of potentially endocrine disrupting chemicals measured in maternal serum were not associated with shortened lactation duration. Breast milk samples from urban and agricultural populations contained all of the persistent chemicals measured and the non-persistent pesticides, chlorpyrifos and permethrin. Concentrations of these two non-persistent pesticides were positively, but not statistically significantly correlated with concentrations measured in the plasma and urine of the same women. Lastly, some dietary and household factors may be potential sources of exposure to the mothers studied. The proposed research will provide information on maternal exposure and lactational exposure of non-persistent and persistent pesticides and PCBs to our most sensitive population, infants. Understanding whether lactation is potentially disrupted and the extent of dietary exposures to infants will allow for informed policy decisions regarding the use of pesticides and for the design of effective interventions in order to ensure the safety of this food for infants.  
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Keywords: Breastfeeding  
Keywords: 0470:Environmental Health  
Keywords: Polychlorinated biphenyls  
Keywords: Pesticides  
Keywords: Biomonitoring  
Keywords: Breast milk  
Keywords: Endocrine disruption  
Keywords: Health and environmental sciences  
Keywords: Lactation  
Breastfeeding  
60164101  
3449087  
2316913741  
861341829  
Breast milk  
66569  
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Polychlorinated biphenyls  
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0470: Environmental Health  
Weldon, Rosana Alysia Hernandez  
Biomonitoring  
Pesticides  
Endocrine disruption  
2010  
Health and environmental sciences English

1483. Weng, B-Q; Jiang, Z-H; Xiao, S-X; Lei, J-G; Wang, Y-X; Tang, X-Q, and Weng, B-Q. Analysis on Nutrients and Pesticide Residues in Strain J Sub(3) Agaricus Blazei Murill Irradiated by Super(60)Co. 2011 Feb 20; 30, (2 ): 244-248.   
Rec #: 43539  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Agaricus blazei Murill as rare edible fungi was adored by more and more customers. But with the increasing attention of food hygiene quality, it was important guidance of the safety production of Agaricus blazei to understand the health status of Agaricus blazei in the actual cultivation. This paper studied the difference in terms of nutritional quality, heavy metal contents and pesticide residues between strain J sub(3) and J sub(1). The results showed that the contents of delicious amino acid(56.5 g times kg super(-1)), sweet amino acid(52.4 g times kg super(-1)), sulfur amino acid(15.8 g times kg super(-1)), branched chain amino acid(38.1 g times kg super(-1)), aromatic amino acid(16.1 g times kg super(-1)), children amino acid(17.8 g times kg super(-1)), necessary amino acid (95.0 g times kg super(-1)in the fruit bodies of Agaricus blazei J sub(3), occupied 25.48%, 23.64%, 7.13%, 17.19%, 7.26%, 8.03% and 42.85% of total amount of amino acid(221.7 g times kg super(-1)), respectively. These values were 28.12%, 12.93%, 0%, 14.41%, 12.59%, 16.34% and 11.76% respectively higher than those of Agaricus blazei J sub(1). The content of polyunsaturated fatty acids(76.15%) and unsaturated fatty acid(77.55%) in Agaricus blazei J sub(3) were 4.39% and 3.82% higher than Agaricus blazei J sub(1) respectively. The contents of cadmium, mercury and arsenic in fruitbodies of Agaricus blazei J sub(3), were 3.86 mg times kg super(-1), 0.42 mg times kg super(-1) and 0.09 mg times kg super(-1), respectively, and decreased by 45.86%, 32.25% and 18.18% than those of Agaricus blazei J sub(1). Lead content was lower than the limit of mushroom health standard of China(GB 7096--2003). Arsenic content was also lower than national green food standard for edible fungus (NY/T 749--2003) in China. The residues of pesticides in the fruitbodies of Agaricus blazei J sub(3), such as bifenthrin, decamethrim, chlorothalonil, hexachlorocyclohexane, carbendazim, avermectins, thiophanate-methyl, methami-dophos, chlorpyrifos, DDT and S0 sub(2), were lower than the limits of national green food standard for edible fungus (NY/T 749--2003), respectively. Therefore, strain J sub(3) of Agaricus blazei has a higher application value.  
Keywords: Sulfur  
Keywords: Agaricus blazei  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Sulphur  
Keywords: ENA 09:Land Use & Planning  
Keywords: Pesticide residues  
Keywords: Heavy metals  
Keywords: Food  
Keywords: K 03400:Human Diseases  
Keywords: Nutrients  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Nutrition  
Keywords: Microbiology Abstracts C: Algology, Mycology & Protozoology; ASFA 3: Aquatic Pollution & Environmental Quality; Pollution Abstracts; Environment Abstracts  
Keywords: Lead  
Keywords: Cadmium  
Keywords: Carbendazim  
Keywords: Food quality  
Keywords: heavy metals  
Keywords: Arsenic  
Keywords: Sweet taste  
Keywords: Amino acids  
Keywords: Avermectin  
Keywords: Fungi  
Keywords: Fruit bodies  
Keywords: Children  
Keywords: Strains  
Keywords: thiophanate-methyl  
Keywords: Basidiocarps  
Keywords: Chlorpyrifos  
Keywords: Chlorothalonil  
Keywords: Pesticides  
Keywords: hexachlorocyclohexane  
Keywords: DDT  
Keywords: Mercury  
Keywords: China, People's Rep.  
Keywords: Hexachlorocyclohexane  
Keywords: Nutrients (mineral)  
Keywords: Hygiene  
Keywords: Aromatics  
Date revised - 2011-04-01  
Language of summary - English  
Location - China, People's Rep.  
Pages - 244-248  
ProQuest ID - 860386194  
SubjectsTermNotLitGenreText - Arsenic; Sulphur; Heavy metals; DDT; Pesticides; Nutrients (mineral); Hygiene; Strains; Aromatics; Sulfur; Pesticide residues; Food; Nutrients; Lead; Cadmium; Carbendazim; Food quality; Sweet taste; Amino acids; Fruit bodies; Fungi; Avermectin; Children; Basidiocarps; thiophanate-methyl; Chlorpyrifos; Chlorothalonil; Mercury; Hexachlorocyclohexane; hexachlorocyclohexane; Nutrition; heavy metals; Agaricus blazei; China, People's Rep.  
Last updated - 2012-04-23  
British nursing index edition - Journal of Agro-Environment Science [J. Agro-Environ. Sci.]. Vol. 30, no. 2, pp. 244-248. 20 Feb 2011.  
Corporate institution author - Weng, B-Q; Jiang, Z-H; Xiao, S-X; Lei, J-G; Wang, Y-X; Tang, X-Q  
DOI - MD-0015620243; 14542256; CS1147188; 1672-2043 English

1484. Werner, Inge; Deanovic, Linda a; Miller, Jeff; Denton, Debra L; Crane, David; Mekebri, Abdou; Moore, Matthew T; Wrysinski, Jeanette, and Werner, Inge. Use of Vegetated Agricultural Drainage Ditches to Decrease Toxicity of Irrigation Runoff From Tomato and Alfalfa Fields in California, Usa. 2010 Dec 1; 29, (12): 2859-2868.   
Rec #: 47589  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The current study investigated the potential of vegetated drainage ditches for mitigating the impact of agricultural irrigation runoff on downstream aquatic ecosystems. Water column toxicity to larval fathead minnow (Pimephales promelas),and the amphipod Hyalella azteca was measured for 12 h or less at the ditch inflow and outflow, using custom-built in situ exposure systems. In addition, water and sediment samples were subject to standard toxicity tests with Ceriodaphnia dubia and H. azteca, respectively. No acute toxicity to larval fathead minnow was observed; however, runoff was highly toxic to invertebrates. Passage through a 389- to 402-m section of vegetated ditch had a mitigating effect and reduced toxicity to some degree. However, runoff from an alfalfa field treated with chlorpyrifos remained highly toxic to both invertebrate species, and runoff from a tomato field treated with permethrin remained highly toxic to H. azteca after passage through the ditch. Predicted toxic units calculated from insecticide concentrations in runoff and 96-h median lethal concentration (LC50) values generally agreed with C. dubia toxicity measured in the laboratory but significantly underestimated in situ toxicity to H. azteca. Sediments collected near the ditch outflow were toxic to H. azteca. Results from the current study demonstrate that experimental vegetated ditches were unable to eliminate the risk of irrigation runoff to aquatic ecosystems. In addition, protective measures based on chemical concentrations or laboratory toxicity tests with C. dubia do not ensure adequate protection of aquatic ecosystems from pyrethroid-associated toxicity.  
Keywords: toxicity testing  
Keywords: Irrigation  
Keywords: Larvae  
Keywords: outflow  
Keywords: alfalfa  
Keywords: Toxicity  
Keywords: invertebrates  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Environmental Studies  
Keywords: Hyalella azteca  
Keywords: Lycopersicon esculentum  
Keywords: Ceriodaphnia dubia  
Keywords: Risk Abstracts; Environment Abstracts; Toxicology Abstracts; Aqualine Abstracts; Water Resources Abstracts  
Keywords: mitigation  
Keywords: Pimephales  
Keywords: USA, California  
Keywords: R2 23050:Environment  
Keywords: aquatic ecosystems  
Date revised - 2011-05-01  
Language of summary - English  
Location - USA, California  
Pages - 2859-2868  
ProQuest ID - 860447250  
SubjectsTermNotLitGenreText - toxicity testing; mitigation; Irrigation; Larvae; outflow; alfalfa; Toxicity; aquatic ecosystems; invertebrates; Lycopersicon esculentum; Hyalella azteca; Ceriodaphnia dubia; Pimephales; USA, California  
Last updated - 2011-11-09  
Place of publication - Oxford  
Corporate institution author - Werner, Inge; Deanovic, Linda A; Miller, Jeff; Denton, Debra L; Crane, David; Mekebri, Abdou; Moore, Matthew T; Wrysinski, Jeanette  
DOI - OB-2e162793-bbb7-47e6-a36bcsamfg201; 14430079; 1552-8618 English

1485. Werner, S. J.; Tupper, S. K.; Linz, G. M., and Homan, H. J. Evaluation and Development of Blackbird Repellents for Agricultural Applications. 2009: 5 p.   
Rec #: 2860  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (AZX,CPY,CYF,CYP,EFV,ES,LCYT,PCZ,PPCP,PPCP2011,TLM), NO REVIEW (AZX,CPY,CYF,CYP,EFV,ES,LCYT,PCZ,PPCP,PPCP2011,TLM)  
Notes: Chemical of Concern: AZX,BSC,CPY,CYF,CYP,EFV,ES,FDX,LCYT,PCZ,PPCP,PPCP2011,TLM

1486. Weschler, C J; Nazaroff, W W, and Weschler, C J. Svoc Exposure Indoors: Fresh Look at Dermal Pathways. 2012 Oct; 22, (5): 356-377.   
Rec #: 42519  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Abstract This paper critically examines indoor exposure to semivolatile organic compounds (SVOCs) via dermal pathways. First, it demonstrates that - in central tendency - an SVOC's abundance on indoor surfaces and in handwipes can be predicted reasonably well from gas-phase concentrations, assuming that thermodynamic equilibrium prevails. Then, equations are developed, based upon idealized mass-transport considerations, to estimate transdermal penetration of an SVOC either from its concentration in skin-surface lipids or its concentration in air. Kinetic constraints limit air-to-skin transport in the case of SVOCs that strongly sorb to skin-surface lipids. Air-to-skin transdermal uptake is estimated to be comparable to or larger than inhalation intake for many SVOCs of current or potential interest indoors, including butylated hydroxytoluene, chlordane, chlorpyrifos, diethyl phthalate, Galaxolide, geranyl acetone, nicotine (in free-base form), PCB28, PCB52, Phantolide, Texanol and Tonalide. Although air-to-skin transdermal uptake is anticipated to be slow for bisphenol A, we find that transdermal permeation may nevertheless be substantial following its transfer to skin via contact with contaminated surfaces. The paper concludes with explorations of the influence of particles and dust on dermal exposure, the role of clothing and bedding as transport vectors, and the potential significance of hair follicles as transport shunts through the epidermis. Human exposure to indoor pollutants can occur through dietary and nondietary ingestion, inhalation, and dermal absorption. Many factors influence the relative importance of these pathways, including physical and chemical properties of the pollutants. This paper argues that exposure to indoor semivolatile organic compounds (SVOCs) through the dermal pathway has often been underestimated. Transdermal permeation of SVOCs can be substantially greater than is commonly assumed. Transport of SVOCs from the air to and through the skin is typically not taken into account in exposure assessments. Yet, for certain SVOCs, intake through skin is estimated to be substantially larger than intake through inhalation. Exposure scientists, risk assessors, and public health officials should be mindful of the dermal pathway when estimating exposures to indoor SVOCs. Also, they should recognize that health consequences vary with exposure pathway. For example, an SVOC that enters the blood through the skin does not encounter the same detoxifying enzymes that an ingested SVOC would experience in the stomach, intestines, and liver before it enters the blood.  
Keywords: Chlorpyrifos  
Keywords: Bisphenol A  
Keywords: Inhalation  
Keywords: Skin  
Keywords: Lipids  
Keywords: H 2000:Transportation  
Keywords: Enzymes  
Keywords: Particulates  
Keywords: Health & Safety Science Abstracts  
Keywords: Ingestion  
Keywords: Volatile organic compounds  
Date revised - 2012-12-01  
Language of summary - English  
Pages - 356-377  
ProQuest ID - 1136413974  
Document feature - figure 6  
SubjectsTermNotLitGenreText - Chlorpyrifos; Bisphenol A; Inhalation; Skin; Lipids; Enzymes; Particulates; Ingestion; Volatile organic compounds  
Last updated - 2013-01-11  
British nursing index edition - Indoor Air [Indoor Air]. Vol. 22, no. 5, pp. 356-377. Oct 2012.  
Corporate institution author - Weschler, C J; Nazaroff, W W  
DOI - fa79c180-1c18-4d4e-a122csamfg201; 17159641; 0905-6947; 1600-0668 English

1487. Weschler, C J and Weschler, C J. Changes in Indoor Pollutants Since the 1950s. 2009 Jan; 43, (1): 153-169.   
Rec #: 48879  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Over the past half-century there have been major changes in building materials and consumer products used indoors. Composite-wood, synthetic carpets, polymeric flooring, foam cushioning, plastic items and scented cleaning agents have become ubiquitous. The same is true for mechanical and electrical appliances such as washer /dryers, TVs and computers. These materials and products emit an array of chemicals including solvents, unreacted monomers, and additives. The consequent changes in emission profiles for indoor pollutants have been accompanied by modifications in building operations. Residences and non-residences are less ventilated than they were decades ago. Air-conditioned buildings are more numerous, especially in certain parts of the world. Most of these recirculate a high fraction of their air. The personal habits of building occupants, including the fraction who smoke indoors, have also changed. Taken together, these changes have altered the kind and concentrations of chemicals that occupants are exposed to in their homes, workplaces and schools. Since the 1950s, levels of certain indoor pollutants (e.g., formaldehyde, aromatic and chlorinated solvents, chlorinated pesticides, PCBs) have increased and then decreased. Levels of other indoor pollutants have increased and remain high (e.g., phthalate esters, brominated flame-retardants, nonionic surfactants and their degradation products). Many of the chemicals presently found in indoor environments, as well as in the blood and urine of occupants, were not present 50 years ago. Given the public's exposure to such species, there would be exceptional value in monitoring networks that provided cross-sectional and longitudinal information regarding pollutants found in representative buildings.  
Keywords: Chemicals  
Keywords: M2 551.556:Wind Effects (551.556)  
Keywords: Consumer products  
Keywords: Ventilation  
Keywords: Air conditioning  
Keywords: Indoor air pollution  
Keywords: Formaldehyde  
Keywords: Environmental Studies  
Keywords: EE 20:Air Pollution: Monitoring, Control & Remediation  
Keywords: schools  
Keywords: Emissions  
Keywords: PCB compounds  
Keywords: P 0000:AIR POLLUTION  
Keywords: Solvents  
Keywords: Construction materials  
Keywords: Esters  
Keywords: Buildings  
Keywords: Smoke  
Keywords: phthalates  
Keywords: Foam  
Keywords: Urine  
Keywords: Pesticides  
Keywords: Building materials  
Keywords: Indoor environments  
Keywords: Surfactants  
Keywords: Additives  
Keywords: Environmental Engineering Abstracts; Meteorological & Geoastrophysical Abstracts; Pollution Abstracts  
Date revised - 2009-05-01  
Language of summary - English  
Pages - 153-169  
ProQuest ID - 289678336  
SubjectsTermNotLitGenreText - Buildings; Chemicals; Solvents; Consumer products; PCB compounds; Air conditioning; Esters; Construction materials; Additives; Surfactants; Indoor environments; Pesticides; phthalates; schools; Urine; Formaldehyde; Emissions; Ventilation; Indoor air pollution; Foam; Building materials; Smoke  
Last updated - 2011-11-07  
Corporate institution author - Weschler, C J  
DOI - OB-MD-0009021409; 8835185; 1352-2310 English

1488. Weschler, Charles J; Nazaroff, William W, and Weschler, Charles J. Svoc Partitioning Between the Gas Phase and Settled Dust Indoors. 2010 Sep; 44, (30): 3609-3620.   
Rec #: 47739  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Semivolatile organic compounds (SVOCs) are a major class of indoor pollutants. Understanding SVOC partitioning between the gas phase and settled dust is important for characterizing the fate of these species indoors and the pathways by which humans are exposed to them. Such knowledge also helps in crafting measurement programs for epidemiological studies designed to probe potential associations between exposure to these compounds and adverse health effects. In this paper, we analyze published data from nineteen studies that cumulatively report measurements of dustborne and airborne SVOCs in more than a thousand buildings, mostly residences, in seven countries. In aggregate, measured median data are reported in these studies for 66 different SVOCs whose octanol-air partition coefficients (Koa) span more than five orders of magnitude. We use these data to test a simple equilibrium model for estimating the partitioning of an SVOC between the gas phase and settled dust indoors. The results demonstrate, in central tendency, that a compound's octanol-air partition coefficient is a strong predictor of its abundance in settled dust relative to its gas phase concentration. Using median measured results for each SVOC in each study, dustborne mass fractions predicted using Koa and gas-phase concentrations correlate reasonably well with measured dustborne mass fractions (R2=0.76). Combined with theoretical understanding of SVOC partitioning kinetics, the empirical evidence also suggests that for SVOCs with high Koa values, the mass fraction in settled dust may not have sufficient time to equilibrate with the gas phase concentration.  
Keywords: Atmospheric particulates  
Keywords: M2 551.556:Wind Effects (551.556)  
Keywords: P 0000:AIR POLLUTION  
Keywords: Indoor air pollution  
Keywords: relative abundance  
Keywords: Buildings  
Keywords: Dust  
Keywords: Environmental Studies  
Keywords: Pollution Abstracts; Environment Abstracts; Meteorological & Geoastrophysical Abstracts; ASFA 2: Ocean Technology Policy & Non-Living Resources  
Keywords: Pollutants  
Keywords: Kinetics  
Keywords: Q2 02405:Oil and gas  
Keywords: Organic compounds  
Keywords: Volatile organic compounds  
Keywords: Eolian dust  
Keywords: ENA 01:Air Pollution  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 3609-3620  
ProQuest ID - 810969262  
SubjectsTermNotLitGenreText - Atmospheric particulates; Pollutants; Organic compounds; Eolian dust; Indoor air pollution; Kinetics; relative abundance; Buildings; Volatile organic compounds; Dust  
Last updated - 2011-12-08  
Corporate institution author - Weschler, Charles J; Nazaroff, William W  
DOI - OB-c09be81a-780a-486b-9ef6csamfg201; 13513940; CS1119550; 1352-2310 English

1489. Wesseling, C.; de Joode, B. V.; Keifer, M.; London, L.; Mergler, D., and Stallones, L. Symptoms of psychological distress and suicidal ideation among banana workers with a history of poisoning by organophosphate or n-methyl carbamate pesticides. 2010; 67, (11): 778-784.   
Rec #: 71839  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Objectives Neuropsychiatric disorders and increased suicide rates have been associated with exposure to cholinesterase inhibiting organophosphates. This study examined symptoms of psychological distress, including suicidal ideation, among banana workers in Costa Rica previously exposed to a cholinesterase inhibiting pesticide. Methods 78 workers who had received medical attention 1-3 years previously for occupational pesticide poisoning were recruited: 54 had been exposed to organophosphate, 24 to carbamate, and 43 and 35, respectively, had single and multiple poisoning episodes with a cholinesterase inhibitor. Referents were 130 non-poisoned workers randomly selected from company payrolls. Psychological distress symptoms during the month prior to interview were obtained using the Brief Symptom Inventory (BSI), which has a general severity index and nine subscale scores. Differences in abnormal BSI scores (T score >= 63) were assessed through multivariate logistic regression for all poisoned and for subcategories of poisoned as compared to non-poisoned workers. Results Organophosphate poisoned workers reported significantly more symptoms than non-poisoned on all but one symptom dimension. Significant trends of increasing symptoms with increasing number of previous poisonings were seen for somatisation, obsessive-compulsiveness, interpersonal sensitivity, depression and anxiety. Carbamate poisoned workers only had increased scores for somatisation. The ORs for suicidal thoughts were: all poisoned 3.58 (95% CI 1.45 to 8.84); organophosphate poisoned 3.72 (1.41 to 9.81); carbamate poisoned 2.57 (0.73 to 9.81); and 2.65 and 4.98, respectively for 1 and >= 2 poisonings (trend p=0.01). Conclusions This cross-sectional study showed a relationship between acute occupational poisoning with organophosphates and psychological distress including suicidal ideation. Stronger designs are needed to address causality.  
Keywords: CHRONIC NEUROLOGICAL SEQUELAE, LONG-TERM EXPOSURE, AGRICULTURAL HEALTH,  
ISI Document Delivery No.: 667EM

1490. Weston, D. P.; Asbell, A. M.; Hecht, S. A.; Scholz, N. L., and Lydy, M. J. Pyrethroid insecticides in urban salmon streams of the Pacific Northwest. 2011; 159, (10): 3051-3056.   
Rec #: 71859  
Keywords: SEDIMENT CONC,MIXTURE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Urban streams of the Pacific Northwest provide spawning and rearing habitat for a variety of salmon species, and food availability for developing salmon could be adversely affected by pesticide residues in these waterbodies. Sediments from Oregon and Washington streams were sampled to determine if current-use pyrethroid insecticides from residential neighborhoods were reaching aquatic habitats, and if they were at concentrations acutely toxic to sensitive invertebrates. Approximately one-third of the 35 sediment samples contained measurable pyrethroids. Bifenthrin was the pyrethroid of greatest concern with regards to aquatic life toxicity, consistent with prior studies elsewhere. **Toxicity to Hyalella azteca and/or Chironomus dilums** was found in two sediment samples at standard testing temperature (23 degrees C), and in one additional sample at a more environmentally realistic temperature (13 degrees C). Given the temperature dependency of pyrethroid toxicity, low temperatures typical of northwest streams can increase the potential for toxicity above that indicated by standard testing protocols. (C) 2011 Elsevier Ltd. All rights reserved.  
Keywords: Pyrethroid, Bifenthrin, Insecticides, Urban pollution, Hyalella azteca  
ISI Document Delivery No.: 828HW

1491. Weston, D P; Holmes, R W; Lydy, Mj, and Weston, D P. Residential Runoff as a Source of Pyrethroid Pesticides to Urban Creeks. 2009 Jan; 157, (1): 287.   
Rec #: 48909  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Residential runoff as a source of pyrethroid pesticides to urban creeks was studied. Pyrethroid insecticides replaced organophosphates like diazinon and chlorpyrifos for pest control in urban environments. Storm drain outfalls were the primary source of pyrethroids to creeks because the systems lacked any other potential sources and because the highest concentrations were often found in sediments in front of drain outfalls. The results showed that winter flows at the Roseville site, during and shortly after storm events, were typically 30-80 L/s, about 10-fold higher than summer flows. It was concluded that storm water runoff was responsible for greater transport of pyrethroids to urban surface waters than was summer irrigation runoff.  
Keywords: PEST CONTROL  
Keywords: SEDIMENT  
Keywords: SENSITIVITY  
Keywords: PYRETHROID PESTICIDES  
Keywords: SEASONAL COMPARISONS  
Keywords: Environment Abstracts  
Keywords: STORM RUNOFF  
Keywords: TOXICOLOGY  
Keywords: ENA 07:General  
Keywords: IRRIGATION  
Date revised - 2009-08-01  
Language of summary - English  
Pages - 287  
ProQuest ID - 14025319  
Document feature - |n 6 |t graphs  
SubjectsTermNotLitGenreText - PEST CONTROL; SEDIMENT; SENSITIVITY; PYRETHROID PESTICIDES; SEASONAL COMPARISONS; STORM RUNOFF; TOXICOLOGY; IRRIGATION  
Last updated - 2011-12-15  
British nursing index edition - Environmental Pollution [Environ. Pollut.]. Vol. 157, no. 1, 287 p. Jan 2009.  
Corporate institution author - Weston, D P; Holmes, R W; Lydy, MJ  
DOI - 161e63a7-61d4-4b90-be41csamfg301; 10330053; 0269-7491 English

1492. Weston, Donald P.; Ding, Yuping; Zhang, Minghua, and Lydy, Michael J. Identifying the cause of sediment toxicity in agricultural sediments: The role of pyrethroids and nine seldom-measured hydrophobic pesticides. 2013 Jan; 90, (3): 958-964.   
Rec #: 5290  
Keywords: SEDIMENT CONC  
Notes: Chemical of Concern: CPY  
Abstract: Few currently used agricultural pesticides are routinely monitored for in the environment. Even if concentrations are known, sediment LC50 values are often lacking for common sediment toxicity testing species. To help fill this data gap, sediments in California ÇÖs Central Valley were tested for nine hydrophobic pesticides seldom analyzed: abamectin, diazinon, dicofol, fenpropathrin, indoxacarb, methyl parathion, oxyfluorfen, propargite, and pyraclostrobin. Most were detected, but rarely at concentrations acutely toxic to Hyalella azteca or Chironomus dilutus. Only abamectin, fenpropathrin, and methyl parathion were found at concentrations of potential concern, and only in one or two samples. One-quarter of over 100 samples from agriculture-affected waterways exhibited toxicity, and in three-fourths of the toxic samples, pyrethroids exceeded concentrations expected to cause toxicity. The pyrethroid Bi-fen-thrin in particular, as well as lambda-cyhalothrin, cypermethrin, esfenvalerate, permethrin, and the organophosphate chlorpyrifos, were primarily responsible for the observed toxicity, rather than the more novel analytes, despite the fact that much of the sampling targeted areas of greatest use of the novel pesticides. Pesticides/ Agricultural water quality/ Pyrethroids/ Hyalella azteca/ Chironomus dilutus

1493. Weston, Donald P and Jackson, Colin J. Use of Engineered Enzymes to Identify Organophosphate and Pyrethroid-Related Toxicity in Toxicity Identification Evaluations. 2009 Jul 15; 43, (14): 5514-5520.   
Rec #: 48409  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Engineered variants of a carboxylesterase from **Lucilia cuprina** (E3) and a phosphotriesterase from Agrobacterium radiobacter (OpdA) with enhanced hydrolytic activities against pyrethroid and organophosphate pesticides were evaluated as a toxicity identification evaluation (TIE) manipulation. Reduction in toxicity in the presence of the enzyme provides an indication that the toxicant is the enzyme's target substrate. Carboxy/esterase E3 variants were evaluated to determine if the **enzymes could mitigate toxicity** of pyrethroids to the amphipod, **Hyalella azteca**. Enzymes were able to achieve 12-70-fold reduction in toxicity for **bifenthrin, cyfluthrin, and cypermethrin in water.** Only a 2-fold reduction in toxicity was observed with pyrethroid-contaminated sediment though the phosphotriesterase OpdA achieved at least a 35-fold reduction in toxicity from the organophosphate chlorpyrifos in sediment. Tests with urban runoff samples and agriculture-affected sediments demonstrated that the enzymes could be useful in TIEs to identify pesticide-related toxicity. The approach promises to be a useful TIE tool for organophosphate and pyrethroid pesticides, particularly in a water matrix, and potentially could be used for identification of toxicity attributable to other pesticides.  
Keywords: Insecticides -- toxicity  
Keywords: Animals  
Keywords: Pyrethrins -- toxicity  
Keywords: Organophosphates  
Keywords: Water Pollutants, Chemical -- toxicity  
Keywords: Enzymes -- metabolism  
Keywords: Enzymes  
Keywords: Enzymes -- chemical synthesis  
Keywords: Enzymes -- genetics  
Keywords: Environmental Monitoring  
Keywords: 0  
Keywords: Insecticides  
Keywords: Protein Engineering  
Keywords: Pyrethrins  
Keywords: Organophosphates -- toxicity  
Keywords: Water Pollutants, Chemical  
Keywords: Serum Albumin, Bovine  
Keywords: Serum Albumin, Bovine -- metabolism  
Date completed - 2009-09-22  
Date created - 2009-08-27  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 5514-5520  
ProQuest ID - 67612945  
Last updated - 2013-01-19  
British nursing index edition - Environmental science & technology, July 15, 2009, 43(14):5514-5520  
Corporate institution author - Weston, Donald P; Jackson, Colin J  
DOI - MEDL-19708390; 19708390; 0013-936X eng

1494. Weston, Donald P and Lydy, Michael J. Focused Toxicity Identification Evaluations to Rapidly Identify the Cause of Toxicity in Environmental Samples. 2010 Jan; 78, (4): 368-374.   
Rec #: 44279  
Keywords: EFFLUENT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Over the past 5 years numerous toxicity studies in California using the amphipod, Hyalella azteca, have reported that pyrethroid insecticides, and less frequently the organophosphate insecticide chlorpyrifos, have been responsible for observed toxicity. As work continues to characterize and mitigate these water quality impacts, an approach is needed to screen samples exhibiting toxicity quickly and cost-effectively to establish if these same substances are again responsible, or if other, more atypical toxicants are responsible. Causality is often determined by a standard toxicity identification evaluation (TIE), but when there is strong historical evidence of a likely toxicant, we propose use of a focused TIE procedure to screen samples using manipulations specifically designed to identify pyrethroid- or chlorpyrifos-related toxicity. The focused tests use reduced temperature, piperonyl butoxide addition, and engineered enzymes specifically designed to hydrolyze certain pyrethroid and organophosphate insecticides. The target compounds exhibit unique response profiles to this battery of manipulations, distinct from each other and other non-insecticides. When used in conjunction with analytical chemistry data, the focused approach was successful in identifying cause of toxicity in a variety of urban and agricultural settings. Copyright 2009 Elsevier Ltd. All rights reserved.  
Keywords: 2921-88-2  
Keywords: Geologic Sediments -- chemistry  
Keywords: Animals  
Keywords: Soil Pollutants -- toxicity  
Keywords: Pyrethrins -- toxicity  
Keywords: Water Pollutants, Chemical -- toxicity  
Keywords: Population Dynamics  
Keywords: California  
Keywords: Soil Pollutants  
Keywords: Insecticides  
Keywords: 51-03-6  
Keywords: Water Pollutants, Chemical  
Keywords: Piperonyl Butoxide  
Keywords: Insecticides -- toxicity  
Keywords: Industrial Waste -- adverse effects  
Keywords: Environmental Pollutants -- toxicity  
Keywords: Temperature  
Keywords: Amphipoda -- drug effects  
Keywords: Environmental Pollutants  
Keywords: Chlorpyrifos  
Keywords: Industrial Waste  
Keywords: 0  
Keywords: Chlorpyrifos -- toxicity  
Keywords: Pyrethrins  
Keywords: Piperonyl Butoxide -- toxicity  
Keywords: Industrial Waste -- analysis  
Keywords: Environmental Monitoring -- methods  
Date completed - 2010-05-06  
Date created - 2010-01-29  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 368-374  
ProQuest ID - 733949372  
Last updated - 2013-01-19  
British nursing index edition - Chemosphere, January 2010, 78(4):368-374  
Corporate institution author - Weston, Donald P; Lydy, Michael J  
DOI - MEDL-20018342; 20018342; 1879-1298 eng

1495. Weston, Donald P; Lydy, Michael J, and Weston, Donald P. Urban and Agricultural Sources of Pyrethroid Insecticides to the Sacramento-San Joaquin Delta of California. 2010 Feb 2; 44, (5): 1833-1840.   
Rec #: 44219  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: While studies have documented the presence of pyrethroid insecticides at acutely toxic concentrations in sediments, little quantitative data on sources exist. Urban runoff, municipal wastewater treatment plants and agricultural drains in California's Sacramento-San Joaquin River Delta were sampled to understand their importance as contributors of these pesticides to surface waters. Nearly all residential runoff samples were toxic to the amphipod, Hyalella azteca, and contained pyrethroids at concentrations exceeding acutely toxic thresholds, in many cases by 10-fold. Toxicity identification evaluation data were consistent with pyrethroids, particularly bifenthrin and cyfluthrin, as the cause of toxicity. Pyrethroids passed through secondary treatment systems at municipal wastewater treatment facilities and were commonly found in the final effluent, usually near H. azteca 96-h EC50 thresholds. Agricultural discharges in the study area only occasionally contained pyrethroids and were also occasional sources of toxicity related to the organophosphate insecticide chlorpyrifos. Discharge of the pyrethroid bifenthrin via urban stormwater runoff was sufficient to cause water column toxicity in two urban creeks, over at least a 30 km reach of the American River, and at one site in the San Joaquin River, though not in the Sacramento River.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: acute toxicity  
Keywords: Surface water  
Keywords: Organophosphates  
Keywords: SW 3030:Effects of pollution  
Keywords: Deltas  
Keywords: Freshwater  
Keywords: Toxicity tests  
Keywords: Wastewater treatment  
Keywords: Sewage disposal  
Keywords: Urban runoff  
Keywords: Insecticides  
Keywords: Agricultural Chemicals  
Keywords: Stormwater runoff  
Keywords: USA, California, San Joaquin R.  
Keywords: deltas  
Keywords: USA, California, Sacramento R.  
Keywords: Municipal wastes  
Keywords: Pyrethroids  
Keywords: Agricultural runoff  
Keywords: Urban areas  
Keywords: Secondary treatment  
Keywords: Rivers  
Keywords: Wastewater Facilities  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: ENA 05:Environmental Design & Urban Ecology  
Keywords: INE, USA, California, Sacramento-San Joaquin Delta  
Keywords: River discharge  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Brackish  
Keywords: Toxicity  
Keywords: Effluents  
Keywords: Sediments  
Keywords: Hyalella azteca  
Keywords: USA, California, American R.  
Keywords: Chlorpyrifos  
Keywords: Municipal Wastewater  
Keywords: Water Pollution Effects  
Keywords: Pesticides  
Keywords: water column  
Keywords: Urban Runoff  
Keywords: Wastewater Treatment  
Keywords: Pollution Abstracts; Environment Abstracts; Aqualine Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Water Resources Abstracts  
Date revised - 2010-08-01  
Language of summary - English  
Location - USA, California, American R.; USA, California, San Joaquin R.; USA, California, Sacramento R.; INE, USA, California, Sacramento-San Joaquin Delta  
Pages - 1833-1840  
ProQuest ID - 754544539  
SubjectsTermNotLitGenreText - Sewage disposal; Insecticides; Pesticides; River discharge; Deltas; Toxicity; Agricultural runoff; Wastewater treatment; Toxicity tests; acute toxicity; Organophosphates; Surface water; Effluents; Sediments; Urban runoff; Chlorpyrifos; Stormwater runoff; deltas; water column; Municipal wastes; Pyrethroids; Urban areas; Secondary treatment; Rivers; Wastewater Facilities; Municipal Wastewater; Agricultural Chemicals; Water Pollution Effects; Urban Runoff; Wastewater Treatment; Hyalella azteca; USA, California, American R.; USA, California, San Joaquin R.; USA, California, Sacramento R.; INE, USA, California, Sacramento-San Joaquin Delta; Brackish; Freshwater  
Last updated - 2012-03-29  
British nursing index edition - Environmental Science & Technology [Environ. Sci. Technol.]. Vol. 44, no. 5, pp. 1833-1840. 2 Feb 2010.  
Corporate institution author - Weston, Donald P; Lydy, Michael J  
DOI - 1efff011-d5ac-4447-86eacsamfg201; 13268768; CS1101313; 0013-936X English

1496. Weston, Donald P; Zhang, Minghua; Lydy, Michael J, and Weston, Donald P. Identifying the Cause and Source of Sediment Toxicity in an Agriculture-Influenced Creeks. 2008 Apr; 27, (4): 953.   
Rec #: 49559  
Keywords: SEDIMENT CONC  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Cause and source of sediment toxicity in an agriculture-influenced creek are identified. Sediment toxicity is observed in five of seven tributaries sampled. All sediments are analyzed for seven pyrethroids, chlorpyrifos, and 20 organochlorine pesticides or their degradation products. Bifenthrin is commonly found throughout Del Puerto Creek and its tributary drains. The results suggest that while bifenthrin is predominantly responsible for the toxicity of the sediment to Hyalella azteca, the sediment will likely still be toxic in the absence of bifenthrin. Agricultural bifenthrin use is scattered throughout the watershed, though some of the parcels receiving the largest amounts of bifenthrin are located south of the Creek and east of Highway 33. The multiple reported uses throughout the watershed support the environmental data in which bifenthrin is found in the sediments of nearly all tributary drains.  
Keywords: CALIFORNIA  
Keywords: SEDIMENT  
Keywords: QUANTITATIVE ANALYSIS  
Keywords: MONITORING, ENV  
Keywords: Environment Abstracts  
Keywords: BIODEGRADATION  
Keywords: TOTAL ORGANIC CARBON  
Keywords: TOXICOLOGY  
Keywords: ENA 07:General  
Keywords: ENV IMPACT ASSESSMENT  
Date revised - 2009-08-01  
Language of summary - English  
Pages - 953  
ProQuest ID - 14849642  
Document feature - |n 4 |t graphs  
SubjectsTermNotLitGenreText - CALIFORNIA; SEDIMENT; QUANTITATIVE ANALYSIS; MONITORING, ENV; BIODEGRADATION; TOTAL ORGANIC CARBON; TOXICOLOGY; ENV IMPACT ASSESSMENT  
Last updated - 2011-12-15  
British nursing index edition - Environmental Toxicology and Chemistry [Environ. Toxicol. Chem.]. Vol. 27, no. 4, 953 p. Apr 2008.  
Corporate institution author - Weston, Donald P; Zhang, Minghua; Lydy, Michael J  
DOI - a3528b56-1738-4f01-9c87csamfg301; 10731034; 0730-7268 English

1497. Wetters, J. H. and Dishburger, H. J. Residues of Chlorpyrifos and 3,5,6-Trichloro-2-Pyridinol in Sweet Potatoes Following Pre-plant Application of Lorsban Insecticides. SOIL; 1976.  
Rec #: 1560  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

1498. Wetters, J. H.; Norton, E. J., and Jeffries, T. K. Residues of Chlorpyrifos and 3,5,6-Trichloro-2-Pyridinol in Alfalfa Green Forage and Hay Following Foliar Applications of Lorsban 4E Insecticide. SOIL; 1979.  
Rec #: 1570  
Keywords: NO SOURCE  
Call Number: NO SOURCE (CPY)  
Notes: Chemical of Concern: CPY

1499. Whangchai, K.; Saetung, W.; Uthaibutra, J.; Pengphol, S., and Phiyanalinmat, S. Effect of ozone on the reduction of pesticide residue in baby corn (Zea mays L.). 2010(875): 291-295.   
Rec #: 54839  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Keywords: ozonated water  
Paper presented at the Southeast Asia Symposium on Quality and Safety of Fresh and Fresh Cut Produce, held August 3-5, 2009, Bangkok, Thailand. Includes references 1023116596

1500. Whangchai, K.; Uthaibutra, J.; Phiyanalinmat, S.; Pengphol, S., and Nomura, N. Effect of Ozone Treatment on the Reduction of Chlorpyrifos Residues in Fresh Lychee Fruits. 2011; 33, (3): 232-235.   
Rec #: 71919  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effect of ozone on the reduction of chlorpyrifos residue in lychee cv. Chakapat (Litchi chinensis Sonn.) was studied. Lychee fruits were dipped in the solution of chlorpyrifos at a concentration of 10 mg L-1 for 10 min. Then, they were exposed to ozone gas (O3) at concentrations of 80, 160, 200, 240 mg L-1 and dipped in ozone-containing water, at concentrations of 2.2, 2.4, 3.4 and 3.2 mg. L-1 for 10, 20, 30 and 60 min, respectively. Both ozone gas and ozone-containing water reduced pesticide residue in lychee, but exposure to ozone gas for 60 min was most effective. When lychee fruits were stored at 25 degrees C for 6 days, both processes did not show significant differences in weight loss, total soluble solids (TSS) and titratable acidity (TA). However, ozone-containing water decreased the eating quality of lychees after storage, compared with the ozone-fumigated groups.  
Keywords: Ozone, Ozone-Containing Water, Ozone Treatment, Lychee Pesticide,  
ISI Document Delivery No.: 768WY

1501. White, M. A.; Clark, K. M.; Grayhack, E. J., and Dumont, M. E. Characteristics Affecting Expression and Solubilization of Yeast Membrane Proteins.   
Rec #: 51489  
Keywords: YEAST  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Biochemistry. 1996 Apr 23;35(16):5109-24 (medline /8611495)  
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COMMENTS: Cites: Science. 1997 Apr 4;276(5309):131-3 (medline /9082985)  
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COMMENTS: Cites: J Mol Biol. 2001 Jan 19;305(3):567-80 (medline /11152613)  
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COMMENTS: Cites: Protein Sci. 2005 Mar;14(3):676-83 (medline /15689514)  
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COMMENTS: Cites: Q Rev Biophys. 2004 May;37(2):121-46 (medline /15999419)  
COMMENTS: Cites: Science. 2005 Aug 5;309(5736):897-903 (medline /16002581)  
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COMMENTS: Cites: Proc Natl Acad Sci U S A. 2000 Apr 11;97(8):4034-9 (medline /10737764)  
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COMMENTS: Cites: Nature. 2006 Feb 9;439(7077):688-94 (medline /16340961)  
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ABSTRACT: Biochemical and structural analysis of membrane proteins often critically depends on the ability to overexpress and solubilize them. To identify properties of eukaryotic membrane proteins that may be predictive of successful overexpression, we analyzed expression levels of the genomic complement of over 1000 predicted membrane proteins in a recently completed Saccharomyces cerevisiae protein expression library. We detected statistically significant positive and negative correlations between high membrane protein expression and protein properties such as size, overall hydrophobicity, number of transmembrane helices, and amino acid composition of transmembrane segments. Although expression levels of membrane and soluble proteins exhibited similar negative correlations with overall hydrophobicity, high-level membrane protein expression was positively correlated with the hydrophobicity of predicted transmembrane segments. To further characterize yeast membrane proteins as potential targets for structure determination, we tested the solubility of 122 of the highest expressed yeast membrane proteins in six commonly used detergents. Almost all the proteins tested could be solubilized using a small number of detergents. Solubility in some **detergents** depended on protein size, number of transmembrane segments, and hydrophobicity of predicted transmembrane segments. These results suggest that bioinformatic approaches may be capable of identifying membrane proteins that are most amenable to overexpression and detergent solubilization for structural and biochemical analyses. Bioinformatic approaches could also be used in the redesign of proteins that are not intrinsically well-adapted to such studies.  
MESH HEADINGS: Adenosine Triphosphatases/metabolism  
MESH HEADINGS: Cell Membrane/drug effects/enzymology  
MESH HEADINGS: Detergents/pharmacology  
MESH HEADINGS: Gene Expression/drug effects  
MESH HEADINGS: Hydrophobic and Hydrophilic Interactions  
MESH HEADINGS: Membrane Proteins/\*metabolism  
MESH HEADINGS: Micelles  
MESH HEADINGS: Molecular Weight  
MESH HEADINGS: Saccharomyces cerevisiae/drug effects/\*metabolism  
MESH HEADINGS: Saccharomyces cerevisiae Proteins/\*metabolism  
MESH HEADINGS: Solubility/drug effects  
MESH HEADINGS: Titrimetry eng

1502. Whyatt, Robin M; Garfinkel, Robin; Hoepner, Lori a; Andrews, Howard; Holmes, Darrell; Williams, Megan K; Reyes, Andria; Diaz, Diurka; Perera, Frederica P; Camann, David E, and Barr, Dana B. A Biomarker Validation Study of Prenatal Chlorpyrifos Exposure Within an Inner-City Cohort During Pregnancy. 2009 Apr; 117, (4): 559-67.   
Rec #: 41239  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: BACKGROUND: We previously documented significant decreases in chlorpyrifos concentrations in maternal personal and indoor air samples among pregnant African-American and Dominican women from New York City after the 2000-2001 restrictions on its residential use. OBJECTIVE: We undertook a biomarker validation study within the same cohort to evaluate trends over time in multiple biomarkers of prenatal chlorpyrifos exposure. METHODS: Subjects were enrolled between February 2001 and May 2004 (n = 102). We measured 3,5,6-trichloro-2-pyridinol (TCPy) in postpartum meconium (n = 83), repeat prenatal maternal spot urine samples (n = 253), and postnatal urine from the mothers (n = 73) and newborns (n = 59). We measured chlorpyrifos in postnatal maternal (n = 92) and umbilical cord (n = 65) blood. RESULTS: We did not detect TCPy in infant urine, but all other biomarkers showed a highly significant decrease in detection frequencies (chi2 = 7.8-34.0, p < or = 0.005) and mean ranks (p < or = 0.006, Kruskal-Wallis) among subjects enrolled in 2003-2004 compared with those enrolled in 2001-2002. Chlorpyrifos in maternal personal and indoor air declined 2- to 3-fold over the same period (p < 0.05). In 2001-2002 samples, TCPy levels in repeat prenatal urine were positively correlated (r = 0.23-0.56), but within-subject variability exceeded between-subject variability (intraclass correlation coefficient = 0.43); indoor air levels explained 19% of the variance in prenatal urine TCPy (p = 0.001). Meconium TCPy concentrations were positively correlated with chlorpyrifos in maternal and cord blood (r = 0.25-0.33, p < 0.05) and with TCPy in maternal urine (r = 0.31, p < 0.01). CONCLUSIONS: Results suggest the biomarkers are reliable dosimeters to differentiate between groups with prenatal chlorpyrifos exposures varying by a factor of 2 or more and vividly illustrate the efficacy of residential restriction on chlorpyrifos to reduce the internal dose during pregnancy.  
Keywords: Pyridones -- urine  
Keywords: Urban Population -- statistics & numerical data  
Keywords: Humans  
Keywords: Infant, Newborn  
Keywords: Chlorpyrifos -- blood  
Keywords: Insecticides -- urine  
Keywords: Insecticides -- analysis  
Keywords: Maternal Exposure  
Keywords: Environmental Studies  
Keywords: Pregnancy  
Keywords: Chlorpyrifos -- analysis  
Keywords: Environmental Monitoring  
Keywords: Chlorpyrifos  
Keywords: Demography  
Keywords: Biological Markers -- blood  
Keywords: 3,5,6-trichloro-2-pyridinol  
Keywords: Insecticides  
Keywords: Pyridones  
Keywords: Meconium -- chemistry  
Keywords: Female  
Keywords: Biological Markers -- urine  
Keywords: Biological Markers  
Keywords: Insecticides -- blood  
Keywords: Chlorpyrifos -- urine  
Copyright - Copyright National Institute of Environmental Health Sciences Apr 2009  
Language of summary - English  
Pages - 559-67  
ProQuest ID - 222659617  
Last updated - 2012-03-02  
Place of publication - Research Triangle Park  
Corporate institution author - Whyatt, Robin M; Garfinkel, Robin; Hoepner, Lori A; Andrews, Howard; Holmes, Darrell; Williams, Megan K; Reyes, Andria; Diaz, Diurka; Perera, Frederica P; Camann, David E; Barr, Dana B  
DOI - 1705216771; 43121971; 67001; ENHP; 19440494; INODENHP0005615441  
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1503. Wielgomas, Bartosz and Czarnowski, Wojciech. Headspace single-drop microextraction and GC-ECD determination of chlorpyrifos-ethyl in rat liver. 2008; 390, (7): 1933-1941.   
Rec #: 54859  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The present work describes a headspace single-drop microextraction (HS-SDME) method in conjunction with gas chromatography electron capture detection (GC-ECD) for the determination of an organophosphate insecticide, chlorpyrifos-ethyl (CPF), in rat liver. Sample preparation included tissue homogenization with methanol in the presence of anhydrous sodium sulfate in order to isolate CPF from the matrix, followed by dilution with 10 mL of 0.1 M Hâ‚‚SOâ‚„ and headspace microextraction to a 2-ÎĽL drop of 1-octanol. The main factors affecting extraction efficiency were optimized [temperature 90 Â°C, preheating and extraction times of eight and six minutes, respectively, 2 g of (NHâ‚„)â‚‚SOâ‚„, stirring rate of 1000 rpm, 200 ÎĽL of methanolic extract]. The method allows for the separation and quantitation of residue levels of CPF in the livers of rats exposed orally to that insecticide. Using internal standardization (with chlorpyrifos-methyl used as an internal standard), the linearity of the method was demonstrated in the range 10-2500 ng gâ»Âą with a correlation coefficient R > 0.996 and a satisfactory level of precision (RSD 3.85%, n = 6). Moreover, the results obtained with the new method do not differ from those obtained with the conventional residue method used in our laboratory. The feasibility of this HS-SDME approach as an equivalent analytical method for the determination of CPF in rat liver that possessess advantages such as low cost, low solvent consumption and high throughput was confirmed. [graphic removed]  
Keywords: Chlorpyrifos-ethyl  
Berlin/Heidelberg : Springer-Verlag

1504. Wille, Timo; Thiermann, Horst, and Worek, Franz. In Vitro Kinetic Interactions of Deet, Pyridostigmine and Organophosphorus Pesticides With Human Cholinesterases. 2011 Apr 25; 190, (2-3): 79-83.   
Rec #: 43419  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The simultaneous use of the repellent DEET, pyridostigmine, and organophosphorus pesticides has been assumed as a potential cause for the Gulf War Illness and combinations have been tested in different animal models. However, human in vitro data on interactions of DEET with other compounds are scarce and provoked the present in vitro study scrutinizing the interactions of DEET, pyridostigmine and pesticides with human acetylcholinesterase (hAChE) and butyrylcholinesterase (hBChE). DEET showed to be a weak and reversible inhibitor of hAChE and hBChE. The IC(50) of DEET was calculated to be 21.7mM DEET for hAChE and 3.2mM DEET for hBChE. The determination of the inhibition kinetics of pyridostigmine, malaoxon and chlorpyrifos oxon with hAChE in the presence of 5mM DEET resulted in a moderate reduction of the inhibition rate constant k(i). The decarbamoylation velocity of pyridostigmine-inhibited hAChE was not affected by DEET. In conclusion, the in vitro investigation of interactions between human cholinesterases, DEET, pyridostigmine, malaoxon and chlorpyrifos oxon showed a weak inhibition of hAChE and hBChE by DEET. The inhibitory potency of the tested cholinesterase inhibitors was not enhanced by DEET and it did not affect the regeneration velocity of pyridostigmine-inhibited AChE. Hence, this in vitro study does not give any evidence of a synergistic effect of the tested compounds on human cholinesterases. Copyright Â© 2011 Elsevier Ireland Ltd. All rights reserved.  
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Keywords: 134-62-3  
Keywords: Malathion  
Keywords: Pesticides -- chemistry  
Keywords: Organophosphorus Compounds  
Keywords: Malathion -- chemistry  
Keywords: Acetylcholinesterase -- metabolism  
Keywords: Pyridostigmine Bromide  
Keywords: EC 3.1.1.7  
Keywords: Pyridostigmine Bromide -- chemistry  
Keywords: malaoxon  
Keywords: EC 3.1.1.-  
Keywords: Chlorpyrifos -- chemistry  
Keywords: Pesticides -- pharmacology  
Keywords: Organophosphorus Compounds -- chemistry  
Keywords: O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphate  
Keywords: DEET -- chemistry  
Keywords: DEET -- pharmacology  
Keywords: 101-26-8  
Keywords: Chlorpyrifos  
Keywords: Malathion -- pharmacology  
Keywords: Cholinesterase Inhibitors  
Keywords: 0  
Keywords: DEET  
Keywords: 5598-15-2  
Keywords: Kinetics  
Keywords: Chlorpyrifos -- analogs & derivatives  
Keywords: Pesticides  
Keywords: 1634-78-2  
Keywords: 121-75-5  
Date completed - 2011-07-26  
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Language of summary - English  
Pages - 79-83  
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SuppNotes - Comment In: Chem Biol Interact. 2011 Aug 15;193(1):107; author reply 108[21473857]  
Last updated - 2013-01-19  
British nursing index edition - Chemico-biological interactions, April 25, 2011, 190(2-3):79-83  
Corporate institution author - Wille, Timo; Thiermann, Horst; Worek, Franz  
DOI - MEDL-21354413; 21354413; 1872-7786 eng

1505. Williams, A. B. and Duke, T. W. Crabs (Arthropoda: Crustacea: Decapoda: Brachyura). 1979: 171-233.   
Rec #: 1750  
Keywords: REVIEW  
Call Number: NO REVIEW (CPY)  
Notes: EcoReference No.: 65064  
Chemical of Concern: CPY

1506. Williams, M K; Rundle, a; Holmes, D; Reyes, M; Hoepner, La; Ban, D B; Camann, De; Perera, F P; Whyatt, R M, and Williams, M K. Changes in Pest Infestation Levels, Self-Reported Pesticide Use, and Permethrin Exposure During Pregnancy After the 2000-2001 U.s. Environmental Protection Agency Restriction of Organophosphates. 2008 Dec; 116, (12): 1681-1688.   
Rec #: 45349  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Background: Widespread residential pesticide use throughout the United States has resulted in ubiquitous, low-level pesticide exposure. The mix of active pesticide ingredients is changing in response to 2000-2001 regulations restricting use of the organophosphorus insecticides chlor-pyrifbs and diazinon. Objectives: We aimed to determine the impact of U.S. Environmental Protection Agency regulations on pest infestation levels, pesticide use, and pesticides measured in indoor air samples. Methodology: 511 pregnant women from inner-city New York were enrolled between 2000 and 2006. Permethrin, a pyrethroid insecticide; piperonyl butoxide (PBO), a pyrethroid synergist; chlorpyrifos; and diazinon were measured in 48-hr prenatal personal air samples. Data on pest infestation and pesticide use were collected via questionnaire. Results: Eighty-eight percent of women reported using pesticides during pregnancy; 55% reported using higher-exposure pesticide applications (spray cans, pest bombs and/or professional pesticide applicators). Self-reported pest sightings and use of higher-exposure applications increased significantly after the regulations were implemented (P < 0.001). PBO, cis-, and trans-permethrin were detected in 75, 19, and 18% of personal air samples, respectively. Detection frequencies of PBO and cis- and trans-permethrin increased significantly over time (p < 0.05 controlling for potential confbunders). Levels and/or detection frequencies of these compounds were significantly higher among mothers reporting use of high exposure pesticide applications (p less than or equal to 0.05). Chlorpyrifos and diazinon levels decreased significantly over time (p < 0.001). Conclusion: In this cohort, pest infestations, use of pesticides, and use of permethrin appear to increase after the residential restriction of organophosphorus insecticides. This is one of the first studies to document widespread residential exposure to PBO.  
Keywords: Organophosphates  
Keywords: permethrin  
Keywords: Piperonyl butoxide  
Keywords: Pesticide applications  
Keywords: Cans  
Keywords: pests  
Keywords: Insecticides  
Keywords: H 5000:Pesticides  
Keywords: Air sampling  
Keywords: Pests  
Keywords: Pyrethroids  
Keywords: X 24330:Agrochemicals  
Keywords: Inventories  
Keywords: Organophosphorus compounds  
Keywords: Data processing  
Keywords: P 0000:AIR POLLUTION  
Keywords: Sprays  
Keywords: Permethrin  
Keywords: organophosphates  
Keywords: Pregnancy  
Keywords: USA, New York  
Keywords: Chlorpyrifos  
Keywords: EPA  
Keywords: Infestation  
Keywords: prenatal experience  
Keywords: Pesticides  
Keywords: Residential areas  
Keywords: Indoor environments  
Keywords: Diazinon  
Keywords: ENA 01:Air Pollution  
Keywords: Pollution Abstracts; Toxicology Abstracts; Health & Safety Science Abstracts; Environment Abstracts  
Date revised - 2009-01-01  
Language of summary - English  
Location - USA, New York  
Pages - 1681-1688  
ProQuest ID - 20262813  
SubjectsTermNotLitGenreText - Inventories; Data processing; Permethrin; Piperonyl butoxide; organophosphates; Pregnancy; Pesticide applications; Chlorpyrifos; Cans; Infestation; Insecticides; Pesticides; Pests; Pyrethroids; Diazinon; Organophosphorus compounds; Organophosphates; Sprays; permethrin; EPA; prenatal experience; pests; Air sampling; Residential areas; Indoor environments; USA, New York  
Last updated - 2011-12-14  
British nursing index edition - Environmental Health Perspectives [Environ. Health Perspect.]. Vol. 116, no. 12, pp. 1681-1688. Dec 2008.  
Corporate institution author - Williams, M K; Rundle, A; Holmes, D; Reyes, M; Hoepner, LA; Ban, D B; Camann, DE; Perera, F P; Whyatt, R M  
DOI - MD-0009045652; 8859428; 0091-6765 English

1507. Williams, Megan Kathleen and Whyatt, Robin M. Urban Residential Pyrethroid Insecticide Use During Pregnancy and Effects on Infant Neurodevelopment. 2009.  
Rec #: 51769  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This dissertation is a molecular epidemiologic study designed to assess the extent of prenatal exposure to pyrethroid insecticides resulting from residential pest control among inner-city women from New York City during pregnancy and to examine the relationship between prenatal exposure to pyrethroids and neurodevelopmental outcomes in the child at age 36 months. The study was conducted among the mothers and newborns enrolled in the Columbia Center for Children's Environmental Health (CCCEH) longitudinal birth cohort. The impetus for the study arose from the 2000-2001 U.S. EPA pesticide regulations restricting the applications of two organophosphorous insecticides, chlorpyrifos and diazinon, from residential pest control. Hypothesis 1. Pyrethroid insecticides are the main active ingredients in spray formulation products marketed for residential pest control in stores located throughout the catchment area of the CCCEH cohort. Results . In 2007, spray products were the most common products sold for residential pest control. The vast majority of spray products contained pyrethroid insecticides. The most common active ingredient contained in spray pesticide products was permethrin. Chlorpyrifos and diazinon have nearly been eliminated from products marketed for residential pest control. This supports my overall hypothesis that pyrethroid insecticides are replacing the organophosphorous insecticides for residential pest control. Hypothesis 2: It is possible to devise a laboratory methodology to measure pyrethroid and organophosphorous insecticides in human plasma following residential exposure. Results . A novel GC-HRMS methodology was designed and validated to measure a battery of pyrethroids in human plasma or sera. Detection limits of this study proved capable of detecting pyrethroids in 6% to 12% of study participants. Hypothesis 3. The increase in residential exposure to pyrethroids among subjects enrolled into the CCCEH cohort between 1999-2006 can be demonstrated by measuring levels of pyrethroids and the synergist piperonyl butoxide in personal air samples collected from the mother over 48-hours during the 3 rd trimester of pregnancy and in kitchen dust samples collected from the home during the 3 rd trimester of pregnancy. Results . There was widespread exposure to the pyrethroid synergist piperonyl butoxide among subjects enrolled in this cohort between years 2000-2006. Levels and detection of piperonyl butoxide were highly associated with reported use of spray products for residential pest control. Detection of piperonyl butoxide in personal air samples increased in association with the enactment of the 2000-2001 U.S. EPA pesticide regulations. As anticipated, due to the low volatility of pyrethroids, detection frequency of permethrin was relatively low in personal air samples. However, levels and detection frequencies of permethrin were associated with reported use of spray products and increased over time. Permethrin was the most frequently detected pyrethroid in dust samples. Hypothesis 4. The increase in pyrethroid insecticide exposure to the mother and fetus during pregnancy can be demonstrated by measuring levels in maternal and fetal plasma collected at delivery and in maternal urine samples collected during the 3 rd trimester of pregnancy among subjects enrolled between years 1999-2004. Results . Detection of permethrin in maternal plasma was relatively low and levels were only marginally greater than the limit of detection. However, this is the first epidemiologic study to demonstrate a high degree of concordance between detection of permethrin isomers in matched maternal and cord plasma samples. These data confirm the ability of permethrin to cross the placental barrier. The ability to examine changes in permethrin exposure over time was limited by infrequent detections and potential analytical batch effects. Results show a significant increase in the detections of trans-permethrin over years 2000-2006. Detections of cis-permethrin decreased over time in the same plasma samples. Cis- and trans-permethrin were not correlated in either maternal or cord plasma. These results were not expected as cis- and trans-permethrin are isomers of the same insecticide and levels are highly correlated in air. The lack of correlation in plasma could be due to different metabolic pathways or to differences in stabilities during storage. Results of the novel GC-HRMS methodology developed for this dissertation support findings from both the store survey and the environmental monitoring suggesting that permethrin is the predominant pyrethroid used among cohort subjects for residential pest control. Hypothesis 5 (exploratory aim). Prenatal exposure to permethrin is associated with delayed neurocognitive development in the child age 36-months. Results . Cognitive and motor development at 36 months of age using the Bayley Scales of Infant Development, 2 nd Edition was examined as a function of permethrin and piperonyl butoxide measured in personal air collected during the 3 rd trimester of pregnancy and maternal and/or cord plasma collected at birth. Adjusting for gender, ethnicity, gestational age at birth, maternal IQ, maternal education, quality of the home environment (HOME) and exposure to ETS, a significant inverse association was between prenatal piperonyl butoxide and 36-month motor developmental scores. (Abstract shortened by UMI.)  
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Keywords: 0380:Medicine  
Keywords: Neurodevelopment  
Keywords: 0573:Public health  
Keywords: Biomonitoring  
Keywords: Health and environmental sciences  
Keywords: 0766:Epidemiology  
Keywords: Children's health  
Keywords: Exposure assessment  
Keywords: Molecular epidemiology  
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0573: Public health  
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0380: Medicine  
42891241  
Neurodevelopment  
Biomonitoring  
304865348  
2012-07-12  
1694329091  
Health and environmental sciences  
Williams, Megan Kathleen  
Molecular epidemiology  
0766: Epidemiology English

1508. Williams, P. L.; James, R. C., and Roberts, S. M. Principles of Toxicology: Environmental and Industrial Applications. Second Edition. 2000: 603 p.   
Rec #: 2390  
Keywords: METHODS  
Call Number: NO METHODS (24D,24DXY,ACL,ATZ,As,CBNDS,CPY,CYP,Cr,Cr element,CuS,DMB,DQTBr,DZ,ETHN,GYP,MB,MCPP1,MOL,MTAS,MTL,NAPH,PAHs,PCP,PMR,PPCP,PPZ,PQT,RTN,SFF,SZ,THM,WFN,Ziram,Zn,Zn element)  
Notes: Chemical of Concern: 24D,24DXY,3CE,ACL,AN,ATZ,As,BAP,BNZ,BZD,CBNDS,CF,CPY,CTC,CYP,CZE,Cr,CuS,DMB,DQTBr,DZ,EGY,ETHN,ETO,FBM,FML,GYP,IPA,MB,MCPP1,MOL,MTAS,MTL,NAPH,NBZ,PAHs,PCP,PL,PMR,PPCP,PPZ,PQT,PYN,RTN,SFF,SZ,THM,TOL,VYL,WFN,Ziram,Zn

1509. Williams, R.; Croghan, C., and Ryan, P. B. Human exposures to PAHs: an eastern United States pilot study. 2013; 185, (1): 1011-1023.   
Rec #: 72039  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Personal exposure monitoring for select polycyclic aromatic hydrocarbons (PAHs) was performed as part of the National Human Exposure Assessment Survey (NHEXAS) Pilot Study in Baltimore, MD and in four surrounding counties (NHEXAS-Maryland). An objective of this effort was to establish environmental exposure estimates for non-scripted subpopulations involved in their normal activities. Participants, children, and adults (ages 13-84) were randomly selected from urban, suburban, and rural areas near Baltimore. Twenty-four hour PM(10) sample collections (similar to 5.8 m(3)) were performed using personal environmental monitors. Monitoring was performed for 47 households and 6 sampling Cycles during 1995-1996. A total of 233 personal air samples were available from the participants with eight PAHs speciated (e.g., chrysene, benzo(a)pyrene) as well as an aggregate grouping (total carcinogenic PAHs). Results indicate that similar to 50 % of the selected samples had detectable concentrations for 3 to 5 of the individual PAHs depending upon spatial setting. Noted differences were observed between exposure concentrations from individuals living in rural areas as compared to urban/suburban environments. Mean benzo(a)pyrene concentrations were observed to be 0.10 ng/m(3) across the entire sampling population. This represented a value well below the World Health Organization's 1.0 ng/m(3) ambient air guideline for this PAH.  
Keywords: Personal exposure monitoring, PAHs, Particulate matter, NHEXAS  
ISI Document Delivery No.: 061GB

1510. Williams, R. L.; Bernard, C. E.; Dyk, M. B.; Ross, J. H., and Krieger, R. I. Measurement of transferable chemical residue from nylon carpet using the California roller and a new mega-California roller. 2008; 43, (8): 675-679.   
Rec #: 72049  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Human chemical exposures resulting from transfer of surface deposition on indoor nylon carpets may be estimated by measuring transferable residues (mu g chemical/cm(2) carpet). A weighted roller developed at California Department of Food and Agriculture (CDFA) has been extensively used to sample transferable residue for estimates of human exposure in risk characterization. A modified roller has been developed to evaluate the influence of pressure on transferable chemical residue since weight and force (or pressure, kg/m(2)) may vary person-to-person and activity-to-activity. A 30.5 cm diameter roller was used to apply 60 to 2100 kg/m(2) to bracket pressures exerted by humans on a flat nylon-carpeted surface. Measurements of transferable cyfluthrin residues were made after 1, 7, and 21 days. Total Soxhlet extractable cyfluthrin residues were relatively constant during the test period. Residue transferability decreased during the study period. Modest increases in the transferability of surface residues were observed over the broad range of pressures applied by the modified roller.  
Keywords: Transferable residue, cyfluthrin, California Department of Food and  
ISI Document Delivery No.: 362XF

1511. Williamson, L. N.; Bartlett, M. G., and Terry, A. V. Determination of chlorpyrifos and its metabolites in rat blood using liquid chromatography/electrospray ionization tandem mass spectrometry. 2007; 30, (2): 273-285.   
Rec #: 72059  
Keywords: METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A method has been developed to quantify chlorpyrifos (O,O-diethyl O-[3,5,6,-trichloro-2-pyridyl] phosphorothionate) and its metabolites chlorpyrifosoxon (O,O-diethyl-O[3,5,6,trichloro-2-pyridyl] phosphate) and TCP (3,5,6,-trichloro-2- pyridinol) in rat blood by liquid chromatography/electrospray ionization tandem mass spectrometry (LC/ESI-MS/MS). **Rat blood was treated by liquid-liquid extraction** and the analytes were separated by gradient elution on an Agilent Zorbax Extended-C(8) column (2.0 x 150 mm, 5 mu m). Chlorpyrifos and chlorpyrifos-oxon were detected in positive ion mode using multiple reaction monitoring (MRM). TCP was detected in negative ion mode using parent-to-parent transition monitoring. This method was validated and the specificity, linearity, limit of quantitation (LOQ), precision, accuracy, stability, and recoveries were determined. The method was then applied to determine the level of chlorpyrifos and its metabolites from rats exposed to a subcutaneous injection of 10 and 18 mg/kg.  
Keywords: organophosphate insecticides, HPLC, tandem mass spectrometry,  
ISI Document Delivery No.: 115XW

1512. Wilson, A. L.; Watts, R. J., and Stevens, M. M. Effects of Different Management Regimes on Aquatic Macroinvertebrate Diversity in Australian Rice Fields. Institute for Land, Water and Society, School of Environmental Sciences, Charles Sturt University, Locked Bag 588, Wagga Wagga, NSW, 2678, Australia. Springer Science+Business Media//: 2008; 23, (3): 565-572.   
Rec #: 2820  
Keywords: MIXTURE  
Call Number: NO MIXTURE (CPY,FPN,MLT,PPN)  
Notes: Chemical of Concern: BSFM,CPY,FPN,MCPANa,MLT,PPN,Urea

1513. Wilson, B. W.; Rusli, F. J.; Tam, M. K. Y.; DePeters, E., and Henderson, J. D. Carbamate Protection of AChE Against Inhibition by Agricultural Chemicals. 2012; 26, (12): 506-509.   
Rec #: 72069  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The carbamate pyridostigmine bromide has been used as a pretreatment to protect individuals from the nerve agent soman. Previous research showed that pyridostigmine significantly protected human muscle acetylcholinesterase in vitro from soman and bovine red blood cell acetylcholinesterase from some organophosphorous pesticides. Research presented here demonstrates that pretreatment with other carbamates also protects acetylcholinesterase from inhibition by the pesticides chlorpyrifos-oxon and diazinon-oxon, but not from malaoxon. (C) 2012 Wiley Periodicals, Inc. J Biochem Mol Toxicol 26: 506-509, 2012; View this article online at wileyonlinelibrary.com. DOI10.1002/jbt.21456  
Keywords: Acetylcholinesterase, Carbamate, Organophosphate, Pesticides,  
ISI Document Delivery No.: 073XS

1514. Wilson, Nancy K; Strauss, Warren J; Iroz-Elardo, Nicole; Chuang, Jane C, and Wilson, Nancy K. Exposures of Preschool Children to Chlorpyrifos, Diazinon, Pentachlorophenol, and 2,4-Dichlorophenoxyacetic Acid Over 3 Years From 2003 to 2005: a Longitudinal Model. 2010 Sep; 20, (6): 546-558.   
Rec #: 40389  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The impact of the US EPA-required phase-outs starting in 2000-2001 of residential uses of the organophosphate (OP) pesticides chlorpyrifos (CPF) and diazinon (DZN) on preschool children's pesticide exposures was investigated over 2003-2005, in the Raleigh-Durham-Chapel Hill area of North Carolina. Data were collected from 50 homes, each with a child initially of age 3 years (OCh) and a younger child (YCh). Environmental samples (indoor and outdoor air, dust, soil) and child-specific samples (hand surface residue, urine, diet) were collected annually over 24-h periods at each home. Child time-activity diaries and household pesticide use information were also collected. Analytes included CPF and DZN; pentachlorophenol (PCP); 2,4-dichlorophenoxyacetic acid (2,4-D); the CPF metabolite 3,5,6-trichloro-2-pyridinol (TCP); and the DZN metabolite 2-isopropyl-6-methyl-4-pyrimidinol (IMP). Exposures (ng/day) through the inhalation, dietary ingestion, and indirect ingestion were calculated. Aggregate potential doses in ng/kg body weight per day (ng/kg/day) were obtained by summing the potential doses through the three routes of exposure. Geometric mean aggregate potential doses decreased from 2003 to 2005 for both OCh and YCh, with the exception of 2,4-D. Child-specific longitudinal modeling indicated significant declines across time of the potential doses of CPF, DZN, and PCP for both children; declines of IMP for both children, significant only for OCh; a decline of TCP for OCh but an increase of TCP for YCh; and no significant change of 2,4-D for either child. Age-adjusted modeling indicated significant effects of the child's age for all except CPF, and of time for all except PCP and 2,4-D. Within-home variability was small compared with that between homes; variability was smallest for 2,4-D, both within and between homes. The aggregate potential doses of CPF and DZN were well below published reference dose values. These findings show the success of the US EPA restrictions in reducing young children's pesticide exposures.  
Keywords: Inhalation  
Keywords: 2,4-D  
Keywords: USA, North Carolina  
Keywords: Age  
Keywords: Inosine monophosphate  
Keywords: Metabolites  
Keywords: Herbicide residues  
Keywords: Dust  
Keywords: Models  
Keywords: Soil  
Keywords: Body weight  
Keywords: 2,4-Dichlorophenoxyacetic acid  
Keywords: X 24330:Agrochemicals  
Keywords: Pentachlorophenol  
Keywords: Diets  
Keywords: Data processing  
Keywords: P 0000:AIR POLLUTION  
Keywords: Hand  
Keywords: Toxicology Abstracts; Pollution Abstracts  
Keywords: organophosphates  
Keywords: Ingestion  
Keywords: Children  
Keywords: Chlorpyrifos  
Keywords: Urine  
Keywords: Pesticides  
Keywords: Diazinon  
Date revised - 2010-10-01  
Language of summary - English  
Location - USA, North Carolina  
Pages - 546-558  
ProQuest ID - 877599374  
SubjectsTermNotLitGenreText - Inhalation; 2,4-D; Diets; Age; Data processing; Inosine monophosphate; Hand; Metabolites; organophosphates; Children; Dust; Models; Chlorpyrifos; Soil; Body weight; Urine; Pesticides; Diazinon; Pentachlorophenol; 2,4-Dichlorophenoxyacetic acid; Ingestion; Herbicide residues; USA, North Carolina  
Last updated - 2012-03-29  
British nursing index edition - Journal of Exposure Science and Environmental Epidemiology [J. Exposure Sci. Environ. Epidemiol.]. Vol. 20, no. 6, pp. 546-558. Sep 2010.  
Corporate institution author - Wilson, Nancy K; Strauss, Warren J; Iroz-Elardo, Nicole; Chuang, Jane C  
DOI - 8d40c3b2-94ca-4289-882cmfgefd107; 13709741; 1559-0631 English

1515. Winkel, L. H.; Pham, T. K.; Vi, M. L.; Stengel, C.; Amini, M.; Nguyen, T. H.; Pham, H. V., and Berg, M. Arsenic Pollution of Groundwater in Vietnam Exacerbated by Deep Aquifer Exploitation for More Than a Century.   
Rec #: 50329  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Arsenic contamination of shallow groundwater is among the biggest health threats in the developing world. Targeting uncontaminated deep aquifers is a popular mitigation option although its long-term impact remains unknown. Here we present the alarming results of a large-scale groundwater survey covering the entire Red River Delta and a unique probability model based on three-dimensional Quaternary geology. Our unprecedented dataset reveals that &sim;7 million delta inhabitants use groundwater contaminated with toxic elements, including manganese, selenium, and barium. Depth-resolved probabilities and arsenic concentrations indicate drawdown of arsenic-enriched waters from Holocene aquifers to naturally uncontaminated Pleistocene aquifers as a result of > 100 years of groundwater abstraction. Vertical arsenic migration induced by large-scale pumping from deep aquifers has been discussed to occur elsewhere, but has never been shown to occur at the scale seen here. The present situation in the Red River Delta is a warning for other As-affected regions where groundwater is extensively pumped from uncontaminated aquifers underlying high arsenic aquifers or zones.  
MESH HEADINGS: Algorithms  
MESH HEADINGS: Arsenic/\*analysis  
MESH HEADINGS: Barium/analysis  
MESH HEADINGS: Environmental Monitoring/methods  
MESH HEADINGS: Geography  
MESH HEADINGS: Humans  
MESH HEADINGS: Logistic Models  
MESH HEADINGS: Manganese/analysis  
MESH HEADINGS: Risk Assessment  
MESH HEADINGS: Rivers/\*chemistry  
MESH HEADINGS: Selenium/analysis  
MESH HEADINGS: Water Movements  
MESH HEADINGS: Water Pollutants, Chemical/\*analysis  
MESH HEADINGS: Water Supply/\*analysis eng

1516. Wismer, T. and Means, C. Toxicology of Newer Insecticides in Small Animals. 2012; 42, (2): 335-347.   
Rec #: 2340  
Keywords: REFS CHECKED,REVIEW  
Call Number: NO REFS CHECKED (ACP,ADC,BOR,BRA3,CBL,CMPH,CPY,DDVP,DMT,DS,DZ,FPN,IMC,MLN,MOM,MTPN,PFOS,PPX,PRT,PSM,SFA,TBO,TCF,TMP,TVP), NO REVIEW (ACP,ADC,BOR,BRA3,CBL,CMPH,CPY,DDVP,DMT,DS,DZ,FPN,IMC,MLN,MOM,MTPN,PFOS,PPX,PRT,PSM,SFA,TBO,TCF,TMP,TVP)  
Notes: Chemical of Concern: ACP,ADC,BOR,BRA3,CBL,CMPH,CPY,DDVP,DMT,DS,DZ,EPRN,FNTH,FPN,HMN,IDC,IMC,LUF,MLN,MOM,MTPN,PFOS,PPX,PRN,PRT,PSM,PYX,SFA,SS,TBO,TCF,TMP,TVP

1517. Wols, Ba; Hofman-Caris, Chm, and Wols, BA. Review of Photochemical Reaction Constants of Organic Micropollutants Required for Uv Advanced Oxidation Processes in Water. 2012 Jun 1; 46, (9): 2815-2827.   
Rec #: 46689  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Emerging organic contaminants (pharmaceutical compounds, personal care products, pesticides, hormones, surfactants, fire retardants, fuel additives etc.) are increasingly found in water sources and therefore need to be controlled by water treatment technology. UV advanced oxidation technologies are often used as an effective barrier against organic contaminants. The combined operation of direct photolysis and reaction with hydroxyl radicals ensures good results for a wide range of contaminants. **In this review, an overview is provided of the photochemical reaction parameters (quantum yield, molar absorption, OH radical reaction rate constant) of more than 100 organic micropollutants.** These parameters allow for a prediction of organic contaminant removal by UV advanced oxidation systems. An example of contaminant degradation is elaborated for a simplified UV/H2O2 system.  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: Hydroxyl Radical  
Keywords: Water Pollution  
Keywords: Consumer products  
Keywords: Degradation  
Keywords: P 0000:AIR POLLUTION  
Keywords: Hormones  
Keywords: Environmental Studies  
Keywords: Hydroxyl radicals  
Keywords: ASFA 3: Aquatic Pollution & Environmental Quality; Environment Abstracts; Pollution Abstracts; Aqualine Abstracts; Water Resources Abstracts  
Keywords: photochemical reactions  
Keywords: Yield  
Keywords: Pollutants  
Keywords: Reviews  
Keywords: Oxidation  
Keywords: SW 3060:Water treatment and distribution  
Keywords: Organic Compounds  
Keywords: Additives  
Keywords: Fuel  
Keywords: Technology  
Date revised - 2012-05-01  
Language of summary - English  
Pages - 2815-2827  
ProQuest ID - 1015553713  
SubjectsTermNotLitGenreText - photochemical reactions; Degradation; Consumer products; Reviews; Oxidation; Additives; Hormones; Hydroxyl radicals; Technology; Hydroxyl Radical; Water Pollution; Yield; Pollutants; Organic Compounds; Fuel  
Last updated - 2012-05-31  
Corporate institution author - Wols, BA; Hofman-Caris, CHM  
DOI - OB-f3581a1b-ffcb-46c5-b12acsamfg201; 16725011; 0043-1354 English

1518. Wong-Ek, Krongkamol; Horprathum, Mati; Eiamchai, Pitak; Limnonthakul, Puenisara; Patthanasettakul, Viyapol; Chindaudom, Pongpan; Nuntawong, Noppadon, and Wong-Ek, Krongkamol. Portable Surface-Enhanced Raman Spectroscopy for Insecticide Detection Using Silver Nanorod Film Fabricated by Magnetron Sputtering. 2011; 7911.  
Rec #: 43689  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In order to increase agricultural productivity, several countries heavily rely on deadly insecticides, known to be toxic to most living organisms and thus significantly affect the food chain. The most obvious impact is to human beings who come into contact, or even consume, pesticide-exposed crops. This work hence focused on an alternative method for insecticide detection at trace concentration under field tests. We proposed a compact Raman spectroscopy system, which consisted of a portable Raman spectroscope, and a surface-enhanced Raman scattering (SERS) substrate, developed for the purpose of such application, on a chip. For the selected portable Raman spectroscope, a laser diode of 785 nm for excitation and a thermoelectric-cooled CCD spectrometer for detection were used. The affordable SERS substrates, with a structure of distributed silver nanorods, were however fabricated by a low-energy magnetron sputtering system. Based on an oblique-angle deposition technique, several deposition parameters, which include a deposition angle, an operating pressure and a substrate rotation, were investigated for their immediate effects on the formation of the nanorods. Trace concentration of organophosphorous chemical agents, including methyl parathion, chlorpyrifos, and malathion, adsorbed on the fabricated SERS substrates were analyzed. The obtained results indicated a sensitive detection for the trace organic analyses of the toxic chemical agents from the purposed portable SERS system.  
Keywords: ENA 06:Food & Drugs  
Keywords: Chlorpyrifos  
Keywords: Insecticides  
Keywords: Food chains  
Keywords: Agricultural production  
Keywords: Lasers  
Keywords: Environment Abstracts  
Keywords: Spectroscopy  
Keywords: Silver  
Keywords: Crops  
Keywords: Malathion  
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SubjectsTermNotLitGenreText - Chlorpyrifos; Food chains; Insecticides; Agricultural production; Lasers; Spectroscopy; Silver; Crops; Malathion  
Last updated - 2012-03-29  
British nursing index edition - Proceedings of SPIE - The International Society for Optical Engineering [Proc. SPIE Int. Soc. Opt. Eng.]. Vol. 7911, [np]. 2011.  
Corporate institution author - Wong-Ek, Krongkamol; Horprathum, Mati; Eiamchai, Pitak; Limnonthakul, Puenisara; Patthanasettakul, Viyapol; Chindaudom, Pongpan; Nuntawong, Noppadon  
DOI - 994643b9-18ea-42aa-a9becsaobj201; 14591022; 0277-786X English

1519. Wong, J. W.; Zhang, K.; Tech, K.; Hayward, D. G.; Krynitsky, A. J.; Cassias, I.; Schenck, F. J.; Banerjee, K.; Dasgupta, S., and Brown, D. Multiresidue Pesticide Analysis of Ginseng Powders Using Acetonitrile- or Acetone-Based Extraction, Solid-Phase Extraction Cleanup, and Gas Chromatography-Mass Spectrometry/Selective Ion Monitoring (GC-MS/SIM) or -Tandem Mass Spectrometry (GC-MS/MS). 2010; 58, (10): 5884-5896.   
Rec #: 72109  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A multiresidue method for the analysis of 168 pesticides in dried powdered ginseng has been developed using acetonitrile or acetone mixture (acetone/cyclohexane/ethyl acetate, 2:1:1 v/v/v) extraction, solid-phase extraction (SPE) cleanup with octyl-bonded silica (C(8)), graphitized carbon black/primary secondary amine (GCB/PSA) sorbents and toluene, and capillary gas chromatography mass spectrometry/selective ion monitoring (GC-MS/SIM) or -tandem mass spectrometry (GC-MS/MS). The geometric mean limits of quantitation (LOQs) were 53 and 6 mu g/kg for the acetonitrile extraction and 48 and 7 mu g/kg for the acetone-based extraction for GC-MS/SIM and GC-MS/MS, respectively. Mean percent recoveries and standard deviations from the ginseng fortified at 25, 100, and 500 mu g/kg using GC-MS/SIM were 87 +/- 10, 88 +/- 8, and 86 +/- 10% from acetonitrile extracts and 88 +/- 13, 88 +/- 12, and 88 +/- 14% from acetone mixture extracts, respectively. The Mean percent recoveries from the ginseng at the 25, 100, and 500 mu g/kg levels using GC-MS/MS were 83 +/- 19, 90 +/- 13, and 89 +/- 11% from acetonitrile extracts and 98 +/- 20, 91 +/- 13, and 88 +/- 14% from acetone extracts, respectively. Twelve dried ginseng products were found to contain one or more of the following pesticides and their metabolites: BHCs (benzene hexachlorides, alpha-, beta-, gamma-, and delta-), chlorothalonil, chlorpyrifos, DDT (dichlorodiphenyl trichloroethane), dacthal, diazinon, iprodione, quintozene, and procymidone ranging from <1 to >4000 mu g/kg. No significant differences were found between the two extraction solvents, and GC-MS/MS was found to be more specific and sensitive than GC-MS/SIM. The procedures described were shown to be effective in screening, identifying, confirming, and quantitating pesticides in commercial ginseng products.  
Keywords: Multiresidue methods, organohalogen pesticides, GC-MS/SIM, GC-MS/MS,  
ISI Document Delivery No.: 596YN

1520. Wu, Changlong and Linden, Karl G. Phototransformation of selected organophosphorus pesticides: Roles of hydroxyl and carbonate radicals. 2010 Jun; 44, (12): 3585-3594.   
Rec #: 5140  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: The phototransformation of two organophosphorus pesticides, parathion and chlorpyrifos, by hydroxyl radicals and carbonate radicals in aqueous solution were studied. Addition of hydrogen peroxide increased the UV degradation rates of both pesticides and data were simulated through kinetic modeling. The second-order rate constants of parathion and chlorpyrifos with hydroxyl radical were determined to be 9.7-á-\_-á0.5-á+ů-á109 and 4.9-á-\_-á0.1-á+ů-á109-áMęĆ1-ásęĆ1, respectively. The presence of bi/carbonate ions reduced the pesticide degradation rates via scavenging of hydroxyl radical but the formation of carbonate radical also contributed to the degradation of the pesticides with second-order reaction rate constants of 2.8-á-\_-á0.2-á+ů-á106 and 8.8-á-\_-á0.4-á+ů-á106-áMęĆ1-ásęĆ1 for parathion and chlorpyrifos, respectively. The dual roles of bicarbonate ion in UV/H2O2 treatment systems, i.e., scavenging of hydroxyl radicals and formation of carbonate radicals, were examined and discussed using a simulative kinetic model. The transformation of pesticides by carbonate radicals at environmentally relevant bi/carbonate concentrations was shown to be a significant contributor to the environmental fate of the pesticides and it reshaped the general phototransformation kinetics of both pesticides in UV/H2O2 systems. Ultraviolet light/ Photochemistry/ Advanced oxidation/ Water treatment

1521. Wu, Changlong and Linden, Karl G. Hsu-Kim Heileen. Phototransformation of Organophosporus Pesticides: Approaches of Uv, Uv/Hydrogen Peroxide Advanced Oxidation and Sensitized Photolysis Processes. 2008: (UMI# 3371396 ).   
Rec #: 51909  
Keywords: FATE  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Organophosphorus (OPs) pesticides are a large group of chemicals that have been widely used because of their high acute toxicity and relatively high degradation rates. They have been detected in surface and ground waters and pose potential health threats to the ecosystem. UV and UV/H 2 O 2 (AOPs) are considered to be effective techniques for the degradation of the pesticides. Direct photolysis by two types of Hg UV lamps, low pressure (LP) and medium pressure (MP), and the UV/H2 O2 AOP was utilized to evaluate the kinetics and mechanisms of the **degradation of three OP pesticides including chlorpyrifos, parathion and diazinon in various waters.** Results demonstrated that direct photolysis was slow and ineffective for the destruction of the pesticides. On the other hand, UV/H 2 O2 AOP treatment was proved more effective due to the reactions between the produced hydroxyl radicals and pesticides. The second-order reaction rate constants between hydroxyl radicals and OP pesticides were determined to be 4.9 Â± 0.1 Ă—109 and 9.70 Â± 0.45 Ă—10 9 M-1 s-1 for chlorpyrifos and parathion, respectively, indicating these pesticides are vulnerable to AOP treatment. Bicarbonate was an important factor in controlling the effectiveness of UV/H2 O2 AOP against the pesticides through the scavenging of hydroxyl radicals and generating carbonate radicals. Phototransformation of the pesticides by UV/H2 O2 AOP yielded several inorganic and organic byproducts identified by using GC/EI-MS (Gas Chromatography Mass Spectrometry) and IC (ion chromatograph). The mechanisms of degradation included several simultaneous pathways. The degradation of these pesticides through sensitized phototransformation by sunlight was also evaluated. Although major water constituents affect the degradation of the pesticides, the contribution of natural organic matter (NOM) was identified as a primary factor. Finally, removal of toxicity as a function of phototransformation was evaluated using Caenorhabditis elegans as a model organism. Results demonstrated that the UV/H2 O2 AOP can effectively reduce the overall toxicity of pesticides despite the formation of various byproducts.  
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0543: Civil engineering  
Phototransformation  
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Pesticides  
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304637348  
2012-07-12  
1865331761  
Sensitized photolysis English

1522. Wu, G.; Bao, X. X.; Zhao, S. H.; Wu, J. J.; Han, A. L., and Ye, Q. F. Analysis of multi-pesticide residues in the foods of animal origin by GC-MS coupled with accelerated solvent extraction and gel permeation chromatography cleanup. 2011; 126, (2): 646-654.   
Rec #: 72139  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A new analytical method was developed to simultaneously determine residues of 109 pesticides (including isomers) in the foods of animal origin. Acetonitrile was selected for accelerated solvent extraction (ASE) for effectively extracting the pesticides from the fatty samples. The cleanup was performed with an automated gel permeation chromatography (GPC) cleanup system. The prepared samples were analysed with GC-MS in the selected ion monitoring mode (SIM) using one target and two qualitative ions for each analyte. Chlorpyrifos-d(10) was used as an internal standard. The lowest limit of detection was 0.3 mu g kg(-1) for some pesticides. The recoveries and relative standard deviations (RSDs) were checked by spiking untreated samples with pesticides at 0.05, 0.1 and 0.2 mg kg(-1). The average recoveries of most pesticides were from 62.6% to 107.8%. The precision values expressed as RSD were all <= 20.5% (n = 6). Good linearity (r >= 0.99) was observed between 0.05 and 1.5 mu g mL(-1). (C) 2010 Elsevier Ltd. All rights reserved.  
Keywords: Pesticides multi-residues, Food of animal origin, GC-MS, Accelerated  
ISI Document Delivery No.: 715BK

1523. Wu, H.; Wang, D. F.; Shi, J.; Xue, S., and Gao, M. L. Effect of the Complex of Zinc(II) and Cerium(IV) with Chitosan on the Preservation Quality and Degradation of Organophosphorus Pesticides in Chinese Jujube (Zizyphus jujuba Mill. cv. Dongzao). 2010; 58, (9): 5757-5762.   
Rec #: 72149  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effects of a novel complex of zinc(II) and cerium(IV) with chitosan film-forming material on the preservation quality of Chinese jujube fruits (Zizyphus jujuba Mill. cv. Dongzao) and degradation of organophosphorus pesticides in the fruits during the room temperature storage were investigated. The results showed that after 18 days of storage, the weight loss, respiratory intensity, and polyphenol oxidase (PPO) activity of fruits treated with the complex were 11.72, 31.51, and 7.07% lower than the control. Furthermore, total soluble solids, ascorbic acid, and polyphenol contents were 15.45, 14.55, and 13.93% higher than the control. The degradation rates of chlorpyrifos and parathion were increased to 97.31 and 92.70% for the complex treatment, which were 30.18 and 17.02% higher than the control, respectively. Therefore, the complex can be applied for preserving Chinese jujube fruits to expand their shelf life and decrease residues of organophosphorus pesticides on the fruits.  
Keywords: Chinese jujube, chitosan, preservation, oganophosphorus pesticides  
ISI Document Delivery No.: 590OW

1524. Wu, J. G.; Lin, L.; Luan, T. G.; Gilbert, Y. S. C., and Lan, C. Effects of organophosphorus pesticides and their ozonation byproducts on gap junctional intercellular communication in rat liver cell line. 2007; 45, (10): 2057-2063.   
Rec #: 72169  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effects of organophosphorus pesticides (OPs), oxons and their ozonation byproducts on gap junctional intercellular communication (GJIC) on **cultured BRL cell line** were investigated using scrape loading and dye transfer (SL/DT) technique. The neutral red uptake assay was used to identify the non-cytotoxic levels of diazinon, parathion and methyl-parathion applied to GJ1C assay. The concentration-dependent inhibition of GJ1C was observed over a range of 50-350 mg/l diazinon, parathion and methyl-parathion after 90 min incubation compared with the vehicle control. However, oxons and ozonation byproducts of OPs had no inhibition effect on GJlC at any of the concentrations tested. The inhibition of GJIC by OPs was reversible after removal of the tested pesticides followed by incubation with fresh medium. The present study suggested that the ozonation treatment could be used for the detoxification of drinking water and food crops contaminated with diazinon, parathion and methyl-parathion without formation of GJIC toxicity. (c) 2007 Elsevier Ltd. All rights reserved.  
Keywords: diazinon, parathion, methyl-parathion, ozone, buffalo rat liver  
ISI Document Delivery No.: 212LS

1525. Wu, N.; Hao, F. T., and Yu, X. J. Peripheral nerve and skin damage associated with working in a STCP factory: Report of four cases. 2012; 50, (6): 514-517.   
Rec #: 72179  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Sodium 3,5,6-trichloropyridin-2-ol (STCP) is a widely used intermediate for the production of chlorpyrifos. However, its effect on the health of workers in STCP factories has become increasingly problematic. This article reports four workers who worked in a STCP factory developed peripheral neuropathy in the lower extremities and chloracne-like skin lesions on the whole body. Patches of follicular skin eruptions (mainly blackheads, accompanied by follicular orifice cornification occasionally accompanied by milia-like skin eruptions) were found on the head and face, around the auricle, chest and back, abdomen and scrotum. In one patient, the activity of serum cholinesterase was decreased and recovered slowly, but there were no muscarinic, nicotinic, or central nervous system symptoms. The concentrations of urine STCP detected in four patients were 0.266, 0.066, 0.044, and 0.033 mu g/mL.  
Keywords: Sodium 3,5,6-trichloropyridin-2-ol (STCP), Chloracne, Cholinesterase  
ISI Document Delivery No.: 966LI

1526. Wu, W. M.; Wu, Y. M.; Zheng, M. M.; Yang, L. M.; Wu, X. P.; Lin, X. C., and Xie, Z. H. Pressurized capillary electrochromatography with indirect amperometric detection for analysis of organophosphorus pesticide residues. 2010; 135, (8): 2150-2156.   
Rec #: 72199  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A new analytical method, pressurized capillary electrochromatography with indirect amperometric detection, has been developed for the determination of some non-electroactive organophosphorus pesticides (OPPs). When 0.1 mmol L(-1) of 3,4-dihydroxybenzylamine (DHBA) was added to the mobile phase containing 50% v/v of ACN and 50% v/v of MES buffer (10 mmol L(-1), pH 5.5), and +0.9 V (vs. Ag/AgCl) of working potential were used, maximal signal levels of analytes could be achieved. A separation voltage of + 10 kV, a column pressure of 7.0 MPa and a pump flow rate of 0.05 mL min(-1) were selected as the other optimal conditions for separation of six OPPs, namely, dimethoate, methyl parathion, ethyl parathion, chlorpyrifos, chlorpyrifos-methyl, trichlorfon. The OPPs could be separated within 15 min and determined with the detection limits ranging from 0.008 to 0.2 mg/kg. Combining with a solid phase extraction procedure, mean recoveries between 78.9 and 87.2% for vegetable samples and from 81.4 to 98.6% for fruit samples were obtained.  
Keywords: INDIRECT ELECTROCHEMICAL DETECTION, LIQUID-CHROMATOGRAPHY,  
ISI Document Delivery No.: 628AR

1527. Wu, X. M.; Bennett, D. H.; Ritz, B.; Frost, J.; Cassady, D.; Lee, K., and Hertz-Picciotto, I. Residential insecticide usage in northern California homes with young children. 2011; 21, (4): 427-436.   
Rec #: 72209  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Residential insecticide usage and actual application details were collected in a population-based sample of 477 households residing within 22 counties in northern California with at least one child of age <= 5 years between January 2006 and August 2008. Structured telephone interviews were conducted collecting information on residential use of insecticides, including outdoor sprays, indoor sprays, indoor foggers, applications by professionals, and pet flea/tick control during the previous year. Interviews also covered post-treatment behaviors, which influence post-application exposure levels. Altogether, 80% of the households applied some type of insecticide in the previous year, with half of this population using two or more application methods. Of the households using insecticides, half reported applying insecticides relatively infrequently (<4 times per year), whereas 11-13% reported high frequency of use ( 424 times per year). Application frequency was temperature dependent, with significantly more applications during the warmer months from May through October. Spot treatments appeared to be the most prevalent application pattern for sprays. For one out of three of the indoor applications, children played in the treated rooms on the day of the application, and for 40% of the outdoor applications, pets played in the treated area on the day of the application. These findings describing the intensity of insecticide use and accompanying behaviors in families with young children may inform future insecticide exposure modeling efforts, and ultimately, risk assessments. Journal of Exposure Science and Environmental Epidemiology (2011) 21, 427-436; doi: 10.1038/jes.2010.36; published online 30 June 2010  
Keywords: insecticide, residential exposure, exposure-related behavior,  
ISI Document Delivery No.: 780LT

1528. Wu, X. W.; Cheng, L. Y.; Cao, Z. Y., and Yu, Y. L. Accumulation of chlorothalonil successively applied to soil and its effect on microbial activity in soil. 2012; 81, 65-69.   
Rec #: 72219  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effect of successive **chlorothalonil** applications on the persistence of chlorothalonil, soil respiration activity, and dehydrogenase activity (DHA) in soil was investigated under laboratory conditions. The persistence of chlorothalonil in soil was prolonged significantly with the increase in the concentration applied. Repeated applications of chlorothalonil at 25 mg kg(-1) led to its accumulation in soil. The effect of repeated chlorothalonil applications on soil respiration and DHA was found to be a concentration-dependent process. Soil respiration was permanently inhibited by the successive introductions of chlorothalonil at 25 mg kg(-1). DHA was reduced significantly on day 15 after four successive treatments of 10 mg kg(-1) and 25 mg kg(-1) of chlorothalonil, although a recovery trend could be found after the third and fourth treatments. Repeated chlorothalonil applications might increase the persistence of chlorothalonil in soil and thus alter soil microbial activity. (C) 2012 Elsevier Inc. All rights reserved.  
Keywords: Chlorothalonil, Microbial activity, Accumulation, Repeated applications  
ISI Document Delivery No.: 966MV

1529. Wu, X-W; Hua, R-M; Tang, J, and Wu, X-W. Effect of Surfactants on Photolysis of Chlorpyrifos in Aqueous Solution. 2009 Aug; 28, (8): 1705-1711.   
Rec #: 41089  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The effect of different surfactants on photolysis of chlorpyrifos was investigated in aqueous solutions under UV and high pressure mercury lamp(HPML) irradiation. The results indicated that photodegradation all well followed pseudo-first-order kinetics under various conditions. No photosensitive effect was observed in the solutions with low dosage SDBS under UV radiation, and its photosensitive efficiency against chlorpyrifos was 11.61% at the concentration of 50 mg times L super(-1) SDBS. The photosensitive efficiency of chlorpyrifos in the presence of 1, 10 and 50 mg times L super(-1) Tween80 was 7%, 24.79% and 90.20%, respectively. When concentration of Span20 was 10, 50 mg times L super(-1), its photosensitive efficiency was 33.07%, 65.49%, respectively. The half lives of chlorpyrifos were found to be 1.32 h, 1.29 h for aqueous solutions containing 50 mg times L super(-1) 0201 and 2201, respectively. Under HPML irradiation, the photolysis of chlorpyrifos was accelerated by Nongru404, Nongru603, Nongru500, Nongru601 and 0206B. The photolysis rate of chlorpyrifos was 1.73 and 2.22 times greater in the presence of 25 mg times L super(-1) Nongru404 and Nongru601 surfactants than that in water alone, respectively. However, little photosensitive efficiency was found on photolysis of chlorpyrifos in the presence of Nongru500, 0206B and Nongru603. An increased absorption of chlorpyrifos solutions in ultraviolet part of the spectrum was responsible for photosensitive efficiency. The results also indicated that the photosensitive efficiency of chlorpyrifos was related to types and dosage of surfactants.  
Keywords: Photolysis  
Keywords: Chlorpyrifos  
Keywords: Efficiency  
Keywords: Photodegradation  
Keywords: P 8000:RADIATION  
Keywords: Irradiation  
Keywords: Kinetics  
Keywords: Pesticides  
Keywords: Ultraviolet radiation  
Keywords: Absorption  
Keywords: Mercury  
Keywords: Pollution Abstracts  
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ProQuest ID - 20825923  
SubjectsTermNotLitGenreText - Chlorpyrifos; Photolysis; Efficiency; Photodegradation; Kinetics; Irradiation; Ultraviolet radiation; Pesticides; Absorption; Mercury; Surfactants  
Last updated - 2011-12-14  
British nursing index edition - Journal of Agro-Environment Science [J. Agro-Environ. Sci.]. Vol. 28, no. 8, pp. 1705-1711. Aug 2009.  
Corporate institution author - Wu, X-W; Hua, R-M; Tang, J  
DOI - MD-0010549247; 10982776; 1672-2043 English

1530. Xia, X. J. ; Zhang, Y.; Wu, J. X.; Wang, J. T.; Zhou, Y. H.; Shi, K.; Yu, Y. L., and Yu, J. Q. Brassinosteroids Promote Metabolism of Pesticides in Cucumber. 2009; 57, (18): 8406-8413.   
Rec #: 72229  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Brassinosteroids (BRs) are known to protect crops from the toxicity of herbicides, fungicides and insecticides, It is shown here that application of 24-epibrassinolide (EBR) accelerated metabolism of various pesticides and conse uently reduced their residual levels in cucumber (Cucumis sativus L). Chlorpyrifos, a widely used insecticide, caused significant reductions of net photosynthetic rate (Pn) and quantum yield of PSII (Phi(PSII) in cucumber leaves. EBR pretreatment alleviated the declines of Pn and Phi(PSII) caused by chlorpyrifos application, and this effect of EBR was associated with reductions of chlorpyrifos residues. o understand how EBR promotes chlorpyrifos metabolism, the effects of EBR on activity and of en ymes involved in pesticide metabolism were analyed. EBR had a positive effect on the activation of glutathione S-transferase (GST), peroxclase (POD), and glutathione reductase (GR) after treatment with chlorpyrifos, although the effect on GR was attenuated at later time points when plants were treated with 1 mM chlorpyrifos. In addition, EBR enhanced the epression of P450 and MRP, which encode P450 monooxygenase and ABCtype transporter, respectively. owever, the epression of GST was consistently lower than that of plants treated with only chlorpyrifos. Importantly, the stimulatory effect of EBR on pesticide metabolism was also observed for cypermethrin, chlorothalonil, and carbenda im, which was attributed to the enhanced activity and genes involved in pesticide metabolism. he results suggest that BRs may be promising, environmentally friendly, natural substances suitable for wide application to reduce the ris s of human and environment e posure tc pesticides.  
Keywords: Brassinosteroids, Cucumis sativus, degradation, glutathione, enzyme  
ISI Document Delivery No.: 493OS

1531. Xie, C. G.; Li, H. F.; Li, S. Q.; Wu, J., and Zhang, Z. P. Surface Molecular Self-Assembly for Organophosphate Pesticide Imprinting in Electropolymerized Poly(p-aminothiophenol) Membranes on a Gold Nanoparticle Modified Glassy Carbon Electrode. 2010; 82, (1): 241-249.   
Rec #: 72239  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This paper reports a surface molecular self-assembly strategy for molecular imprinting in electropolymerized polyaminothiophenol (PATP) membranes at the surface of gold nanoparticles (AuNPs) modified glassy carbon (gc) electrode for the electrochemical detection of pesticide chlorpyrifos (CPF). Electropolmerizable p-aminothiophenol (ATP) was first assembled on the AuNPs at the gc electrode surface by the formation of Au-S bonds, and subsequently, the CPF template was further assembled onto the monolayer of ATP through the hydrogen-bonding interaction between amino group and CPF. A conductive hybrid membrane was fabricated at the assembled gc electrode by the electropolymerization in a mixing solution containing additional ATP and CPF templates, and meanwhile, the CPF was spontaneously, imprinted into the PATP/AuNP film. The amount of imprinted sites at the PATP/AuNP film was significantly increased due to the additional replenishment of CPF templates. The cyclic voltammetric response of the imprinted PATP-AuN-P-gc sensor to CPF is about 3.2-fold as compared with the imprinted PATP-Au sensor, and the detection limit for CPF is about 2 orders of magnitude lower than that by the imprinted PATP-Au sensor. An excellent electrochemical selectivity for CPF over other pesticides was also achieved. The combination of surface molecular self-assembly with electropolymerized molecular imprinting on a larger surface area of a AuNP-modified electrode produces a high ratio of imprinted sites and, thus, provides an ultrasensitive electrochemical detection of organophosphate pesticide.  
Keywords: TANDEM MASS-SPECTROMETRY, SOLID-PHASE EXTRACTION, CONDUCTING  
ISI Document Delivery No.: 539OT

1532. Xie, H; Zhu, L; Wang, J, and Xie, H. Determination of Chlorpyrifos Residues in Water, Cabbage and Soil by Gc-Fpd. 2012 Aug; 31, (8): 1268-1274.   
Rec #: 38619  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Using gas chromatography-flame photometric detection (GC-FPD), a method was developed for the analysis of organophosphorus pesticide chlorpyrifos in water, soil and cabbage. The chlorpyrifos residue in water was extracted and purified by petroleum ether and liquid-liquid extraction. The chlorpyrifos residue in cabbage was extracted with acetone and the chlorpyrifos residue in soil was extracted by the Soxhlet method with acetone. After clean up by liquid-liquid distribution, it was determinated by GC-FPD equipped with OV-101(100% dimethyl polysiloxane) column (30 m x 0.53 mm x 1.0 mu m). The retention time of chlorpyrifos was 1.74 min; the linearity range of chlorpyrifos was between 1.0 x 10 super(-11) and 1.0 x 10 super(-8) g; the correlation coefficient was 0.9998; the limits of detection was 2.0 x 10 super(-12) g. Average recovery rates of chlorpyrifos in these samples ranged from 80% to 120% with coefficient of variation from 1.19% to 4.40%. The method is sensitive and operated easily to detect low levels of chlorpyrifos in the water, cabbage and soil.  
Keywords: Residues  
Keywords: ENA 09:Land Use & Planning  
Keywords: Meteorological & Geoastrophysical Abstracts; Environment Abstracts  
Keywords: Correlations  
Keywords: Brassica  
Keywords: Chlorpyrifos  
Keywords: Soil  
Keywords: Petroleum  
Keywords: Photometric observations  
Keywords: Pesticides  
Keywords: M2 551.5:General (551.5)  
Keywords: Acetone  
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SubjectsTermNotLitGenreText - Photometric observations; Correlations; Soil; Chlorpyrifos; Residues; Petroleum; Pesticides; Ethers; Acetone; Brassica  
Last updated - 2012-12-03  
British nursing index edition - Environmental Chemistry - Huanjing Huaxue. Vol. 31, no. 8, pp. 1268-1274. Aug 2012.  
Corporate institution author - Xie, H; Zhu, L; Wang, J  
DOI - MD-0019988760; 17299975; 0254-6108 English

1533. Xie, Hui; Zhu, Lusheng; Ma, Tingting; Wang, Jun; Wang, Jinhua; Su, Jun; Shao, Bo, and Xie, Hui. Immobilization of an Enzyme From a Fusarium Fungus Wz-I for Chlorpyrifos Degradation. 2010 Dec; 22, (12): 1930-1935.   
Rec #: 40199  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The free enzyme extracted from WZ-I, which was identified as Fusarium LK. ex Fx, could effectively degrade chlorpyrifos, an organophosphate insecticide. The methods of immobilizing this free enzyme and determined its degradation-related characteristics were investigated. The properties of the immobilized enzyme were compared with those of the free enzyme. The optimal immobilization of the enzyme was achieved in a solution of 30 g/L sodium alginate at 4[deg]C for 4-12 hr. The immobilized enzyme showed the maximal activity at pH 8.0, 45[deg]C. The maximum initial rate and the substrate concentration of the immobilized enzyme were less than that of the free enzyme. The immobilized enzyme, therefore, had a higher capacity to withstand a broader range of temperatures and pH conditions than the free enzyme. With varying pH and temperatures, the immobilized enzyme was more active than the free enzyme in the degradation reaction. In addition, the immobilized enzyme exhibited only a slight loss in its initial activity, even after three repeated uses. The results showed that the immobilized enzyme was more resistant to different environmental conditions, suggesting that it was viable for future practical use.  
Keywords: Fusarium  
Keywords: Degradation  
Keywords: Organophosphates  
Keywords: Temperature  
Keywords: Enzymes  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos  
Keywords: Sodium  
Keywords: Insecticides  
Keywords: Pesticides  
Keywords: Environment Abstracts  
Keywords: ENA 21:Wildlife  
Keywords: pH  
Date revised - 2011-06-01  
Language of summary - English  
Pages - 1930-1935  
ProQuest ID - 886113020  
SubjectsTermNotLitGenreText - Sodium; Chlorpyrifos; Insecticides; Degradation; Organophosphates; Pesticides; Temperature; Enzymes; pH; Fusarium  
Last updated - 2011-10-24  
Corporate institution author - Xie, Hui; Zhu, Lusheng; Ma, Tingting; Wang, Jun; Wang, Jinhua; Su, Jun; Shao, Bo  
DOI - OB-79166c38-6288-4fc1-b60acsamfg201; 14443019; 1001-0742 English

1534. Xie, Shaofei; Xiang, Bingren; Yu, Liyan, and Deng, Haishan. Tailoring Noise Frequency Spectrum to Improve Nir Determinations. 2009 Dec 15; 80, (2): 895-902.   
Rec #: 44429  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Near infrared spectroscopy (NIR) contains excessive background noise and weak analytical signals caused by near infrared overtones and combinations. That makes it difficult to achieve quantitative determinations of low concentration samples by NIR. A simple chemometric approach has been established to modify the noise frequency spectrum to improve NIR determinations. The proposed method is to multiply one Savitzky-Golay filtered NIR spectrum with another reference spectrum added with thermal noises before the other Savitzky-Golay filter. Since Savitzky-Golay filter is a kind of low-pass filter and cannot eliminate low frequency components of NIR spectrum, using one step or two consecutive Savitzky-Golay filter procedures cannot improve the determination of NIR greatly. Meanwhile, significant improvement is achieved via the Savitzky-Golay filtered NIR spectrum processed with the multiplication alteration before the other Savitzky-Golay filter. The frequency range of the modified noise spectrum shifts toward higher frequency regime via multiplication operation. So the second Savitzky-Golay filter is able to provide better filtering efficiency to obtain satisfied result. The improvement of NIR determination with tailoring noise frequency spectrum technique was demonstrated by both simulated dataset and two measured NIR spectral datasets. It is expected that noise frequency spectrum technique will be adopted mostly in applications where quantitative determination of low concentration sample is crucial.  
Keywords: 2921-88-2  
Keywords: Antiviral Agents -- administration & dosage  
Keywords: Water Pollutants, Chemical -- analysis  
Keywords: Humans  
Keywords: Algorithms  
Keywords: Chromatography, High Pressure Liquid  
Keywords: Antiviral Agents -- blood  
Keywords: Chlorpyrifos -- analysis  
Keywords: Water Supply -- analysis  
Keywords: Insecticides  
Keywords: Water Pollutants, Chemical  
Keywords: Male  
Keywords: 59277-89-3  
Keywords: Capsules  
Keywords: Signal Processing, Computer-Assisted  
Keywords: Reproducibility of Results  
Keywords: Acyclovir -- administration & dosage  
Keywords: Antiviral Agents  
Keywords: Insecticides -- analysis  
Keywords: Chlorpyrifos  
Keywords: Acyclovir -- blood  
Keywords: Acyclovir  
Keywords: 0  
Keywords: Spectroscopy, Near-Infrared -- methods  
Keywords: Spectroscopy, Near-Infrared -- instrumentation  
Date completed - 2010-01-20  
Date created - 2009-10-19  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 895-902  
ProQuest ID - 734093858  
Last updated - 2013-01-19  
British nursing index edition - Talanta, December 15, 2009, 80(2):895-902  
Corporate institution author - Xie, Shaofei; Xiang, Bingren; Yu, Liyan; Deng, Haishan  
DOI - MEDL-19836570; 19836570; 1873-3573 eng

1535. Xiong, J. F.; Guan, Z.; Zhou, G. M.; Tang, X. Y.; Lv, Y. J., and Wang, H. L. Determination of chlorpyrifos in environmental water samples by dispersive liquid-liquid microextraction with solidification of a floating organic drop followed by gas chromatography with flame photometry detection. 2012; 4, (10): 3246-3250.   
Rec #: 72319  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Dispersive liquid-liquid microextraction with solidification of a floating organic drop (DLLME-SFO) followed by gas chromatography with flame photometry detection (GC-FPD) has been adopted and improved for determining chlorpyrifos in environmental water samples. A mixture of 1.5 mL of methanol (disperser solvent) and 40 mu L of 1-dodecanol (extraction solvent) was quickly injected into 25 mL of a water sample with a liquid-transferring device. After five minutes, 0.5 g of sodium chloride was added into the aqueous solution and the sample vial was shaken by hand. Another five minutes later, the sample was centrifugated at 3400 rpm for 3 min, and then the centrifugal tube was placed in an ice bath. When the extraction solvent floating on the top of the aqueous solution had solidified, it was transferred into another vial and diluted with 60 mu L of ethyl acetate. The extraction recovery (ER) and the enrichment factor (EF) were 79.02% and 232.42, respectively. The limit of detection (LOD) (S/N = 3) was 0.02 mu g L(-1), the linear range was 0.05-4 mu g L(-1), the relative standard deviation (RSD) was in the range of 3.93-7.29% and the recoveries of spiked samples ranged from 84.34% to 110.20%.  
Keywords: SOLID-PHASE MICROEXTRACTION, ORGANOPHOSPHORUS PESTICIDES,  
ISI Document Delivery No.: 012LS

1536. Xiong, J. F.; Tang, X. Y.; Zhou, G. M.; Guan, Z., and Wu, L. M. Dispersive solid phase extraction coupled with HPLC-UV for simultaneous determination of chlorpyrifos and 3,5,6-trichloro-2-pyridinol in soil samples. 2013; 5, (2): 536-540.   
Rec #: 72329  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A simple method was proposed for simultaneous determination of chlorpyrifos and its hydrolysis and biodegradation product 3,5,6-trichloro-2-pyridinol (TCP) in soil samples. The analytes were extracted with ethyl acetate (EtOAc) under optimized pretreatment conditions such as the type, volume and pH of extraction solvent. Clean-up of the extract from soil was conducted by dispersive solid phase extraction (DSPE) using activated carbon as the adsorbent. High performance liquid chromatography with ultraviolet detection (HPLC-UV) was used for simultaneous determination of the two analytes. Under the optimized HPLC conditions, the limits of detection (LOD), obtained on signal-to-noise ratio (S/N) of 3, for chlorpyrifos and TCP were 0.0080 mg kg(-1) and 0.0120 mg kg(-1), respectively. Linear calibration curves were obtained in the range of 0.05-2.00 mg kg(-1) and 0.03-2.00 mg kg(-1) for chlorpyrifos and TCP, respectively. The spike recoveries from soil ranged from 89.4% to 114%, and the relative standard deviation (RSD) was in the range of 0.80%-14%.  
Keywords: CHROMATOGRAPHY-MASS-SPECTROMETRY, POLYBROMINATED DIPHENYL ETHERS,  
ISI Document Delivery No.: 058TZ

1537. Xu, F; Chang, X; Lou, D; Wu, Q; Zhou, Z, and Xu, F. Chlorpyrifos Exposure Causes Alternation in Dopamine Metabolism in Pc12 Cells. 2012 May; 22, (4): 309-314.   
Rec #: 38849  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos (CPF) is one of the organophosphorus pesticides widely used around the world, especially in China. Acetylcholinesterase inhibition is the main effect of organophosphorus insecticides exposure. Studies showed that CPF may also interfere with the metabolism of monoamine transmitters. To investigate the effects of CPF on dopaminergic pathway, the dopamine content, gene expression of catechol-O-methyl- transferase (COMT), vesicular monoamine transporter-2 (VMAT-2), and monoamine oxidase (MAO) and its activity in PC12 cells exposed to CPF was determined. Results showed that cell viability was decreased and total dopamine concentration was increased with CPF administration in a dose-dependent pattern. Gene of MAO was significantly downregulated in PC12 cells, while genes of COMT and VMAT-2 in PC12 cells did not show any change after CPF exposure. The MAO activity was decreased following incubation exposed to CPF. These results suggest that CPF may interfere with dopaminergic pathway through inhibition on gene and protein expression of MAO in vitro.  
Keywords: Gene expression  
Keywords: Chlorpyrifos  
Keywords: Pesticides (organophosphorus)  
Keywords: Insecticides  
Keywords: Dopamine  
Keywords: Pheochromocytoma cells  
Keywords: Acetylcholinesterase  
Keywords: Amine oxidase (flavin-containing)  
Keywords: X 24330:Agrochemicals  
Keywords: Toxicology Abstracts  
Keywords: Metabolism  
Date revised - 2012-10-01  
Language of summary - English  
Pages - 309-314  
ProQuest ID - 1093475613  
SubjectsTermNotLitGenreText - Gene expression; Chlorpyrifos; Pesticides (organophosphorus); Insecticides; Dopamine; Pheochromocytoma cells; Acetylcholinesterase; Amine oxidase (flavin-containing); Metabolism  
Last updated - 2012-10-19  
British nursing index edition - Toxicology Mechanisms and Methods [Toxicol. Mech. Methods]. Vol. 22, no. 4, pp. 309-314. May 2012.  
Corporate institution author - Chang, X; Lou, D; Zhou, Z  
DOI - MD-0019808024; 17172008; 1537-6516 English

1538. Xu, J. F.; Li, W. J.; Chen, X. Y., and Zhou, Y. Klebsiella alba sp nov., a novel pesticide-tolerant bacterium from a heavily polluted environment. 2010; 56, (3): 241-247.   
Rec #: 72359  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A novel Gram-negative, aerobic, rod-shaped and pesticide (chlorpyrifos and atrazine) tolerant strain, designated CW-D 3(T), was isolated from a heavily polluted soil sample in Jiangsu Province, China. The strain could tolerate about 800 mu g.ml(-1) atrazine or chlorpyrifos when added in TYB medium. A polyphasic taxonomy including phylogenetic and phenotypic analysis was performed on the new isolate. Phylogenetic analysis and chemotaxonomic characteristics revealed that strain CW-D 3(T) belongs to the genus Klebsiella. Its closest phylogenetic neighbors were K. singaporensis (strain LX3(T)), three subspecies of K. pneumoniae (strains ATCC 13883(T), ATCC 13884(T) and ATCC 11296(T)) and K. granulomatis, according to 16S rRNA and rpoB gene analysis. The 16S rRNA gene sequence similarity was about 94.8-97.6% and the rpoB gene sequence similarity was about 96.8-98.6% to its phylogenetic neighbors. Strain CW-D 3(T) also showed low DNA-DNA reassociationalues (less than 21%) with respect to the three subspecies of K. pneumoniae and Klebsiella singaporensis, its major fatty acids were C(14:0), C(16:0), c-C(17:0) and c-C(19:0) omega 8c. The G+C content of the DNA was 58.3 mol%. Phylogenetic and phenotypic results supported the assignment of CW-D 3(T) as a novel species of the genus Klebsiella, for which the name Klebsiella alba sp. nov. is proposed. The type strain is CW-D 3(T) (=LMG 24441(T)=KCTC 12878(T) =CCTCC AB 206144(T)).  
Keywords: Klebsiella alba, polluted environment, polyphasic taxonomy, rpoB gene,  
ISI Document Delivery No.: 847CC

1539. Xu, W. N.; Liu, W. B., and Liu, Z. P. Trichlorfon-induced apoptosis in hepatocyte primary cultures of Carassius auratus gibelio. 2009; 77, (7): 895-901.   
Rec #: 72379  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: **Trichlorfon**, an organophosphorus pesticide, can disrupt metabolism, reproduction and immune functions of some aquatic animals. In the present study, the effect of trichlorfon on apoptosis and the underlying apoptotic mechanism were investigated in primary cultures of Carassius auratus gibelio **hepatocytes**. Analyses of cultures exposed to 0, 0.01, 0.1, and 1.0 mg L(-1) trichlorfon concentrations for 24 h indicated that trichlorfon induced apoptosis and caused nuclear shrinkage, cell membrane rupture, cytoskeletal collapse, loss of cytoplasm, mitochondria vacuolization, and apoptotic body formation, as well as lipid droplet accumulation. Trichlorfon increased intracellular reactive oxygen species and malondialdehyde concentrations and caused cytochrome c release from mitochondria into the cytoplasm, leading to caspase-3 activation. These findings contributed to a better understanding of the mechanisms underlying trichlorfon-induced apoptosis via activation of mitochondrial pathways while clearly indicating that trichlorfon-induced cell death was via apoptosis accompanied by mitochondrial cytochrome c release and consequent caspase-3 activation. (C) 2009 Elsevier Ltd. All rights reserved.  
Keywords: Apoptosis, Carassius auratus gibelio hepatocytes, Primary culture,  
ISI Document Delivery No.: 522IX

1540. Xu, X. M.; Yu, S.; Li, R.; Fan, J.; Chen, S. H.; Shen, H. T. ; Han, J. L.; Huang, B. F., and Ren, Y. P. Distribution and migration study of pesticides between peel and pulp in grape by online gel permeation chromatography-gas chromatography/mass spectrometry. 2012; 135, (1): 161-169.   
Rec #: 72389  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A multi-residue method for the analysis of 175 pesticides was developed by online gel permeation chromatography-gas chromatography/mass spectrometry (GPC-GC/MS) to study pesticide distribution and migration between peel and pulp in grape. The separated peel and pulp samples were extracted by ace-tonitrile after fortified with chlorpyrifos-d(10) isotope internal standard. The extract was first purified by solid phase distribution sorbent of primary secondary amine (PSA) and then detected by online GPC-GC/MS. At the spiking levels of 10, 50 and 200 mu g kg(-1), 73.7%, 94.3% and 98.9% of the pesticides, respectively, presented recoveries between 70% and 120%. The ratios were 91.4%, 94.9% and 92.0%, respectively, for the relative standard deviations (RSDs) bellow 15%. Limits of detection (LODs) for the pesticides in pulp were below 10 mu g kg(-1). Pesticides were separated to four groups according to the distribution ratios (peel/whole grape) of 100%, 80-99.9%, 50-80% and 0-50% in peel. Relationship between the pesticide distribution and corresponding regulation of EU maximum residue level (MRL) was discussed. Six factors influencing the pesticides distribution and migration between peel and pulp were discussed. Weak linear correlation between the pesticide solubility in water (20 degrees C) and the distribution ratios (lowest and average) in peel was found for most of the detected pesticides with solubility less than 200 mg L(-1). (c) 2012 Elsevier Ltd. All rights reserved.  
Keywords: Grape, Peel and pulp, Pesticides, Distribution and migration mechanism,  
ISI Document Delivery No.: 971LO

1541. Xu, Y.; Bian, W. J.; Li, S. N., and Zhu, G. N. Acute Toxicity of Five Insecticides to Daphnia magna in Water-Sediment System. Institute of Pesticides and Environmental Toxicology, Zhejiang University, Hangzhou 310029, China,//: 2011; 30, (5): 855-859(CHI) (ENG ABS).   
Rec #: 2320  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (BFT,CPY,CYF,FNV,FPN)  
Notes: Chemical of Concern: BFT,CPY,CYF,FNV,FPN

1542. Yadav, J L ; Saini, R K, and Yadav, J L. Status of Adoption of Seed Treatment Practice in Wheat Among Farmers of Mahendergarh District of Haryana. 2010 Jun; 28, (2B): 1250-1253.   
Rec #: 44089  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Farmers' responses on adoption of seed treatment practice for wheat in different blocks of Mahendergarh district of Haryana were recorded with the help of questionnaire through personal interviews. Farmers in different blocks, namely, Ateli, Mahendergarh, Nangal Chaudhary, Narnaul and Kanina, were questioned on various aspects such as whether they adopted seed treatment with insecticides/fungicides or mixed Azotobactor (for enhancing nitrogen fixation) with seed or not, utility of seed treatment, its economy and effectiveness, source of guidance for it. The results showed that about 85% of the farmers of the district adopted seed treatment practice in wheat Per cent farmers opting for seed treatment with insecticides alone, insecticide + fungicides, and Azotobactor were 92.9, 6.0 and 1.1, respectively. Most of the farmers used the recommended pesticides i.e. chlorpyrifos, endosulfan, bavistin and rexil, for treating the seed but at doses higher than recommended. About 99% of the farmers termed seed treatment practice as beneficial, 62.8% as cheap, 31.4% as costly and 93.7% as simple. About 99% of the farmers obtained effective control of the targeted pests/diseases through seed treatment Apart from using their own experience, the farmers sought guidance for seed treatment from three major sources: government agencies associated with agriculture, electronic media and pesticide dealers from where 55.0, 56.6 and 68.8% farmers, sought help. Among different blocks, farmers of Kanina, Narnaul and Ateli had greater awareness about seed treatment over, those of Nangal Chaudhary and Mahendergarh.  
Keywords: Agriculture  
Keywords: wheat  
Keywords: Inventories  
Keywords: Seeds  
Keywords: India, Haryana  
Keywords: Adoption  
Keywords: Endosulfan  
Keywords: ENA 06:Food & Drugs  
Keywords: Chlorpyrifos  
Keywords: Seed treatments  
Keywords: Triticum aestivum  
Keywords: pests  
Keywords: Insecticides  
Keywords: Nitrogen fixation  
Keywords: D 04040:Ecosystem and Ecology Studies  
Keywords: Pesticides  
Keywords: Fungicides  
Keywords: Economics  
Keywords: seed treatments  
Keywords: Pests  
Keywords: Ecology Abstracts; Environment Abstracts  
Keywords: A 01400:Soil Microbes  
Date revised - 2010-09-01  
Language of summary - English  
Location - India, Haryana  
Pages - 1250-1253  
ProQuest ID - 755143212  
SubjectsTermNotLitGenreText - Agriculture; Chlorpyrifos; Inventories; Seed treatments; Seeds; Insecticides; Nitrogen fixation; Pesticides; Fungicides; Adoption; Pests; Endosulfan; wheat; pests; Economics; seed treatments; Triticum aestivum; India, Haryana  
Last updated - 2012-03-29  
British nursing index edition - Environment and Ecology [Environ. Ecol.]. Vol. 28, no. 2B, pp. 1250-1253. Jun 2010.  
Corporate institution author - Yadav, J L; Saini, R K  
DOI - MD-0014638454; 13682020; 0970-0420 English

1543. Yan, X.; Shi, H. Y., and Wang, M. H. Development of an enzyme-linked immunosorbent assay for the simultaneous determination of parathion and imidacloprid. 2012; 4, (12): 4053-4057.   
Rec #: 72459  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A multi-determinant immunogen was prepared by haptens of parathion and imidacloprid conjugated to bovine serum albumin (BSA). The broad-specificity polyclonal antibody (BsPAb) was generated by male New Zealand white rabbits immunized with the multi-determinant immunogen. The antibody was screened against six different coating antigens. An indirect competitive enzyme-linked immunosorbent assay (ic-ELISA) was developed and used for the analysis of  **parathion and imidacloprid** simultaneously. Under the optimized conditions, the 50% inhibition concentration (IC(50)) value for parathion and imidacloprid was 0.052 and 1.70 mg L(-1), with a limit of detection (LOD, IC(10)) of 0.0005 and 0.0045 mg L(-1), respectively. There was no obvious cross-reactivity (CR) with most of the neonicotinoids and organophosphorus insecticides, except for imidaclothiz (23.9%) and acetamiprid (6.17%). The recoveries of parathion and imidacloprid in environmental and agricultural samples, including tap water, river water, soil and cabbage, ranged from 87.2% to 117% and 84.4% to 107%, respectively. These results showed that the ic-ELISA can be used as a sensitive tool for detecting parathion and imidacloprid simultaneously in environmental and agricultural samples.  
Keywords: MONOCLONAL-ANTIBODY, CHLORPYRIFOS-METHYL, SAMPLES, ELISA, FENITROTHION,  
ISI Document Delivery No.: 049FH

1544. Yan, X. Y.; Lashley, S.; Smulian, J. C.; Ananth, C. V.; Barr, D. B.; Ledoux, T. A.; Hore, P., and Robson, M. G. Pesticide Concentrations in Matrices Collected in the Perinatal Period in a Population of Pregnant Women and Newborns in New Jersey, USA. 2009; 15, (5): 948-967.   
Rec #: 72469  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Gestational exposure to pesticides may adversely affect fetal development and birth outcomes. However, data on fetal exposure and associated health effects in newborns remain sparse. We measured a variety of pesticides and metabolites in maternal urine, maternal serum, cord serum, amniotic fluid, and meconium samples collected at the time of cesarean delivery from 150 women in central New Jersey, USA. Women who used pesticides at home had higher concentrations of pesticides or metabolites in cord serum [e.g., dacthal (p = .007), diethyltoluamide (p = .043), and phthalimide (p = .030)] than those who did not use pesticides, suggesting that residential use of pesticides may contribute to overall exposure as assessed by biomonitoring. Except for orthophenylphenol, the concentrations of most pesticides in biological matrices of this study population were either comparable to or lower than the levels reported in previous studies and in the U.S. general population. The daily exposure estimates of two representative organophosphorus insecticides ( chlorpyrifos and diazinon) were lower than most regulatory protection limits (USEPA oral benchmark dose(10)/100, USEPA reference oral dose, or ATSDR minimal risk levels); however, they were near or at the USEPA's population-adjusted doses for children and women. No abnormal birth outcomes or other clinical endpoints were noted in those newborns who had higher concentrations of orthophenylphenol during the perinatal period.  
Keywords: pesticides, urine, blood, amniotic fluid, exposure assessment, pregnant  
ISI Document Delivery No.: 512FM

1545. Yan, Xiaoyong and Robson, Mark Gregory. Biomarker Identification and Exposure Assessment of Environmentally Toxic Substances in a Population of Pregnant Women and Newborns. 2009: (UMI# 3379089 ).   
Rec #: 51779  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Widespread exposure to environmentally toxic chemicals may adversely affect fetal development and birth outcomes. However, data on prenatal exposure and associated health effects in newborns are very limited. **A variety of pesticides, phthalates, and their metabolites were measured in maternal urine, maternal serum, cord serum, amniotic fluid, and meconium samples collected at the time of cesarean delivery from 150 women in central New Jersey.** Significantly higher concentrations of dacthal (p=0.007), diethyltoluamide (p=0.043), and phthalimide (p=0.030) in cord serum of pesticide users than non-users suggests that residential use of pesticides may contribute to overall exposure. The concentrations of most pesticides in biological matrices of this study population were either comparable to or lower than the levels reported in previous studies and in the US general population, except for orthophenylphenol. The daily intakes of two representative organophosphorus insecticides (chlorpyrifos and diazinon) were lower than most regulatory protection limits (EPA oral benchmark dose 10 /100, EPA reference oral dose, or ATSDR minimal risk levels). The urinary concentrations of most phthalate metabolites were comparable to or lower than the U.S. general population, except for mono-(2-ethylhexyl) phthalate, mono-(2-ethyl-5-hydroxyhexyl) phthalate, and mono-(2-ethyl-5-oxohexyl) phthalate, three metabolites of di(2-ethylhexyl) phthalate (DEHP). The median urinary concentrations of mono-(2-ethyl-5-hydroxyhexyl) phthalate (109 ÎĽg/L) and mono-(2-ethyl-5-oxohexyl) phthalate (95.1 ÎĽg/L) were more than 5 times their population-based concentrations, while the median urinary concentration of mono-(2-ethylhexyl) phthalate was over 20 times higher. Calculation of daily phthalate intakes using the urinary biomarker data revealed that none of the pregnant women tested had integrated exposures to DEHP higher than the ATSDR MRLs. High concentrations of DEHP metabolites may indicate a recent exposure to the plastic medical devices containing DEHP in the hospital. However, no abnormal birth outcomes or other adverse clinical reproductive endpoints were noted in those newborns who had higher concentrations of orthophenylphenol and DEHP during the perinatal period. Significantly higher concentrations and detection frequencies in maternal urine than in maternal serum and cord serum suggest that urinary concentrations of the metabolites may be more reliable biomarkers of exposure to the environmental toxicants than the concentrations in other biological specimens.  
Start Page: 103  
ISSN/ISBN: 9781109456202  
Keywords: 0383:Surgery  
Keywords: 0380:Medicine  
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Keywords: Newborns  
Keywords: Pesticides  
Keywords: 0383:Toxicology  
Keywords: Biomarkers  
Keywords: Health and environmental sciences  
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2009  
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Biomarkers  
0383: Toxicology  
66569  
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Pregnancy  
0380: Medicine  
42791421  
1917781031  
2010-08-07  
Phthalates  
Newborns  
0470: Environmental Health  
Pesticides  
304989200  
Health and environmental sciences  
3379089  
Environmental toxins  
Yan, Xiaoyong English

1546. Yanai, J.; Brick-Turin, Y.; Dotan, S.; Langford, R.; Pinkas, A., and Slotkin, T. A. A Mechanism-Based Complementary Screening Approach for the Amelioration and Reversal of Neurobehavioral Teratogenicity. 2010; 32, (1): 109-113.   
Rec #: 2140  
Keywords: MODELING  
Call Number: NO MODELING (CPY,NCTN,PCP)  
Notes: Chemical of Concern: CPY,NCTN,PCP

1547. Yanai, J. and Pinkas, A. Reversal of Chlorpyrifos Neurobehavioral Teratogenicity in Mice by Adult Allographic Subventricular Zone-Derived Neural Stem Cell Transplantation. 2010; 32, (4): 498-(ABS).   
Rec #: 2560  
Keywords: ABSTRACT  
Call Number: NO ABSTRACT (CPY)  
Notes: Chemical of Concern: CPY

1548. Yang, C.; Song, C. J.; Mulchandani, A., and Qiao, C. L. Genetic Engineering of Stenotrophomonas Strain YC-1 To Possess a Broader Substrate Range for Organophosphates. 2010; 58, (11 ): 6762-6766.   
Rec #: 72499  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In this work, Stenotrophomonas sp. strain YC-1, a native soil bacterium that produces methyl parathion hydrolase (MPH), was genetically engineered to possess a broader substrate range for organophosphates (OPs). A surface anchor system derived from the truncated ice nucleation protein (INPNC) from Pseudomonas syringae was used to target organophosphorus hydrolase (OPH) onto the cell surface of strain YC-1, reducing the potential substrate uptake limitation. The surface localization of INPNC OPH was verified by cell fractionation, Western blot, proteinase accessibility, and immunofluorescence microscopy. No growth inhibition was observed for the engineered strain, and suspended cultures retained almost 100% activity over a period of 2 weeks. Concomitant expression of OPH in strain YC-1 resulted in a recombinant strain capable of simultaneously degrading diethyl and dimethyl OPs. A mixture of six OP pesticides (0.2 mM each) could be degraded completely within 5 h. The broader substrate specificity in combination with the rapid degradation rate makes this engineered strain a promising candidate for in situ remediation of OP-contaminated sites.  
Keywords: Organophosphate detoxification, organophosphorus hydrolase, methyl  
ISI Document Delivery No.: 602OU

1549. Yang, C.; Zhu, Y. R.; Yang, J. J.; Liu, Z.; Qiao, C. L.; Mulchandani, A., and Chen, W. Development of an Autofluorescent Whole-Cell Biocatalyst by Displaying Dual Functional Moieties on Escherichia coli Cell Surfaces and Construction of a Coculture with Organophosphate-Mineralizing Activity. 2008; 74, (24): 7733-7739.   
Rec #: 72509  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Surface display of the active proteins on living cells has enormous potential in the degradation of numerous toxic compounds. Here, we report the codisplay of organophosphorus hydrolase (OPH) and enhanced green fluorescent protein (GFP) on the cell surface of Escherichia coli by use of the truncated ice nucleation protein (INPNC) and Lpp-OmpA fusion systems. The surface localization of both INPNC-OPH and Lpp-OmpA-GFP was demonstrated by Western blot analysis, immunofluorescence microscopy, and a protease accessibility experiment. Anchorage of GFP and OPH on the outer membrane neither inhibits cell growth nor affects cell viability, as shown by growth kinetics of cells and stability of resting cultures. The engineered E. coli can be applied in the form of a whole-cell biocatalyst and can be tracked by fluorescence during bioremediation. This strategy of codisplay should open a new dimension for the display of multiple functional moieties on the surface of a bacterial cell. Furthermore, a coculture comprised of the engineered E. coli and a natural p-nitrophenol (PNP) degrader, Ochrobactrum sp. strain LL-1, was assembled for complete mineralization of organophosphates (OPs) with a PNP substitution. The coculture degraded OPs as well as PNP rapidly. Therefore, the coculture with autofluorescent and mineralizing activities can potentially be applied for bioremediation of OP-contaminated sites.  
Keywords: GREEN-FLUORESCENT PROTEIN, ICE-NUCLEATION PROTEIN, PARATHION HYDROLASE  
ISI Document Delivery No.: 381CU

1550. Yang, D; Howard, a; Bruun, D; Ajua-Alemanj, M; Pickart, C; Lein, P J, and Yang, D. Chlorpyrifos and Chlorpyrifos-Oxon Inhibit Axonal Growth by Interfering With the Morphogenic Activity of Acetylcholinesterase. 2008 Apr 1; 228, (1): 32-41.   
Rec #: 42239  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A primary role of acetylcholinesterase (AChE) is regulation of cholinergic neurotransmission by hydrolysis of synaptic acetylcholine. In the developing nervous system, however, AChE also functions as a morphogenic factor to promote axonal growth. This raises the question of whether organophosphorus pesticides (OPs) that are known to selectively bind to and inactivate the enzymatic function of AChE also interfere with its morphogenic function to perturb axonogenesis. To test this hypothesis, **we exposed primary cultures of sensory neurons** derived from embryonic rat dorsal root ganglia (DRG) to chlorpyrifos (CPF) or its oxon metabolite (CPFO). Both OPs significantly decreased axonal length at concentrations that had no effect on cell viability, protein synthesis or the enzymatic activity of AChE. Comparative analyses of the effects of CPF and CPFO on axonal growth in DRG neurons cultured from AChE nullizygous (AChE super(-) super(/) super(-)) versus wild type (AChE super(+) super(/) super(+)) mice indicated that while these OPs inhibited axonal growth in AChE super(+) super( )/ super(+) DRG neurons, they had no effect on axonal growth in AChE super(-) super( )/ super(-) DRG neurons. However, transfection of AChE super(-) super(/) super(-) DRG neurons with cDNA encoding full-length AChE restored the wild type response to the axon inhibitory effects of OPs. These data indicate that inhibition of axonal growth by OPs requires AChE, but the mechanism involves inhibition of the morphogenic rather than enzymatic activity of AChE. These findings suggest a novel mechanism for explaining not only the functional deficits observed in children and animals following developmental exposure to OPs, but also the increased vulnerability of the developing nervous system to OPs.  
Keywords: CSA Neurosciences Abstracts; Toxicology Abstracts  
Keywords: Pesticides (organophosphorus)  
Keywords: Protein biosynthesis  
Keywords: Sensory neurons  
Keywords: Acetylcholinesterase  
Keywords: N3 11028:Neuropharmacology & toxicology  
Keywords: Dorsal root ganglia  
Keywords: Cell culture  
Keywords: Metabolites  
Keywords: Children  
Keywords: Hydrolysis  
Keywords: Chlorpyrifos  
Keywords: Nervous system  
Keywords: Neurotransmission  
Keywords: Transfection  
Keywords: Axonogenesis  
Keywords: Acetylcholine  
Keywords: Embryos  
Keywords: Enzymatic activity  
Keywords: X 24330:Agrochemicals  
Date revised - 2008-07-01  
Language of summary - English  
Pages - 32-41  
ProQuest ID - 20718309  
SubjectsTermNotLitGenreText - Axonogenesis; Nervous system; Acetylcholinesterase; Chlorpyrifos; Enzymatic activity; Sensory neurons; Transfection; Embryos; Hydrolysis; Metabolites; Cell culture; Acetylcholine; Protein biosynthesis; Children; Dorsal root ganglia; Neurotransmission; Pesticides (organophosphorus)  
Last updated - 2011-12-13  
British nursing index edition - Toxicology and Applied Pharmacology [Toxicol. Appl. Pharmacol.]. Vol. 228, no. 1, pp. 32-41. 1 Apr 2008.  
Corporate institution author - Yang, D; Howard, A; Bruun, D; Ajua-Alemanj, M; Pickart, C; Lein, P J  
DOI - MD-0008184329; 8254325; 0041-008X English

1551. Yang, G. and Cho, N. H. Development, Validation, and Application of a Portable SPR Biosensor for the Direct Detection of Insecticide Residues. 2008; 17, (5): 1038-1046.   
Rec #: 72539  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This Study was carried out to develop a small-sized biosensor based on Surface plasmon resonance (SPR) for the rapid identification of insecticide residues for food safety. The SPR biosensor module Consists of a single 770 rim-fight emitting diodes (LED) light source, several optical lenses for transferring light, a hemisphere sensor chip, photo detector, A/D converter, power Source, and software for signal processing using a computer. Except for the computer, the size and weight of the sensor module are 150 (L)x70 (W)x120 (H) mm and 828 g, respectively. Validation and application procedures were designed to assess refractive index analysis, affinity properties, sensitivity, linearity, limits of detection, and robustness which includes an analysis of baseline stability and reproducibility of ligand immobilization using carbamate (carbofuran and carbaryl) and organophosphate (cadusafos, ethoprofos, and chlorpyrifos) insecticide residues. With direct binding analysis, insecticide residues were detected at less than the minimum 0.01 ppm and analyzed in less than 100 sec with a good linear relationship. Based on these results, we find that the binding interaction with active target groups in enzymes using the miniaturized SPR biosensor could detect low concentrations which satisfy, the maximum residue limits for pesticide tolerance in Korea, Japan, and the USA.  
Keywords: Surface plasmon resonance, biosensor, insecticide, pesticide, carbamate,  
ISI Document Delivery No.: 368WS

1552. Yang, G. and Kang, S. SPR-based antibody-antigen interaction for real time analysis of carbamate pesticide residues. 2008; 17, (1): 15-19.   
Rec #: 72549  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This research was conducted to develop a quick and sensitive method of detecting carbamate residues using the immobilization of antibody-antigen interactions with surface plasmon resonance (SPR). We have used commercialized surface plasmon resonance equipment (Biacore 3000). The antibody used for the immunoassay was specific for glutathione-S-transferase (GST) and the antigens included several carbamate pesticides (carbofuran, carbaryl, and benfuracarb). When antigens were applied to the protein GST, the detection limit was 2 ng/mL of carbamate pesticide. The fabricated protein GST maintained its activity for over 200 measurements. Thus we determined that the SPR biosensors could detect the specific reversible binding of a reactant in solution to a binding partner immobilized on the surface of the sensor and allow real-time detection and monitoring.  
Keywords: biosensor, surface plasmon resonance (SPR), carbamate, pesticide residue  
ISI Document Delivery No.: 273IC

1553. Yang, G; Kang, S, and Yang, G. Detection of Multi-Class Pesticide Residues Using Surface Plasmon Resonance Based on Polyclonal Antibody. 2008 Jun; 17, (3): 547-552.   
Rec #: 45869  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The detection of carbamate (carbofuran, carbaryl, benfracarb, tbiodicarb, and methomil) and organophosphate (diazinon, cadusafos, ethoprofos, parathion-methyl, and chlorpyrifos) pesticide residues with very low detection limits was carried out using surface plasmon resonance (SPR) based equipment The capacity to develop a portable SPR biosensor for food safety was also investigated.  **The applied ligand for the immunoassays was polyclonal goat anti-rabbit immunoglobulin (IgG) peroxidase conjugate. Concentration tests using direct binding assays showed the possibility of quantitative analysis. For ligand fishing to find a proper antibody to respond to each pesticide, acetylcholinesterase (AChE), and glutathione-s-transferase (GST) were tested.** The reproducibility and precision of SPR measurements were evaluated. With this approach, the limit of detection for pesticide residues was 1 ng/mL and analysis took less than 11 min. Thus, it was demonstrated that detecting multi-class pesticide residues using SPR and IgG antibodies provides enough sensitivity and speed for use in portable SPR biosensors.  
Keywords: Carbofuran  
Keywords: Acetylcholinesterase  
Keywords: Pesticide residues  
Keywords: Food  
Keywords: Peroxidase  
Keywords: Carbaryl  
Keywords: organophosphates  
Keywords: Glutathione transferase  
Keywords: Pesticides (carbamates)  
Keywords: Chlorpyrifos  
Keywords: Biosensors  
Keywords: Antibodies  
Keywords: surface plasmon resonance  
Keywords: Pesticides  
Keywords: Biotechnology and Bioengineering Abstracts  
Keywords: Immunoglobulin G  
Keywords: W 30955:Biosensors  
Keywords: Immunoassays  
Keywords: Diazinon  
Date revised - 2008-10-01  
Language of summary - English  
Pages - 547-552  
ProQuest ID - 20948282  
SubjectsTermNotLitGenreText - Pesticide residues; surface plasmon resonance; Immunoglobulin G; Biosensors; Carbofuran; Acetylcholinesterase; Pesticides (carbamates); Glutathione transferase; Chlorpyrifos; Antibodies; organophosphates; Peroxidase; Pesticides; Immunoassays; Carbaryl; Food; Diazinon  
Last updated - 2011-12-14  
British nursing index edition - Food Science and Biotechnology [Food Sci. Biotech.]. Vol. 17, no. 3, pp. 547-552. Jun 2008.  
Corporate institution author - Yang, G; Kang, S  
DOI - MD-0008349435; 8370106; 1226-7708 English

1554. Yang, Q.; Nagano, T.; Shah, Y.; Cheung, C.; Ito, S., and Gonzalez, F. J. The Ppar Alpha-Humanized Mouse: a Model to Investigate Species Differences in Liver Toxicity Mediated by Ppar Alpha.   
Rec #: 51379  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Toxicol Sci. 1999 Jan;47(1):1-8 (medline /10048147)  
COMMENTS: Cites: Cancer Lett. 1999 Aug 23;143(1):87-94 (medline /10465342)  
COMMENTS: Cites: Cancer Res. 1999 Oct 1;59(19):4776-80 (medline /10519382)  
COMMENTS: Cites: J Biol Chem. 2000 Sep 1;275(35):27117-22 (medline /10852923)  
COMMENTS: Cites: Am J Pathol. 2000 Jun;156(6):2149-57 (medline /10854235)  
COMMENTS: Cites: Gene Expr. 2001;9(6):291-304 (medline /11764000)  
COMMENTS: Cites: Biochem Biophys Res Commun. 2002 Jan 25;290(3):1114-22 (medline /11798191)  
COMMENTS: Cites: Annu Rev Med. 2002;53:409-35 (medline /11818483)  
COMMENTS: Cites: Science. 1975 Nov 21;190(4216):787-9 (medline /1198095)  
COMMENTS: Cites: Toxicol Appl Pharmacol. 2002 Dec 15;185(3):180-96 (medline /12498735)  
COMMENTS: Cites: Curr Med Chem. 2003 Feb;10(4):267-80 (medline /12570700)  
COMMENTS: Cites: Physiol Genomics. 2003 Sep 29;15(1):9-19 (medline /12851464)  
COMMENTS: Cites: Crit Rev Toxicol. 2003;33(6):655-780 (medline /14727734)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 2004 Mar 2;101(9):2999-3004 (medline /14973191)  
COMMENTS: Cites: Cancer Res. 2004 Jun 1;64(11):3849-54 (medline /15172993)  
COMMENTS: Cites: Toxicol Pathol. 2004 Jul-Aug;32 Suppl 2:6-11 (medline /15503658)  
COMMENTS: Cites: Mol Pharmacol. 2005 Mar;67(3):681-94 (medline /15576629)  
COMMENTS: Cites: Mol Pharmacol. 2005 Apr;67(4):1257-67 (medline /15635043)  
COMMENTS: Cites: Toxicol Pathol. 2005;33(1):181-4 (medline /15805070)  
COMMENTS: Cites: Toxicol Sci. 2005 Nov;88(1):250-64 (medline /16081524)  
COMMENTS: Cites: Carcinogenesis. 2006 May;27(5):1074-80 (medline /16377806)  
COMMENTS: Cites: Carcinogenesis. 2007 Jun;28(6):1171-7 (medline /17331954)  
COMMENTS: Cites: Mol Cell Biol. 2007 Jun;27(12):4238-47 (medline /17438130)  
COMMENTS: Cites: Proc Natl Acad Sci U S A. 1976 Jun;73(6):2043-6 (medline /180535)  
COMMENTS: Cites: Nature. 1980 Jan 24;283(5745):397-8 (medline /6766207)  
COMMENTS: Cites: Biochem J. 1982 Apr 1;203(1):161-8 (medline /7103935)  
COMMENTS: Cites: Mol Cell Biol. 1995 Jun;15(6):3012-22 (medline /7539101)  
COMMENTS: Cites: Biochemistry. 1993 Jun 1;32(21):5598-604 (medline /7684926)  
COMMENTS: Cites: Atherosclerosis. 1996 Jul;124 Suppl:S29-37 (medline /8831913)  
COMMENTS: Cites: J Lipid Res. 1997 Sep;38(9):1851-8 (medline /9323594)  
COMMENTS: Cites: Carcinogenesis. 1997 Nov;18(11):2029-33 (medline /9395198)  
COMMENTS: Cites: FEBS Lett. 1998 Jul 3;430(3):227-30 (medline /9688544)  
ABSTRACT: To determine the impact of the species difference between rodents and humans in response to peroxisome proliferators (PPs) mediated by peroxisome proliferator-activated receptor (PPAR)alpha, PPAR alpha-humanized transgenic mice were generated using a P1 phage artificial chromosome (PAC) genomic clone bred onto a ppar alpha-null mouse background, designated hPPAR alpha PAC. In hPPAR alpha PAC mice, the human PPAR alpha gene is expressed in tissues with high fatty acid catabolism and induced upon fasting, similar to mouse PPAR alpha in wild-type (Wt) mice. Upon treatment with the PP fenofibrate, hPPAR alpha PAC mice exhibited responses similar to Wt mice, including peroxisome proliferation, lowering of serum triglycerides, and induction of PPAR alpha target genes encoding enzymes involved in fatty acid metabolism in liver, kidney, and heart, suggesting that human PPAR alpha (hPPAR alpha) functions in the same manner as mouse PPAR alpha in regulating fatty acid metabolism and lowering serum triglycerides. However, in contrast to Wt mice, treatment of hPPAR alpha PAC mice with fenofibrate did not cause significant hepatomegaly and hepatocyte proliferation, thus indicating that the mechanisms by which PPAR alpha affects lipid metabolism are distinct from the hepatocyte proliferation response, the latter of which is only induced by mouse PPAR alpha. In addition, a differential regulation of several genes, including the oncogenic let-7C miRNA by PPs, was observed between Wt and hPPAR alpha PAC mice that may contribute to the inherent difference between mouse and human PPAR alpha in activation of hepatocellular proliferation. The hPPAR alpha PAC mouse model provides an in vivo platform to investigate the species difference mediated by PPAR alpha and an ideal model for human risk assessment PPs exposure.  
MESH HEADINGS: Animals  
MESH HEADINGS: Antimetabolites/diagnostic use  
MESH HEADINGS: Blotting, Northern  
MESH HEADINGS: Bromodeoxyuridine/diagnostic use  
MESH HEADINGS: Cell Proliferation/drug effects  
MESH HEADINGS: Chromosomes, Artificial, Human/genetics  
MESH HEADINGS: Cloning, Molecular  
MESH HEADINGS: Drug-Induced Liver Injury/\*pathology  
MESH HEADINGS: Fenofibrate/pharmacology  
MESH HEADINGS: Humans  
MESH HEADINGS: Hypolipidemic Agents/pharmacology  
MESH HEADINGS: Lipids/blood  
MESH HEADINGS: Mice  
MESH HEADINGS: Mice, Transgenic  
MESH HEADINGS: Mitochondria, Liver/metabolism  
MESH HEADINGS: Models, Biological  
MESH HEADINGS: PPAR alpha/\*physiology  
MESH HEADINGS: RNA/biosynthesis  
MESH HEADINGS: Reverse Transcriptase Polymerase Chain Reaction  
MESH HEADINGS: Species Specificity eng

1555. Yang, T. C.; Xu, X. M.; Hou, J.; Gong, Z. Y.; Cheng, Z. P.; Fan, W. Z.; Fu, T.; Wang, S. S.; Ye, X. J.; Wu, Y. P.; Chen, M.; Ling, F.; Feng, X. Y.; Zhu, G. R.; Ren, Z. Y.; Fu, G. M., and He, F. Dengue Fever Vector Composition and Pesticide Residues in Yiwu, Zhejiang Province, China. 2012; 47, (4): 309-315.   
Rec #: 72589  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: In 2009, an outbreak of dengue fever occurred in Yiwu, the major international market in Zhejiang province, China. A mosquito vector eradication program was undertaken using several insecticides to limit further transmission of the dengue virus. At the conclusion of this effort, the affected area was surveyed for dengue fever vector species, and mosquito-breeding area water samples were collected and analyzed for residual pesticide content. The survey detected the Asian tiger mosquito, Aedes albopictus (Skuse), in 19 villages in Yiwu, accounting for 51.7% of the mosquitoes in the 89 samples collected. Other species collected included Armigeres subalbatus (Coquillett), Culex pipiens quinquefasciatus Say, Cx. tritaeniorhynchus Giles, Cx. mimulus Edwards, and Anopheles sinensis Wiedemann. Analysis of water from 45 mosquito-breeding sites using gas chromatography-mass spectrometry detected a total of 7 pesticides, including the herbicide prometryn, 2 organophosphate insecticides (chlorpyrifos and triazophos), and 3 pyrethroid insecticides (cyhalothrin, cypermethrin, and permethrin). The maximum level of permethrin detected was 323.9 mu g/L in breeding waters in which Ae. albopictus and Ar subalbatus coexisted.  
Keywords: dengue, mosquito, vectors, pesticide residue, water analysis  
ISI Document Delivery No.: 998WW

1556. Yang, X.; Wang, M.; Shu, S.; Zou, Z., and Xiang, K. [Damage and Control of Agrotis Ypsilon on Scrophularia Ningpoensis].   
Rec #: 77889  
Keywords: NON-ENGLISH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: OBJECTIVE: To study the damage of Agrotis ypsilon on Scrophularia ningpoensis and the control method, so as to provide scientific basis for its integrated pests management (IPM).  
ABSTRACT: METHOD: The field investigation and the field controlling trial were carried out for the research.  
ABSTRACT: RESULT: There is obvious relationship between the pre-season crops and the damage degree of S. ningpoensis. The damage rate of the fields which had planted maize and tobacco in the last planting season was much higher than that of the other fields. The average damage rate could reach 12.43% and 15.68%. The result of five pesticides against A. ypsilon in field trial showed that the controlling effect of 10% beta-cypermethrin EC 2000 times and 40% chlorpyrifos EC 1500 times were 92.53% and 91.69%, respectively.  
ABSTRACT: CONCLUSION: A. ypsilon could be well controlled while 10% beta-cypermethrin EC or 40% chlorpyrifos EC are sprayed during the period of seedling.  
MESH HEADINGS: Animals  
MESH HEADINGS: Chlorpyrifos/pharmacology  
MESH HEADINGS: Insect Control/\*methods  
MESH HEADINGS: Insecticides/pharmacology  
MESH HEADINGS: Moths/drug effects/\*physiology  
MESH HEADINGS: Plant Diseases/\*parasitology  
MESH HEADINGS: Pyrethrins/pharmacology  
MESH HEADINGS: Scrophularia/\*parasitology chi

1557. Yang, X. B.; Ying, G. G., and Kookana, R. S. Rapid multiresidue determination for currently used pesticides in agricultural drainage waters and soils using gas chromatography-mass spectrometry. 2010; 45, (2): 152-161.   
Rec #: 72599  
Keywords: FATE  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: An efficient and sensitive method for simultaneous determination of 38 pesticides in agricultural drainage waters and soils has been developed and validated. Water samples were extracted using solid-phase extraction with C18 cartridges while solid samples (suspended particle matter and soil) were extracted by using the quick, easy, cheap, effective, rugged and safe (QuEChERS) extraction method. The target pesticides were analyzed by using gas chromatography-mass spectrometry with electron impact ionization. The proposed method allowed a simultaneous determination and confirmation of a large number of pesticides in agricultural drainage waters, suspended particle matters and soils/sediments with a good reproducibility and low detection limits. The developed method was applied to a survey of pesticides in a vegetable growing area of Guangzhou, China. The pesticides commonly found in the area were butachlor, carbofuran, dichlorvos, fipronil, isocarbophos and pyridaben.  
Keywords: Drainage water, suspended particle matter, soil, solid phase extraction,  
ISI Document Delivery No.: 595BO

1558. Yang, Zhong-Hua; Liu, Yu; Lu, Yue-Le; Wu, Tong; Zhou, Zhi-Qiang, and Liu, Dong-Hui. Dispersive suspended microextraction. 2011 Nov 14-; 706, (2): 268-274.   
Rec #: 4990  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: A novel sample pre-treatment technique termed dispersive suspended microextraction (DSME) coupled with gas chromatography-flame photometric detection (GC-FPD) has been developed for the determination of eight organophosphorus pesticides (ethoprophos, malathion, chlorpyrifos, isocarbophos, methidathion, fenamiphos, profenofos, triazophos) in aqueous samples. In this method, both extraction and two phasesÇÖ separation process were performed by the assistance of magnetic stirring. After separating the two phases, 1 ++L of the suspended phase was injected into GC for further instrument analysis. Varieties of experiment factors which could affect the experiment results were optimized and the following were selected: 12.0 ++L p-xylene was selected as extraction solvent, extraction speed was 1200 rpm, extraction time was 30 s, the restoration speed was 800 rpm, the restoration time was 8 min, and no salt was added. Under the optimum conditions, limits of detections (LODs) varied between 0.01 and 0.05 ++g LêÆ1. The relative standard deviation (RSDs, n = 6) ranged from 4.6% to 12.1%. The linearity was obtained by five points in the concentration range of 0.1Çô100.0 ++g LêÆ1. Correlation coefficients (r) varied from 0.9964 to 0.9995. The enrichment factors (EFs) were between 206 and 243. In the final experiment, the developed method has been successfully applied to the determination of organophosphorus pesticides in wine and tap water samples and the obtained recoveries were between 83.8% and 101.3%. Compared with other pre-treatment methods, DSME has its own features and could achieve satisfied results for the analysis of trace components in complicated matrices. Organophosphorus pesticides/ Dispersive suspended microextraction/ Gas chromatography/ Wine/ Tap water

1559. Yao, Yuan; Harner, Tom; Blanchard, Pierrette; Tuduri, Ludovic; Waite, Don; Poissant, Laurier; Murphy, Clair; Belzer, Wayne; Aulagnier, Fabien, and Sverko, Ed. Pesticides in the Atmosphere Across Canadian Agricultural Regions. 2008 Aug 15; 42, (16): 5931-5937.   
Rec #: 49289  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The Canadian Atmospheric Network for Currently Used Pesticides (CANCUP) was the first comprehensive, nationwide air surveillance study of pesticides in Canada. This paper presentsthe atmospheric occurrence and distribution of pesticides including organochlorine pesticides (OCPs), organophosphate pesticides (OPPs), acid herbicides (AHs), and neutral herbicides (NHs) during the spring to summer of 2004 and 2005 across agricultural regions in Canada. Atmospheric concentrations of pesticides varied within years and time periods, and regional characteristics were observed including the following: (i) highest air concentrations of several herbicides (e.g., mecoprop, triallate, and ethalfluralin) were found at Bratt's Lake, SK, a site in the Canadian Prairies; (ii) the west-coast site at Abbotsford, BC, had the maximum concentrations of diazinon; (iii) the fruit and vegetable growing region in Vineland, ON, showed highest levels for several insecticides including chlorpyrifos, endosulfan, and azinphos-methyl; (iv) high concentrations of atrazine and metolachlor were measured at St. Anicet, QC, a corn-growing region; (v) the Kensington site in PEI, Canada's largest potato-producing province, exhibited highest level of dimethoate. Analysis of particle- and gas-phase fractions of air samples revealed that most pesticides including OCPs, OPPs, and NHs exist mainly in the gas phase, while AHs exhibit more diversity in particle-gas partitioning behavior. This study also demonstrated that stirred up soil dust does not account for pesticides that are detected in the particle phase. The estimated dry and wet deposition fluxes indicate considerable atmospheric inputs for some current-use pesticides (CUPs). This data set represents the first measurements for many pesticides in the atmosphere, precipitation, and soil for given agricultural regions across Canada.  
Keywords: Agriculture  
Keywords: Air Pollutants  
Keywords: Pesticide Residues  
Keywords: Pesticide Residues -- chemistry  
Keywords: Atmosphere  
Keywords: Soil  
Keywords: Pesticides -- chemistry  
Keywords: 0  
Keywords: Canada  
Keywords: Pesticides  
Keywords: Soil -- analysis  
Keywords: Rain  
Keywords: Time Factors  
Keywords: Air Pollutants -- chemistry  
Date completed - 2009-01-22  
Date created - 2008-09-04  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 5931-5937  
ProQuest ID - 69514981  
Last updated - 2013-01-19  
British nursing index edition - Environmental science & technology, August 15, 2008, 42(16):5931-5937  
Corporate institution author - Yao, Yuan; Harner, Tom; Blanchard, Pierrette; Tuduri, Ludovic; Waite, Don; Poissant, Laurier; Murphy, Clair; Belzer, Wayne; Aulagnier, Fabien; Sverko, Ed  
DOI - MEDL-18767647; 18767647; 0013-936X eng

1560. Ye, Xibiao ; Pierik, Frank H; Angerer, Jă Rgen; Meltzer, Helle Margrete; Jaddoe, Vincent W V; Tiemeier, Henning; Hoppin, Jane a, and Longnecker, Matthew P. Levels of Metabolites of Organophosphate Pesticides, Phthalates, and Bisphenol a in Pooled Urine Specimens From Pregnant Women Participating in the Norwegian Mother and Child Cohort Study (Moba). 2009 Sep; 212, (5): 481-491.   
Rec #: 48359  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Concerns about reproductive and developmental health risks of exposure to organophosphate (OP) pesticides, phthalates, and bisphenol A (BPA) among the general population are increasing. Six dialkyl phosphate (DAP) metabolites, 3,5,6-trichloro-2-pyridinol (TCPy), BPA, and fourteen phthalate metabolites were measured in 10 pooled urine samples representing 110 pregnant women who participated in the Norwegian Mother and Child Birth Cohort (MoBa) study in 2004. Daily intakes were estimated from urinary data and compared with reference doses (RfDs) and daily tolerable intakes (TDIs). The MoBa women had a higher mean BPA concentration (4.50 microg/L) than the pregnant women in the Generation R Study (Generation R) in the Netherlands and the National Health and Nutrition Examination Survey (NHANES) in the United States. The mean concentration of total DAP metabolites (24.20 microg/L) in MoBa women was higher than that in NHANES women but lower than that in Generation R women. The diethyl phthalate metabolite mono-ethyl phthalate (MEP) was the dominant phthalate metabolite in all three studies, with the mean concentrations of greater than 300 microg/L. The MoBa and Generation R women had higher mean concentrations of mono-n-butyl phthalate (MnBP) and mono-isobutyl phthalate (MiBP) than the NHANES women. The estimated average daily intakes of BPA, chlorpyrifos/chlorpyrifos-methyl and phthalates in MoBa (and the other two studies) were below the RfDs and TDIs. The higher levels of metabolites in the MoBa participants may have been from intake via pesticide residues in food (organophosphates), consumption of canned food, especially fish/seafood (BPA), and use of personal care products (selected phthalates).  
Keywords: Phthalic Acids  
Keywords: bisphenol A  
Keywords: Organophosphates  
Keywords: Humans  
Keywords: Environmental Exposure -- analysis  
Keywords: Pesticides -- urine  
Keywords: MLT3645I99  
Keywords: Phthalic Acids -- urine  
Keywords: Phenols  
Keywords: Pregnancy  
Keywords: 0  
Keywords: Pesticides  
Keywords: Cohort Studies  
Keywords: Adult  
Keywords: Organophosphates -- urine  
Keywords: Middle Aged  
Keywords: Norway  
Keywords: Adolescent  
Keywords: Phenols -- urine  
Keywords: Female  
Date completed - 2009-11-17  
Date created - 2009-07-27  
Date revised - 2012-12-20  
Language of summary - English  
Pages - 481-491  
ProQuest ID - 67527223  
Last updated - 2013-01-19  
British nursing index edition - International journal of hygiene and environmental health, September 2009, 212(5):481-491  
Corporate institution author - Ye, Xibiao; Pierik, Frank H; Angerer, JĂĽrgen; Meltzer, Helle Margrete; Jaddoe, Vincent W V; Tiemeier, Henning; Hoppin, Jane A; Longnecker, Matthew P  
DOI - MEDL-19394271; 19394271; 1618-131X eng

1561. Yen, J.; Donerly, S.; Levin, E., and Linney, E. Differing Effects of 3 Organophosphates (Chlorpyrifos, Diazinon and Parathion) on Developing Zebrafish Nervous System. 2011; 33, (4): 509-510(ABS).   
Rec #: 2830  
Keywords: ABSTRACT  
Call Number: NO ABSTRACT (CPY,DZ)  
Notes: Chemical of Concern: CPY,DZ,EPRN,PRN

1562. You, Jing; Pehkonen, Sari; Weston, Donald P; Lydy, Michael J, and You, Jing. Chemical Availability and Sediment Toxicity of Pyrethroid Insecticides to Hyalella Azteca: Application to Field Sediment With Unexpectedly Low Toxicity. 2008 Oct; 27, (10): 2124.   
Rec #: 49149  
Keywords: SEDIMENT CONC  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: Chemical availability and sediment toxicity of pyrethroid insecticides to Hyalella Azteca were examined. The traditional TU method, which uses TOC-normalized total sediment concentration, predicted successfully the toxicity caused by pyrethroids and chloropyrifos with 84% accuracy in California sediments. The results showed that a single-point Tenax extraction could be used as a less expensive, simple alternative to determine not only the bioavailability of pyrethroids from sediment but also the sediment toxicity. The present results concluded that adsorption to sand might play a controlling role in pyrethroid bioavailability and that sediment toxicity to benthic invertebrates and predictive tools need to account for this potential adsorption phenomenon.  
Keywords: CALIFORNIA  
Keywords: ORGANOPHOSPHATE PESTICIDES  
Keywords: SEDIMENT  
Keywords: BENTHIC COMMUNITIES  
Keywords: PYRETHROID PESTICIDES  
Keywords: ADSORPTION  
Keywords: Environment Abstracts  
Keywords: TOXICOLOGY  
Keywords: ENA 07:General  
Date revised - 2009-08-01  
Language of summary - English  
Pages - 2124  
ProQuest ID - 14838792  
Document feature - |n 2 |t graphs  
SubjectsTermNotLitGenreText - CALIFORNIA; ORGANOPHOSPHATE PESTICIDES; SEDIMENT; BENTHIC COMMUNITIES; PYRETHROID PESTICIDES; ADSORPTION; TOXICOLOGY  
Last updated - 2011-12-15  
British nursing index edition - Environmental Toxicology and Chemistry [Environ. Toxicol. Chem.]. Vol. 27, no. 10, 2124 p. Oct 2008.  
Corporate institution author - You, Jing; Pehkonen, Sari; Weston, Donald P; Lydy, Michael J  
DOI - b72ad638-dc5d-4cb5-8eebcsamfg301; 10734280; 0730-7268 English

1563. Young, B. M.; Tulve, N. S.; Egeghy, P. P.; Driver, J. H.; Zartarian, V. G.; Johnston, J. E.; Delmaar, C. J. E.; Evans, J. J.; Smith, L. A.; Glen, G.; Lunchick, C.; Ross, J. H.; Xue, J. P., and Barnekow, D. E. Comparison of four probabilistic models (CARES (R), Calendex (TM), ConsExpo, and SHEDS) to estimate aggregate residential exposures to pesticides. 2012; 22, (5): 522-532.   
Rec #: 72739  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Two deterministic models (US EPA's Office of Pesticide Programs Residential Standard Operating Procedures (OPP Residential SOPs) and Draft Protocol for Measuring Children's Non-Occupational Exposure to Pesticides by all Relevant Pathways (Draft Protocol)) and four probabilistic models (CARES (R), Calendex (TM), ConsExpo, and SHEDS) were used to estimate aggregate residential exposures to pesticides. The route-specific exposure estimates for young children (2-5 years) generated by each model were compared to evaluate data inputs, algorithms, and underlying assumptions. Three indoor exposure scenarios were considered: crack and crevice, fogger, and flying insect killer. Dermal exposure estimates from the OPP Residential SOPs and the Draft Protocol were 4.75 and 2.37 mg/kg/day (crack and crevice scenario) and 0.73 and 0.36 mg/kg/day (fogger), respectively. The dermal exposure estimates (99th percentile) for the crack and crevice scenario were 16.52, 12.82, 3.57, and 3.30 mg/kg/day for CARES, Calendex, SHEDS, and ConsExpo, respectively. Dermal exposure estimates for the fogger scenario from CARES and Calendex (1.50 and 1.47 mg/kg/day, respectively) were slightly higher than those from SHEDS and ConsExpo (0.74 and 0.55 mg/kg/day, respectively). The ConsExpo derived non-dietary ingestion estimates (99th percentile) under these two scenarios were higher than those from SHEDS, CARES, and Calendex. All models produced extremely low exposure estimates for the flying insect killer scenario. Using similar data inputs, the model estimates by route for these scenarios were consistent and comparable. Most of the models predicted exposures within a factor of 5 at the 50th and 99th percentiles. The differences identified are explained by activity assumptions, input distributions, and exposure algorithms.  
Keywords: model, probabilistic, SHEDS, CARES, ConsExpo, Calendex  
ISI Document Delivery No.: 994MD

1564. Yousif, I. O. Micronucleus analysis and mitotic index in a Jordanian population exposed to pesticides of organophosphate: malathion and chlorpyrifos. 2011; 64, (2): 173-178.   
Rec #: 72749  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A longitudinal study of possible genetic damage in Jordanian workers occupationally exposed to a mixture of pesticides containing malathion and chlorpyrifos was studied. Micronucleus assay and mitotic index were selected to achieve this purpose. A second series of blood samples was taken 8 months after the workers were removed from agricultural field to detect DNA repair in lymphocytes of the same subjects. Regardless of the sampling time the exposed workers showed an increased number of micronucleus (MN) frequency. After 8 months of non-exposure the workers showed a significantly decreased number of MN frequency compared to the results of the first sampling, but it was still significantly higher than the controls indicating a possible risk of cytogenetic damage for the exposed group. Besides that, malathion and chlorpyrifos lowered the mitotic index in peripheral lymphocyte cells of the exposed subjects.  
Keywords: cytotoxicity, genotoxicity, lymphocytes, micronucleus, mitotic index,  
ISI Document Delivery No.: 844KW

1565. Yu, X. Y.; Zhao, Y. D.; Wang, D. I.; Hou, F. H., and Liu, X. J. Impact on the Activity of Acetylcholinesterase(AChE) in Head and Bioconcentration in Zebrafish (Brachydanio rerio) After Chronic Exposure to Chlorpyrifos and Triazophos. 2008; 27, (6): 2452-2455.   
Rec #: 1580  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

1566. Yuan, L. L.; Pollard, A. I., and Carlisle, D. M. Using Propensity Scores to Estimate the Effects of Insecticides on Stream Invertebrates from Observational Data. 2009; 28, (7): 1518-1527.   
Rec #: 1590  
Keywords: SURVEY  
Call Number: NO SURVEY (CBL,CPY,DZ)  
Notes: Chemical of Concern: CBL,CPY,DZ

1567. Yue, Y. D. ; Zhang, R.; Fan, W., and Tang, F. High-Performance Thin-Layer Chromatographic Analysis of Selected Organophosphorous Pesticide Residues in Tea. 2008; 91, (5): 1210-1217.   
Rec #: 72789  
Keywords: FOOD  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: The separation of 9 organophosphates (monocrotophos, quinalphos, triazophos, parathion-methyl, isofenphos-methyl, temephos, parathion, phoxim-ethyl, and chlorpyrifos) by high-performance thin-layer chromatography (HPTLC) with automated multiple development was studied. The HPTLC method was developed and validated for analysis of residues of phoxim-ethyl and chlorpyrifos in tea. The sample was extracted with acetonitrile and cleaned up by ENVI-CARB solid-phase extraction. The extract was directly applied as bands to glass-backed silica gel 60F(254) HPTLC plates. The plates were developed with dichloromethane-hexane (1 + 1, v/v) in a glass twin-trough chamber. Evaluation of the developed HPTLC plates was performed densitometrically. The results indicated that the detection limits of phoxim and chlorpyrifos were 5.0 x 10(-9) and 1.0 x 10(-8) g, respectively. Recoveries of the pesticides from tea by this analytical method were 90.7-105.5%, and relative standard deviations were 7.3-13.5%. The precision and accuracy of the method were generally satisfactory for analysis of pesticide residues in tea.  
Keywords: SOLID-PHASE MICROEXTRACTION, GAS-CHROMATOGRAPHY, LIQUID-CHROMATOGRAPHY,  
ISI Document Delivery No.: 362XB

1568. Zaheer Khan, M.; Yasmeen, G.; Naqvi, S. N. H., and Perveen, A. Activity of Cholinesterase and Alkaline Phosphatase in Liver, Kidney and Brain of Euphlyctis cyanophlyctis Under the Effect of Chlorpyrifos and Dathrin. zaheer\_khan@sfu.ca//: 2008; 2, (2): 349-356.   
Rec #: 1600  
Keywords: NO DURATION  
Call Number: NO DURATION (CPY)  
Notes: Chemical of Concern: CPY

1569. Zaja, Roko ; Loncar, Jovica; Popovic, Marta; Smital, Tvrtko, and Zaja, Roko. First Characterization of Fish P-Glycoprotein (Abcb1) Substrate Specificity Using Determinations of Its Atpase Activity and Calcein-Am Assay With Plhc-1/Dox Cell Line. 2011 May; 103, (1-2): 53-62.   
Rec #: 47339  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: P-glycoprotein (P-gp; abcb1) is one of the major ABC transport proteins that mediates multixenobiotic resistance (MXR) defense in fish. In order to offer a sound evaluation of its ecotoxicological relevance it is critical to characterize substrate specificity of fish P-gp. Measurement of the ATPase activity is a reliable approach often used to discern type of interaction of various drugs with mammalian P-gp. A similar assay has never been used for characterization of P-gp in aquatic organisms and the main goal of this study was to develop a specific ATPase assay for characterization of fish P-gp. **For this purpose we have used P-gp enriched membrane vesicles isolated from fish hepatoma PLHC-1/dox cells characterized by high overexpression of P-gp.** As additional demonstration of a P-gp specific phenotype, we have quantified transcript expression of a series of eight ABC efflux transporter genes constitutively expressed in PLHC-1 wild type and PLHC-1/dox cells. Transcript expression analysis confirmed high and specific P-gp transcript overexpression in PLHC-1/dox cells. Provided that the transcript abundance is translated to protein, the development of ATPase assay is enabled. Using this model we determined KmATP of 0.4mM, baseline ATPase activity from 35-50nmol/mgPROT/min, and maximal activation of ATPase activity obtained for fish P-gp in our system was 1.8-2.5-fold over baseline. All these values were in good agreement with data previously reported for mammalian P-gp. In order to perform a more detailed characterization of fish P-gp substrate specificity, in the next step of our study we used the developed ATPase assay to test 50 different compounds for their interaction with fish P-gp. The same set of compounds was also tested with calcein-AM (Ca-AM) transport activity assay both using PLHC-1/dox cells and NIH 3T3/MDR1 fibroblast cells overexpressing human P-gp. Our results showed that there is a clear difference for some substancesafive compounds specifically interacted only with fish P-gp, while seven compounds exhibited interaction with human P-gp only. Most of the compounds tested in this study showed similar behavior in respect to fish or human P-gp and relatively high correlation in the interaction potency was found between fish and human P-gp. In summary, the described results represent the first in depth insight into substrate specificity of an important xenobiotic efflux transporter in fish. In addition, our study showed that combination of Ca-AM assay and the developed ATPase assay using inside/out vesicles isolated from PLHC-1/dox cells, offers a high-throughput and reliable approach for identification of environmentally relevant pollutants that interact with fish P-gp.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: Aquatic organisms  
Keywords: Specificity  
Keywords: Man-induced effects  
Keywords: Substrate specificity  
Keywords: Xenobiotics  
Keywords: Phenotypes  
Keywords: Fibroblasts  
Keywords: Hepatoma  
Keywords: P-Glycoprotein  
Keywords: Pollutants  
Keywords: Interspecific relationships  
Keywords: Membrane vesicles  
Keywords: Vesicles  
Keywords: Drugs  
Keywords: X 24300:Methods  
Keywords: Toxicology  
Keywords: Drug interaction  
Keywords: Membranes  
Keywords: Adenosinetriphosphatase  
Keywords: Data processing  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Environment Abstracts; Toxicology Abstracts; Pollution Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: Environmental Studies--Toxicology And Environmental Safety  
Keywords: Assays  
Keywords: Transcription  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Proteins  
Keywords: Fish  
Keywords: abundance  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 53-62  
ProQuest ID - 886060972  
SubjectsTermNotLitGenreText - Pollutants; Interspecific relationships; Specificity; Man-induced effects; Phenotypes; Drugs; Toxicology; Drug interaction; Hepatoma; Aquatic organisms; P-Glycoprotein; Data processing; Adenosinetriphosphatase; Membrane vesicles; Transcription; Substrate specificity; Vesicles; Fibroblasts; Membranes; Assays; Proteins; Fish; Xenobiotics; abundance  
Last updated - 2011-12-08  
Corporate institution author - Zaja, Roko; Loncar, Jovica; Popovic, Marta; Smital, Tvrtko  
DOI - OB-74dcae3b-d4e9-40e4-9dadcsaobj201; 14878605; CS1148326; 0166-445X English

1570. Zamfir, Lucian-Gabriel; Rotariu, Lucian, and Bala, Camelia. A novel, sensitive, reusable and low potential acetylcholinesterase biosensor for chlorpyrifos based on 1-butyl-3-methylimidazolium tetrafluoroborate/multiwalled carbon nanotubes gel. 2011 Apr 15-; 26, (8): 3692-3695.   
Rec #: 2270  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: A novel, low potential and highly sensitive acetylcholinesterase (AChE) biosensor was developed based on 1-butyl-3-methylimidazolium tetrafluoroborate/multiwalled carbon nanotube composite gel thiocholine sensor. Composite gel promoted electron transfer reaction at a lower potential (+50 mV) and catalyzed electrochemical oxidation of thiocholine with high sensitivity. AChE was immobilized in solÇôgel matrix that provides a good support for enzyme without any inhibition effect from the ionic liquid. The amount of immobilized enzyme and incubation time with chlorpyrifos were optimized. Chlorpyrifos could be determined in the range of 10ęĆ8 Çô10ęĆ6 M with a detection limit of 4 nM. Fast and efficient enzyme reactivation was obtained at low obidoxime concentration (0.1 mM). Moreover, the biosensor exhibited a good stability and reproducibility and could be use for multiple determinations of pesticide with no loss of the enzyme activity. Acetylcholinesterase/ Biosensor/ Carbon nanotube/ Ionic liquid/ Pesticide/ Reactivation

1571. Zamora, Emu; Liu, J; Pope, C N, and Zamora, EMU. Effects of Chlorpyrifos Oxon on M2 Muscarinic Receptor Internalization in Different Cell Types. 2008; 71, (21): 1440-1447.   
Rec #: 42349  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The muscarinic M2 receptor is a member of the G protein-coupled receptor (GPCR) superfamily. Agonist activation of GPCR leads to their phosphorylation, desensitization, internalization, and subsequent endocytic recycling or lysosomal degradation. Agonist-induced phosphorylation of M2 receptors is mediated by G-protein receptor kinase 2 (GRK2). The active metabolite of the organophosphorus insecticide chlorpyrifos, i.e., chlorpyrifos oxon (CPO), inhibited agonist-induced phosphorylation of human recombinant M2 receptors by GRK2 in vitro in a concentration-dependent manner. In both intact HEL 299 cells (human embryonic lung fibroblasts expressing M2 receptors) and CHO-M2 cells (stably expressing M2 receptors), the muscarinic agonist carbachol (100 mu M) led to receptor internalization as determined by reduced specific binding to the membrane-impermeable radioligand [ super(3)H]-N-methyIscopolamine (NMS). CPO alone (100 mu M) exerted no significant effect on NMS binding in either HEL 299 or CHO-M2 cells. In HEL 299 cells, CPO did not influence carbachol-induced internalization, whereas in CHO-M2 cells CPO blocked internalization. In primary striatal neurons, M2 receptors appeared widely and diffusely distributed. Exposure to either carbachol or CPO led to apparent receptor internalization with an increased percent of cells exhibiting punctate domains of immunostaining, while combined exposure to both carbachol and CPO led to a significantly higher percent of cells exhibiting this appearance. The data suggest that CPO may differentially influence agonist-stimulated M2 receptor internalization in a cell-dependent manner.  
Keywords: Degradation  
Keywords: Metabolites  
Keywords: Recycling  
Keywords: Waste management  
Keywords: Fibroblasts  
Keywords: Insecticides  
Keywords: Phosphorylation  
Keywords: Neostriatum  
Keywords: Embryo fibroblasts  
Keywords: Embryos  
Keywords: X 24330:Agrochemicals  
Keywords: Environment Abstracts; Toxicology Abstracts  
Keywords: Organophosphorus compounds  
Keywords: Data processing  
Keywords: Acetylcholine receptors (muscarinic)  
Keywords: Guanine nucleotide-binding protein  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: Lung  
Keywords: Neurons  
Keywords: ^b-Adrenergic-receptor kinase  
Keywords: Pesticides  
Keywords: Protein turnover  
Keywords: ^AG protein-coupled receptors  
Keywords: Carbachol  
Keywords: Lysosomes  
Date revised - 2008-12-01  
Language of summary - English  
Pages - 1440-1447  
ProQuest ID - 20269191  
SubjectsTermNotLitGenreText - Pesticides; Chlorpyrifos; Degradation; Recycling; Waste management; Lung; Metabolites; Organophosphorus compounds; Phosphorylation; Acetylcholine receptors (muscarinic); ^AG protein-coupled receptors; Carbachol; ^b-Adrenergic-receptor kinase; Embryos; Guanine nucleotide-binding protein; Insecticides; Protein turnover; Neostriatum; Fibroblasts; Lysosomes; Embryo fibroblasts; Data processing; Neurons  
Last updated - 2011-12-14  
British nursing index edition - Journal of Toxicology and Environmental Health, Part A: Current Issues [J. Toxicol. Environ. Health, A: Curr. Iss.]. Vol. 71, no. 21, pp. 1440-1447. 2008.  
Corporate institution author - Zamora, EMU; Liu, J; Pope, C N  
DOI - MD-0008927223; 8762246; 1528-7394 English

1572. Zartarian, V.; Xue, J. P.; Glen, G.; Smith, L.; Tulve, N., and Tornero-Velez, R. Quantifying children's aggregate (dietary and residential) exposure and dose to permethrin: application and evaluation of EPA's probabilistic SHEDS-Multimedia model. 2012; 22, (3): 267-273.   
Rec #: 72839  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Reliable, evaluated human exposure and dose models are important for understanding the health risks from chemicals. A case study focusing on permethrin was conducted because of this insecticide's widespread use and potential health effects. SHEDS-Multimedia was applied to estimate US population permethrin exposures for 3- to 5-year-old children from residential, dietary, and combined exposure routes, using available dietary consumption data, food residue data, residential concentrations, and exposure factors. Sensitivity and uncertainty analyses were conducted to identify key factors, pathways, and research needs. Model evaluation was conducted using duplicate diet data and biomonitoring data from multiple field studies, and comparison to other models. Key exposure variables were consumption of spinach, lettuce, and cabbage; surface-to-skin transfer efficiency; hand mouthing frequency; fraction of hand mouthed; saliva removal efficiency; fraction of house treated; and usage frequency. For children in households using residential permethrin, the non-dietary exposure route was most important, and when all households were included, dietary exposure dominated. SHEDS-Multimedia model estimates compared well to real-world measurements data; this exposure assessment tool can enhance human health risk assessments and inform children's health research. The case study provides insights into children's aggregate exposures to permethrin and lays the foundation for a future cumulative pyrethroid pesticides risk assessment.  
Keywords: probabilistic, exposure, model, aggregate, SHEDS, permethrin  
ISI Document Delivery No.: 926QZ

1573. Zeljezic, Davor; Vrdoljak, Ana Lucic; Lucas, Joe N; Lasan, Ruzica; Fucic, Aleksandra; Kopjar, Nevenka; Katic, Jelena; Mladinic, Marin; Radic, Bozica, and Zeljezic, Davor. Effect of Occupational Exposure to Multiple Pesticides on Translocation Yield and Chromosomal Aberrations in Lymphocytes of Plant Workers. 2009 Jul 20; 43, (16): 6370-6377.   
Rec #: 44709  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Employees handling pesticides are simultaneously exposed to different active substances. Occurring multiple chemical exposures may pose a higher risk than it could be deduced from studies evaluating the effect of a single substance. This study comprised 32 pesticide plant workers exposed to carbofuran, chlorpyrifos, metalaxyl, and dodine and an equal number of control subjects. Groups were matched by age (43.8 plus or minus 10.16 vs 41.8 plus or minus 7.42, respectively), sex (14 females; 18 males), and smoking (11 smokers; 21 nonsmokers). Chromosome aberration and translocation frequencies were determined using a standard aberration assay and fluorescent in situ hybridization (FISH) by applying painting probes for chromosomes 1, 2, and 4. Although significant, an observed increase in chromatid breaks (5.2 plus or minus 2.49) compared to controls (2.1 plus or minus 0.87), pPostHoc = 0.000001 is biologically irrelevant. Genomic frequency of translocations was also significantly elevated (exposed 0.0165 plus or minus 0.0070; control 0.0051 plus or minus 0.0023, pPostHoc = 0.0000004). The distribution of translocations among chromosomes 1, 2, and 4 did not differ from control subjects. It corresponded to the distribution of DNA content among selected chromosomes indicating randomness of DNA damage. A good translocation yield correlation within years spent in pesticide production indicates that multiple pesticide exposure may pose a risk to genome integrity. However, for more accurate health risk assessments, the use of probes for some other groups of chromosomes should be considered.  
Keywords: Risk assessment  
Keywords: Genomes  
Keywords: Age  
Keywords: Chromatids  
Keywords: Heavy metals  
Keywords: DNA probes  
Keywords: Chromosome 1  
Keywords: Lymphocytes  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Toxicity tests  
Keywords: Environmental factors  
Keywords: Smoking  
Keywords: Chromosomes  
Keywords: Metalaxyl  
Keywords: Personnel  
Keywords: Risk factors  
Keywords: R2 23060:Medical and environmental health  
Keywords: genomics  
Keywords: Chromosome aberrations  
Keywords: Translocation  
Keywords: Occupational exposure  
Keywords: Sex  
Keywords: Fluorescence in situ hybridization  
Keywords: Carbofuran  
Keywords: H 1000:Occupational Safety and Health  
Keywords: carbofuran  
Keywords: Q5 01504:Effects on organisms  
Keywords: Pollution Abstracts; Health & Safety Science Abstracts; Immunology Abstracts; Risk Abstracts; Environment Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: F 06965:Immune Cells  
Keywords: ENA 02:Toxicology & Environmental Safety  
Keywords: Chlorpyrifos  
Keywords: DNA damage  
Keywords: Chromosome translocations  
Keywords: Pesticides  
Keywords: DNA  
Keywords: translocation  
Date revised - 2010-08-01  
Language of summary - English  
Pages - 6370-6377  
ProQuest ID - 754542551  
SubjectsTermNotLitGenreText - Genomes; Chromosomes; Heavy metals; Personnel; Pesticides; DNA; Lymphocytes; Environmental factors; Toxicity tests; Risk assessment; Chromatids; Carbofuran; DNA probes; Chromosome 1; Chlorpyrifos; Smoking; DNA damage; Metalaxyl; Chromosome translocations; Risk factors; genomics; Chromosome aberrations; Occupational exposure; Sex; Fluorescence in situ hybridization; Age; carbofuran; translocation; Translocation  
Last updated - 2012-04-06  
British nursing index edition - Environmental Science & Technology [Environ. Sci. Technol.]. Vol. 43, no. 16, pp. 6370-6377. 20 Jul 2009.  
Corporate institution author - Zeljezic, Davor; Vrdoljak, Ana Lucic; Lucas, Joe N; Lasan, Ruzica; Fucic, Aleksandra; Kopjar, Nevenka; Katic, Jelena; Mladinic, Marin; Radic, Bozica  
DOI - 4e921877-b4d3-489b-ba89csamfg201; 13267866; CS1101138; 0013-936X English

1574. Zemtsova, G.; Killmaster, L. F.; Mumcuoglu, K. Y., and Levin, M. L. Co-feeding as a route for transmission of Rickettsia conorii israelensis between Rhipicephalus sanguineus ticks. 2010; 52, (4): 383-392.   
Rec #: 55019  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Rickettsia conorii is widely distributed in Europe, Asia, and Africa. The brown dog tick, Rhipicephalus sanguineus, is the recognized vector of R. conorii. In this study, we assessed the efficiency of R. conorii israelensis transmission between co-feeding Rh. sanguineus ticks. Infected Rh. sanguineus adults and uninfected nymphs were fed simultaneously upon either naĂÂŻve dogs or a dog previously exposed to this agent. When ticks were placed upon naĂÂŻve dogs, 92-100% of nymphs acquired the infection and 80-88% of infected engorged nymphs transmitted it transstadially. When ticks were placed upon a seropositive dog, only 8-28.5% of recipient nymphs became infected. Our results establish the first evidence for efficient natural transmission of R. conorii israelensis between co-feeding ticks upon both naĂÂŻve and seropositive dogs. This route of transmission can ensure continuous circulation of R. conorii israelensis in tick vectors even in the absence of naĂÂŻve reservoir hosts.  
Keywords: Co-feeding  
Dordrecht : Springer Netherlands

1575. Zeng, Jingbin; Yu, Binbin; Chen, Wenfeng; Lin, Zhijie; Zhang, Limei; Lin, Zequan; Chen, Xi; Wang, Xiaoru, and Zeng, Jingbin. Application of Ceramic/Carbon Composite as a Novel Coating for Solid-Phase Microextraction. 2008 Apr; 1188, (1): 26-33.   
Rec #: 46019  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A ceramic/carbon composite was developed and applied as a novel coating for solid-phase microextraction (SPME). The ceramic/carbon coating exhibited several good properties for SPME, such as high extraction quantities and enhanced thermal and organic solvent stability. Under scanning electron microscopy (SEM), the tightly attached coating layer on stainless steel wire revealed excellent mechanical characteristics. Single fiber and fiber-to-fiber reproducibility were less than 6.9 and 9.5%, respectively. The effects of extraction and desorption parameters such as extraction time, stirring rate, ionic strength, and desorption temperature and desorption time on the extraction/desorption efficiency were investigated and optimized. Coupled to gas chromatography with a flame thermionic detector, the optimized SPME method was applied to the analysis of organophosphorus pesticides (OPPs) in aqueous samples. The calibration curves were linear from 0.05 to 200 ng mL super(-1) for fenchlorphos, pirimiphos-methyl, chlorpyrifos, ethion and from 0.2 to 200 ng mL super(-1) for quinalphos, and the limits of detection were between 5.2 and 34.6 ng L super(-1). The recovery of the OPPs spiked in real water samples at 5 ng mL super(-1) ranged from 86.2 to 103.4% and the relative standard deviations were less than 8.5%.  
Keywords: composite materials  
Keywords: Desorption  
Keywords: Water sampling  
Keywords: Chromatography  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Temperature  
Keywords: Solvents  
Keywords: quinalphos  
Keywords: Chlorpyrifos  
Keywords: Ceramics  
Keywords: Fibers  
Keywords: Gas chromatography  
Keywords: Pesticides  
Keywords: Microscopy  
Keywords: Steel  
Keywords: Pollution Abstracts  
Keywords: Coatings  
Date revised - 2009-01-01  
Language of summary - English  
Pages - 26-33  
ProQuest ID - 19567369  
SubjectsTermNotLitGenreText - Coatings; Desorption; Ceramics; Pesticides; quinalphos; composite materials; Water sampling; Chlorpyrifos; Microscopy; Solvents; Chromatography; Steel; Gas chromatography; Temperature; Fibers  
Last updated - 2011-12-14  
British nursing index edition - Journal of Chromatography A [J. Chromatogr.]. Vol. 1188, no. 1, pp. 26-33. Apr 2008.  
Corporate institution author - Zeng, Jingbin; Yu, Binbin; Chen, Wenfeng; Lin, Zhijie; Zhang, Limei; Lin, Zequan; Chen, Xi; Wang, Xiaoru  
DOI - MD-0009035102; 8848878; 0021-9673 English

1576. Zhai, Chen ; Sun, Xia; Zhao, Wenping; Gong, Zhili, and Wang, Xiangyou. Acetylcholinesterase biosensor based on chitosan/prussian blue/multiwall carbon nanotubes/hollow gold nanospheres nanocomposite film by one-stepelectrodeposition. 2013 Apr 15-; 42, (0): 124-130.   
Rec #: 4980  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: In this paper, chitosanÇôprussian blueÇômultiwall carbon nanotubes-hollow gold nanospheres (ChitÇôPBÇôMWNTsÇôHGNs) film was fabricated onto the gold electrode surface by one-step electrodeposition method; and then acetylcholinesterase (AChE) and Nafion were modified onto the film to prepare an AChE biosensor. Incorporating MWNTs and HGNs into ChitÇôPB hybrid film promoted electron transfer reaction, enhanced the electrochemical response and improved the microarchitecture of the electrode surface. The morphologies and electrochemistry properties of the composite were investigated by using scanning electron microscopy, transmission electron microscopy, cyclic voltammetry and electrochemical impedance spectroscopy, respectively. Parameters affecting the biosensor response such as pH, enzyme loading and inhibition time were optimized. **Based on the inhibition of pesticides on the AChE activity, using malathion, chlorpyrifos, monocrotophos and carbofuran as model compounds, this biosensor showed a wide range, low detection limit, good reproducibility and high stability.** Moreover, AChE/ChitÇôPBÇôMWNTsÇôHGNs/Au biosensor can also be used for direct analysis of practical samples, which would be a new promising tool for pesticide analysis. Biosensor/ One-step electrodeposition/ Hollow gold nanospheres/ Acetylcholinesterase

1577. Zhan, Yu; Zhang, Minghua, and Zhan, Yu. Pure: a Web-Based Decision Support System to Evaluate Pesticide Environmental Risk for Sustainable Pest Management Practices in California. 2012 Aug 1; 82, 104-113.   
Rec #: 42619  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Farmers, policy makers, and other stakeholders seek tools to quantitatively assess pesticide risks for mitigating pesticide impacts on ecosystem and human health. This paper presents the Pesticide Use Risk Evaluation (PURE) decision support system (DSS) for evaluating site-specific pesticide risks to surface water, groundwater, soil, and air across pesticide active ingredient (AI), pesticide product, and field levels. The risk score is determined by the ratio of the predicted environmental concentrations (PEC) to the toxicity value for selected endpoint organism(s); except that the risk score for the air is calculated using the emission potential (EP), which is a pesticide product property for estimating potential volatile organic compound (VOC) emissions by California Environmental Protection Agency (CEPA). The risk scores range from 0 to 100, where 0 represents negligible risk while 100 means the highest risk. The procedure for calculating PEC in surface water was evaluated against monitoring data for 41 pesticide AIs, with a statistically significant correlation coefficient of r=0.82 (p<0.001). In addition, two almond fields in the Central Valley, California were evaluated for pesticide risks as a case study, where the commonly acknowledged high-risk pesticides gained high risk scores. Simazine, one of the most frequently detected pesticides in groundwater, was scored as 74 (the moderate high risk class) to groundwater; and chlorpyrifos, one of the frequently detected pollutants in surface water, was scored as 100 (the high risk class) to surface water. In support of pesticide risk quantitative assessment and use of reduced-risk pesticide selection, the PURE-DSS can be useful to assist growers, pesticide control advisors, and environmental protection organizations in mitigating pesticide use impacts on the environment.  
Keywords: Risk assessment  
Keywords: Mitigation  
Keywords: Surface water  
Keywords: M3 1010:Issues in Sustainable Development  
Keywords: Statistical analysis  
Keywords: Soil  
Keywords: simazine  
Keywords: Pollutants  
Keywords: Risk factors  
Keywords: Ground water  
Keywords: Emissions  
Keywords: Risk groups  
Keywords: USA, California  
Keywords: R2 23050:Environment  
Keywords: X 24330:Agrochemicals  
Keywords: Artificial intelligence  
Keywords: Data processing  
Keywords: Prunus dulcis  
Keywords: P 0000:AIR POLLUTION  
Keywords: Environmental Studies--Toxicology And Environmental Safety  
Keywords: Decision support systems  
Keywords: Pest control  
Keywords: Toxicity  
Keywords: Chlorpyrifos  
Keywords: Pesticides  
Keywords: volatile organic compounds  
Keywords: Groundwater  
Keywords: Risk Abstracts; Sustainability Science Abstracts; Environment Abstracts; Toxicology Abstracts; Pollution Abstracts  
Keywords: USA, California, Central Valley  
Keywords: Volatile organic compounds  
Keywords: ENA 01:Air Pollution  
Date revised - 2012-11-01  
Language of summary - English  
Location - USA, California; USA, California, Central Valley  
Pages - 104-113  
ProQuest ID - 1222925900  
SubjectsTermNotLitGenreText - Risk assessment; Data processing; Surface water; Statistical analysis; Pest control; Toxicity; Chlorpyrifos; Soil; simazine; Pollutants; Risk factors; Pesticides; Ground water; volatile organic compounds; Risk groups; Artificial intelligence; Mitigation; Decision support systems; Emissions; Groundwater; Volatile organic compounds; Prunus dulcis; USA, California; USA, California, Central Valley  
Last updated - 2012-12-06  
Corporate institution author - Zhan, Yu; Zhang, Minghua  
DOI - OB-facca0fc-1496-40ce-8bdccsamfg201; 16867933; 0147-6513 English

1578. Zhang, Chun-Yong; Yuan, Chun-Wei; Fu, De-Gang; Gu, Zhong-Ze, and Zhang, Chun-Yong. Treatment of Chlorpyrifos Wastewater by Two-Band Micro-Electrolysis. 2009 Apr; 35, (4): 99-103.   
Rec #: 41289  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The feasibility of treating chlorpyrifos wastewater by micro-electrolysis was investigated by using COD.TOC value as indexes, and different operating parameters such as reaction time, initial pH and H2O2 dosage were studied to achieve the optimal combination. While H2O)2 seemed to have complex influence on the degradation process, it was abandoned and the possible mechanism was discussed. The two-band experiments were carried out based on the obtained results and the removal rate of COD and TOC value both exceeded 85%. The option of micro-electrolysis was proved to be very economical and adaptable in treating pesticides wastewater and showed possibilities for real application.  
Keywords: Agricultural Chemicals  
Keywords: Degradation  
Keywords: Pesticides  
Keywords: SW 3030:Effects of pollution  
Keywords: Water Treatment  
Keywords: Hydrogen Ion Concentration  
Keywords: Water Resources Abstracts; Aqualine Abstracts  
Keywords: Chemical Oxygen Demand  
Keywords: AQ 00002:Water Quality  
Keywords: Wastewater Treatment  
Date revised - 2009-08-01  
Language of summary - English  
Pages - 99-103  
ProQuest ID - 290557662  
SubjectsTermNotLitGenreText - Pesticides; Wastewater Treatment; Degradation; Hydrogen Ion Concentration; Chemical Oxygen Demand; Water Treatment; Agricultural Chemicals  
Last updated - 2011-11-05  
Corporate institution author - Zhang, Chun-Yong; Yuan, Chun-Wei; Fu, De-Gang; Gu, Zhong-Ze  
DOI - OB-MD-0010131719; 10261687; 1000-3770 English

1579. ZHANG, Cun-zheng; ZHANG, Xin-ming; TIAN, Zi-hua; HE, Dan-jun, and LIU, Xian-jin. Degradation of Chlorpyrifos and Fipronil in Rice from Farm to Fork and Risk Assessment. 2010 May; 9, (5): 754-763.   
Rec #: 160  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Degradation of pesticide residues (chlorpyrifos and fipronil) in rice from farm to fork and risk assessment for human health were studied to reveal the magnitude of risks faced by different populations of interest, so that appropriate measures can be taken to control the risks, and to refine and update the human health risk assessment data while helping to determine the maximum residue level (MRL) value and harvest interval. Different dosages and treatments were used in field trials for the harvest residue test. Residue levels of postharvest-applied chlorpyrifos and fipronil during storage, exposure to sunlight, washing and boiling processes (boiled rice) were investigated for brown rice. The dietary exposure evaluation model (DEEM) was employed to estimate acute and chronic risks faced by different populations of interest. Percent of reference dose (POR) and margin of exposure (MOE) were calculated. A positive correlation between pesticide residues and the dosage and application frequency of pesticide was found in the field trials. Risk quotients indicate that multiple applications and double dosages of chlorpyrifos increase the risks to the entire population and prolong exposures to toxic concentrations. The concentration of pesticide residues decreased as a function of time, after sunlight exposure, storage, washing, and boiling processes. 91.6 and 96.16% degradations were achieved at the end of the experimental period for fipronil and chlorpyrifos, respectively. The boiling process played an important role in the degradation of these pesticides. The result of risk assessment to human health showed that harvest residues of chlorpyrifos in rice and acute dietary risks of chlopyrifos were of concern. The acute dietary (food only) risk estimated for chlorpyrifos as percent of acute population adjusted dose (aPAD) was frequently over 100%. The risk faced by boys under the age of 14 was higher than that for girls of the same age. For the subpopulation above age 14, the risk reversed. The chronic dietary risk from food alone showed that dietary exposures with fipronil were below the level of concern for the entire population, including children. The risk faced by rural residents was more serious than that for urbanite residents with the most sensitive populations being children and male residents who faced higher acute dietary risk than the other subpopulation groups. The harvest interval was found to be the critical measure to mitigate risk for all populations for safe rice eating. All risk levels decreased to acceptable levels when the harvest interval was extended to 14 d. To address these risks, a number of measures including reduced application rates (should not be doubled at single application), increased retreatment intervals (longer than 7 d) and extended interval of harvest (at least 14 d) will be needed. The MRL for fipronil in rice is recommended to be 0.01 mg kgęĆ1 in accordance with Codex (ref). rice/ risk assessment/ pesticide residue/ chlorpyrifos/ fipronil

1580. Zhang, H.; Yang, C.; Zhao, Q., and Qiao, C. L. Development of an autofluorescent organophosphates-degrading Stenotrophomonas sp with dehalogenase activity for the biodegradation of hexachlorocyclohexane (HCH). 2009; 100, (13): 3199-3204.   
Rec #: 72889  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Simultaneous biodegradation of hexachlorocyclohexane (HCH) and organophosphates (OPs) by a recombinant Stenotrophomonas sp. was studied in the study. The broad-host-range plasmid pVGAB, harboring enhanced green fluorescent protein gene (egfp) and dehalogenase genes (linA and linB), was constructed and transformed into the OP-degrading strain Stenotrophomonas YC-1 to get the recombinant strain YC-H. over-expression of dehalogenase (LinA and LinB) and enhanced green fluorescent protein (EGFP) was obtained in YC-H by determining their enzymatic activities and fluorescence intensity. YC-H was capable of rapidly and simultaneously degrading 10 mg/I gamma-HCH and 100 mg/I methyl parathion (MP) determined by GC-ECD analysis. A bioremediation assay with YC-H inoculated into fumigated and nonfumigated soil showed that both 10 mg/kg gamma-HCH and 100 mg/kg MP could be completely degraded within 32 days. The novel EGFP-marked bacterium could be potentially applied in the field-scale decontamination of HCH and OPs residues in the environment. (C) 2009 Elsevier Ltd. All rights reserved.  
Keywords: Hexachlorocyclohexane, Organophosphates, Dehalogenase, Green fluorescent  
ISI Document Delivery No.: 442AB

1581. Zhang, J.; Chen, Y. H., and Lu, Q. Pro-Oncogenic and Anti-Oncogenic Pathways: Opportunities and Challenges of Cancer Therapy.   
Rec #: 50609  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Anticancer Res. 2009 May;29(5):1739-43 (medline /19443396)  
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ABSTRACT: Carcinogenesis is the uncontrolled growth of cells gaining the potential to invade and disrupt vital tissue functions. This malignant process includes the occurrence of 'unwanted' gene mutations that induce the transformation of normal cells, for example, by overactivation of pro-oncogenic pathways and inactivation of tumor-suppressive or anti-oncogenic pathways. It is now recognized that the number of major signaling pathways that control oncogenesis is not unlimited; therefore, suppressing these pathways can conceivably lead to a cancer cure. However, the clinical application of cancer intervention has not matched up to scientific expectations. Increasing numbers of studies have revealed that many oncogenic-signaling elements show double faces, in which they can promote or suppress cancer pathogenesis depending on tissue type, cancer stage, gene dosage and their interaction with other players in carcinogenesis. This complexity of oncogenic signaling poses challenges to traditional cancer therapy and calls for considerable caution when designing an anticancer drug strategy. We propose future oncology interventions with the concept of integrative cancer therapy.  
MESH HEADINGS: Antineoplastic Agents/pharmacology/\*therapeutic use  
MESH HEADINGS: Humans  
MESH HEADINGS: Neoplasms/\*drug therapy  
MESH HEADINGS: Proto-Oncogenes/drug effects  
MESH HEADINGS: Signal Transduction/drug effects eng

1582. Zhang, J.; Zhao, L. L.; Hu, Z. P.; Zhou, J.; Deng, L.; Gu, F.; Dai, H. M., and Huang, M. [Effects of Low-Dose Chlorpyrifos Exposure on Dopaminergic Neurons in the Midbrain Substantia Nigra and Neural Behavioral Development in Neonatal Rats].   
Rec #: 74879  
Keywords: NON-ENGLISH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: OBJECTIVE: To explore the effects of low-dose chlorpyrifos (CPF) exposure on dopaminergic (DA) neurons in the midbrain substantia nigra and neural behavioral development in neonatal rats.  
ABSTRACT: METHODS: Postnatal 11 day old Sprague-Dawley rats were randomly assigned into CPF, menstruum dimethysulfoxide (DMSO) and normal saline (NS) groups. The rats in the CPF group were injected with low-dose CPF (5 mg/kg?d) on postnatal days 11-14. The two control groups were injected with DMSO or NS respectively. The rats were sacrificed on postnatal days 15, 20, 30, and 60. Body weight gain, outward appearance of brain tissue, the coefficient of brain and the water content of brain tissue were measured. Tyrosine hydroxylase (TH) expression in DA neurons in the midbrain substantial nigra was examined by immunohistochemical straining. Immune electron microscopy was used to examine the subcellular structure of DA neurons. Open field test, grip strength test, slope test and Morris water maze test were used to examine the neurobehavioral changes.  
ABSTRACT: RESULTS: The outward appearance of brain tissue was normal in the three groups. There were no significant differences in the absolute value of body weight gain, the coefficient of brain and the water content of brain tissue among the three groups. CPF exposure decreased the level of TH immunoreactivity (P < 0.05) in the substantia nigra of CPF group since postnatal day 30 compared with the DMSO and NS groups. The subcellular structures of some DA neurons in the CPF group were impaired. Decreased motor activity and learning and memory impairments were observed in the CPF group compared with those in the DMSO and NS groups (P < 0.05) since postnatal day 30.  
ABSTRACT: CONCLUSIONS: CPF exposure during the neonatal period can cause long-term motor activity and learning and memory impairments in accompany with DA neurons damage in the midbrain substantia nigra.  
MESH HEADINGS: Animals  
MESH HEADINGS: Animals, Newborn  
MESH HEADINGS: Behavior, Animal/\*drug effects  
MESH HEADINGS: Chlorpyrifos/\*toxicity  
MESH HEADINGS: Dopaminergic Neurons/\*drug effects  
MESH HEADINGS: Female  
MESH HEADINGS: Insecticides/\*toxicity  
MESH HEADINGS: Learning/drug effects  
MESH HEADINGS: Male  
MESH HEADINGS: Motor Activity/drug effects  
MESH HEADINGS: Rats  
MESH HEADINGS: Rats, Sprague-Dawley  
MESH HEADINGS: Substantia Nigra/\*drug effects chi

1583. Zhang, K.; Fang, H.; Shen, G.; Taylor, J. S., and Wooley, K. L. Well-Defined Cationic Shell Crosslinked Nanoparticles for Efficient Delivery of Dna or Peptide Nucleic Acids.   
Rec #: 50759  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Bioconjug Chem. 2004 Jul-Aug;15(4):710-7 (medline /15264857)  
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ABSTRACT: This mini-review highlights developments that have been made over the past year to advance the construction of well-defined nanoscale objects to serve as devices for cell transfection. Design of the nanoscale objects originated from biomimicry concepts, using histones as the model, to afford cationic shell crosslinked knedel-like (cSCK) nanoparticles. Packaging and delivery of plasmid DNA, oligonucleotides, and peptide nucleic acids were studied by dynamic light scattering, transmission electron microscopy, gel electrophoresis, biological activity assays, RT-PCR measurements, flow cytometry, and confocal fluorescence microscopy. With the demonstration of more efficient cell transfection in vitro than that achieved using commercially-available transfection agents, together with the other features offered by the robust nanostructural framework, work continues toward the application of these cSCKs for in vivo molecular recognition of genetic material, for imaging and therapy targeted specifically to pulmonary injury and disease.  
MESH HEADINGS: \*DNA/diagnostic use/genetics/therapeutic use  
MESH HEADINGS: Humans  
MESH HEADINGS: \*Nanoparticles/chemistry/diagnostic use/therapeutic use  
MESH HEADINGS: \*Peptide Nucleic Acids/genetics  
MESH HEADINGS: Transfection/\*methods eng

1584. Zhang, K.; Mei, Q. S.; Guan, G. J.; Liu, B. H.; Wang, S. H., and Zhang, Z. P. Ligand Replacement-Induced Fluorescence Switch of Quantum Dots for Ultrasensitive Detection of Organophosphorothioate Pesticides. 2010; 82, (22): 9579-9586.   
Rec #: 72899  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The development of a simple and on-site assay for the detection of organophosphorus pesticed residues is very important for food safety and exosystem protection. This paper reports the surface coordination-originated fluorescence resonance energy transfer (FRET) of CdTe quantum dots (QDs) and a simple ligand-replacement turn-on mechanism for the highly sensitive and selective detection of organophosphorothioate pesticides. It has been demonstrated that coordination of dithizone at the surface of CdTe QDs in basic media can strongly quench the green emission of CdTe QDs by a FRET mechanism. Upon the addition of organophosphorothioate pesticides, the dithizone ligands at the CdTe QD surface are replaced by the hydrolyzate of the organophosphorothioate, and hence the fluorescence is turned on. The fluorescence turn on is immediate, and the limit of detection for chlorpyrifos is as low as similar to 0.1 nM. Two consecutive linear ranges allow a wide determination of chlorpyrifos concentrations from 0.1 nM to 10 mu M. Importantly, the fluorescence turn-on chemosensor can directly detect chlorpyrifos residues in apples at a limit of 5.5 ppb, which is under the maximum residue limit allowed by the U.S. Environmental Protection Agency. The very simple strategy reported here should facilitate the development of fluorescence turn-on chemosensors for chemo/biodetection.  
Keywords: ENERGY-TRANSFER FRET, SOL-GEL FILM, TURN-ON, GOLD NANOPARTICLES, P-31  
ISI Document Delivery No.: 678MQ

1585. Zhang, K. X. and Ouellette, B. F. Caerus: Predicting Cancer Outcomes Using Relationship Between Protein Structural Information, Protein Networks, Gene Expression Data, and Mutation Data.   
Rec #: 50249  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: J Cell Sci Suppl. 1994;18:97-104 (medline /7883800)  
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ABSTRACT: Carcinogenesis is a complex process with multiple genetic and environmental factors contributing to the development of one or more tumors. Understanding the underlying mechanism of this process and identifying related markers to assess the outcome of this process would lead to more directed treatment and thus significantly reduce the mortality rate of cancers. Recently, molecular diagnostics and prognostics based on the identification of patterns within gene expression profiles in the context of protein interaction networks were reported. However, the predictive performances of these approaches were limited. In this study we propose a novel integrated approach, named CAERUS, for the identification of gene signatures to predict cancer outcomes based on the domain interaction network in human proteome. We first developed a model to score each protein by quantifying the domain connections to its interacting partners and the somatic mutations present in the domain. We then defined proteins as gene signatures if their scores were above a preset threshold. Next, for each gene signature, we quantified the correlation of the expression levels between this gene signature and its neighboring proteins. The results of the quantification in each patient were then used to predict cancer outcome by a modified na‹ve Bayes classifier. In this study we achieved a favorable accuracy of 88.3%, sensitivity of 87.2%, and specificity of 88.9% on a set of well-documented gene expression profiles of 253 consecutive breast cancer patients with different outcomes. We also compiled a list of cancer-associated gene signatures and domains, which provided testable hypotheses for further experimental investigation. Our approach proved successful on different independent breast cancer data sets as well as an ovarian cancer data set. This study constitutes the first predictive method to classify cancer outcomes based on the relationship between the domain organization and protein network.  
MESH HEADINGS: Algorithms  
MESH HEADINGS: Bayes Theorem  
MESH HEADINGS: Breast Neoplasms/\*drug therapy/metabolism  
MESH HEADINGS: Cell Line, Tumor  
MESH HEADINGS: Computational Biology/\*methods  
MESH HEADINGS: \*DNA Mutational Analysis  
MESH HEADINGS: Female  
MESH HEADINGS: \*Gene Expression Profiling  
MESH HEADINGS: \*Gene Expression Regulation, Neoplastic  
MESH HEADINGS: Gene Regulatory Networks  
MESH HEADINGS: Humans  
MESH HEADINGS: Mutation  
MESH HEADINGS: Neoplasm Proteins/chemistry  
MESH HEADINGS: Proteomics/\*methods  
MESH HEADINGS: Reproducibility of Results  
MESH HEADINGS: Sensitivity and Specificity  
MESH HEADINGS: Tumor Markers, Biological eng

1586. Zhang, M. M.; Deng, C. S.; Ma, J. F.; Zhang, Y. R.; Geng, B., and Li, S. P. Screening and Identification of Multi-Functional Trichoderma spp. Institute of Environment and Sustainable Development in Agriculture, CAAS, Beijing 100081, China,//: 2012; 31, (8): 1571-1575(CHI) (ENG ABS).   
Rec #: 2800  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

1587. Zhang, Q. M.; Zhu, L. S.; Han, C.; Wang, J.; Xie, H.; Wang, J. H., and Sun, S. J. Analysis of chlorpyrifos and TCP residues in agricultural soil and apples by HPLC. 2011; 9, (1): 659-662.   
Rec #: 72919  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the present work, a method for the analysis of the residues of chlorpyrifos and its toxic metabolite 3,5,6-trichloro-2-pyridinol (TCP) in agricultural soil and apples was developed. The residues of chlorpyrifos and TCP were extracted from agricultural soil and apple samples by shaking followed clean-up by liquid-liquid extraction (LLE) and solid-phase extraction (SPE) coupled with detection of high-performance liquid chromatography (HPLC). Under the optimum conditions, the average recovery of chlorpyrifos and TCP with concentrations of 0.1-1.0 mg kg(-1) from soil samples was 92.9-100.3% and 95.7-97.6%, respectively, and the relative standard deviation was 3.7-14.8% and 2.8-13.5%, respectively. The average recovery of chlorpyrifos and TCP from apple samples was 88.9-93.3% and 91.5-97.5%, respectively, and the relative standard deviation was 3.6-15.1% and 2.3-2.3%, respectively. In conclusion, the proposed method can be successfully applied for the determination of chlorpyrifos and TCP residues in soil and apple samples.  
Keywords: Organophosphate insecticides, metabolite, solid-phase extraction, HPLC  
ISI Document Delivery No.: 740GJ

1588. Zhang, Qun; Wang, Baichuan; Cao, Zhengya; Yu, Yunlong, and Zhang, Qun. Plasmid-Mediated Bioaugmentation for the Degradation of Chlorpyrifos in Soil. 2012 Jun 30; 221-222, 178-184.   
Rec #: 38749  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: To overcome the poor survival and low activity of the bacteria used for bioremediation, a plasmid-mediated bioaugmentation method was investigated, which could result in a persistent capacity for the degradation of chlorpyrifos in soil. The results indicate that the pDOC plasmid could transfer into soil bacteria, including members of the Pseudomonas and Staphylococcus genera. The soil bacteria acquired the ability to degrade chlorpyrifos within 5 days of the transfer of pDOC. The efficiency of the pDOC transfer in the soil, as measured by the chlorpyrifos degradation efficiency and the most probable number (MPN) of chlorpyrifos degraders, was influenced by the soil temperature, moisture level and type. The best performance for the transfer of pDOC was observed under conditions of 30 degree C and 60% water-holding capacity (WHC). The results presented in this paper show that the transfer of pDOC can enhance the degradation of chlorpyrifos in various soils, although the degradation efficiency did vary with the soil type. It may be concluded that the introduction of plasmids encoding enzymes that can degrade xenobiotics or donor strains harboring these plasmids is an alternative approach in bioaugmentation.  
Keywords: Soil types  
Keywords: Bioremediation  
Keywords: Degradation  
Keywords: Staphylococcus  
Keywords: Survival  
Keywords: Soil temperature  
Keywords: Enzymes  
Keywords: Pseudomonas  
Keywords: Xenobiotics  
Keywords: Plasmids  
Keywords: Soil microorganisms  
Keywords: Chlorpyrifos  
Keywords: Soil  
Keywords: Most probable number  
Keywords: Toxicology Abstracts; Environment Abstracts  
Keywords: Engineering--Chemical Engineering  
Keywords: Pesticides  
Keywords: ENA 15:Renewable Resources-Terrestrial  
Keywords: X 24330:Agrochemicals  
Date revised - 2012-06-01  
Language of summary - English  
Pages - 178-184  
ProQuest ID - 1020276473  
SubjectsTermNotLitGenreText - Soil types; Chlorpyrifos; Most probable number; Bioremediation; Soil temperature; Enzymes; Survival; Xenobiotics; Plasmids; Soil microorganisms; Soil; Degradation; Pesticides; Staphylococcus; Pseudomonas  
Last updated - 2012-06-21  
Corporate institution author - Zhang, Qun; Wang, Baichuan; Cao, Zhengya; Yu, Yunlong  
DOI - OB-7ac4d550-5a89-4b61-9116csamfg201; 16792563; 0304-3894 English

1589. Zhang, X; Liu, X; Luo, Y; Zhang, M, and Zhang, X. Evaluation of Water Quality in an Agricultural Watershed as Affected by Almond Pest Management Practices. 2008 Aug; 42, (14): 3685-3696.   
Rec #: 49329  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: In the last decade, the detection of organophosphate (OP) pesticides in the San Joaquin River watershed has raised concerns about water quality. This study examined the influences of almond pest management practices (PMPs) on water quality. The Soil and Water Assessment Tool (SWAT) model was employed to simulate pesticide concentration in water as affected by different PMPs. California Pesticide Use Reporting (PUR) data were used to investigate PMP use trends. Stepwise regression analysis was performed to test the correlation between specific PMP use and pesticide concentrations in surface water and sediment. Our results showed an increasing use of reduced risk pesticides and pyrethroids on almonds. SWAT simulation over the period of 1992-2005 showed decreases in OP concentrations in surface water. High OP and pyrethroid use in dormant sprays was associated with high pesticide concentrations in water and sediment. Almond pesticide use was proved to have significant impacts on the pesticide load in the San Joaquin River watershed. The PMP which combines the use of reduced risk pesticides with no dormant spray was recommended for almond orchard use. This paper presented a novel method of studying the environmental impacts of different agricultural PMPs. By combining pesticide use surveys with watershed modeling, we provided a quantitative foundation for the selection of PMPs to reduce pesticide pollution in surface water.  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: water quality  
Keywords: Organophosphates  
Keywords: Surface water  
Keywords: Agricultural pollution  
Keywords: SW 3030:Effects of pollution  
Keywords: Surface Water  
Keywords: Water quality  
Keywords: Watersheds  
Keywords: Environmental Studies  
Keywords: Soil  
Keywords: risk reduction  
Keywords: foundations  
Keywords: orchards  
Keywords: Agricultural Chemicals  
Keywords: USA, California, San Joaquin R.  
Keywords: USA, California  
Keywords: Pyrethroids  
Keywords: Rivers  
Keywords: Sediment pollution  
Keywords: Pollution detection  
Keywords: Prunus dulcis  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Sprays  
Keywords: Water Quality  
Keywords: Environmental impact  
Keywords: Simulation  
Keywords: Pest control  
Keywords: Pollution surveys  
Keywords: Model Studies  
Keywords: Risk  
Keywords: AQ 00007:Industrial Effluents  
Keywords: Pollution Abstracts; Aqualine Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Water Resources Abstracts  
Keywords: Spray  
Keywords: Pesticides  
Date revised - 2011-05-01  
Language of summary - English  
Location - USA, California, San Joaquin R.; USA, California  
Pages - 3685-3696  
ProQuest ID - 290276874  
SubjectsTermNotLitGenreText - Sediment pollution; Agricultural pollution; Spray; Pesticides; Environmental impact; Pest control; Water quality; Watersheds; water quality; Pollution detection; Surface water; Organophosphates; Sprays; Simulation; Pollution surveys; Soil; risk reduction; foundations; orchards; Pyrethroids; Rivers; Risk; Agricultural Chemicals; Water Quality; Surface Water; Model Studies; Prunus dulcis; USA, California, San Joaquin R.; USA, California  
Last updated - 2011-11-08  
Corporate institution author - Zhang, X; Liu, X; Luo, Y; Zhang, M  
DOI - OB-MD-0008483008; 8495318; CS0856105; 0043-1354 English

1590. Zhang, X.; Wallace, A. D.; Du, P.; Kibbe, W. A.; Jafari, N.; Xie, H. H.; Lin, S. M.; Baccarelli, A.; Soares, M. B., and Hou, L. F. DNA methylation alterations in response to pesticide exposure in vitro. 2012; 53, (7): 542-549.   
Rec #: 72939  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Although pesticides are subject to extensive carcinogenicity testing before regulatory approval, pesticide exposure has repeatedly been associated with various cancers. This suggests that pesticides may cause cancer via nonmutagenicity mechanisms. The present study provides evidence to support the hypothesis that pesticide-induced cancer may be mediated in part by epigenetic mechanisms. We examined whether exposure to seven commonly used pesticides (i.e., fonofos, parathion, terbufos, chlorpyrifos, diazinon, malathion, and phorate) induces DNA methylation alterations in vitro. We conducted genome-wide DNA methylation analyses on DNA samples obtained from the human hematopoietic K562 cell line exposed to ethanol (control) and several organophosphate pesticides (OPs) using the Illumina Infinium HumanMethylation27 BeadChip. Bayesian-adjusted t-tests were used to identify differentially methylated gene promoter CpG sites. In this report, we present our results on three pesticides (fonofos, parathion, and terbufos) that clustered together based on principle component analysis and hierarchical clustering. These three pesticides induced similar methylation changes in the promoter regions of 712 genes, while also exhibiting their own OP-specific methylation alterations. Functional analysis of methylation changes specific to each OP, or common to all three OPs, revealed that differential methylation was associated with numerous genes that are involved in carcinogenesis-related processes. Our results provide experimental evidence that pesticides may modify gene promoter DNA methylation levels, suggesting that epigenetic mechanisms may contribute to pesticide-induced carcinogenesis. Further studies in other cell types and human samples are required, as well as determining the impact of these methylation changes on gene expression. Environ. Mol. Mutagen. 2012. (c) 2012 Wiley Periodicals, Inc.  
Keywords: pesticide exposure, DNA methylation alteration, carcinogenesis  
ISI Document Delivery No.: 986RQ

1591. Zhang, Xiao; Shen, Yan; Yu, Xiang-yang, and Liu, Xian-jin. Dissipation of chlorpyrifos and residue analysis in rice, soil and water under paddy field conditions. 2012 Apr 1-; 78, (0): 276-280.   
Rec #: 30  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: The analytical method for the residues of chlorpyrifos in rice plants, water and soil was developed and dissipation of chlorpyrifos under field conditions was studied. The limit of detection (LOD) of chlorpyrifos was 0.006 mg kgęĆ1 and the limit of quantification (LOQ) was found to be 0.04 mg kgęĆ1 in rice plant (water) and 0.02 mg kgęĆ1 in the other substrates, respectively. The results showed that the initial residues of chlorpyrifos in Nanjing and Guangxi were 4.99 and 6.05 mg kgęĆ1 (rice plant), 1.35 and 1.58 mg kgęĆ1 (water) and 0.51 and 0.63 mg kgęĆ1 (soil), respectively. The half-lives of chlorpyrifos in rice plant, water and soil from Nanjing were 4.28, 0.58 and 1.35 day, respectively, and the half-lives of those from Guangxi were 3.86, 0.52 and 1.21 day, respectively. The husked rice, rice hull and straw samples were found to contain chlorpyrifos well below the maximum residue limit (MRL) following the recommended dosage, the residues of chlorpyrifos in soil were undetectable under all application levels and frequencies after 28 day of applications. Chlorpyrifos/ Dissipation/ Residues/ Rice plant/ Soil/ Water

1592. Zhang, Xiaofei; Driver, Jeffrey H.; Li, Yanhong; Ross, John H., and Krieger, Robert I. Dialkylphosphates (DAPs) in Fruits and Vegetables May Confound Biomonitoring in Organophosphorus Insecticide Exposure and Risk Assessment. 2008; 56, (22): 10638-10645.   
Rec #: 55029  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Trace residues of organophosphorus (OP) pesticides are associated with fruits and vegetables that have been sprayed with those OP pesticides to guard against insect pests. Human dietary exposure to these OP pesticides is commonly estimated by measuring the amount of OP metabolites in urine, assuming a stoichiometric relationship between a metabolite and its parent insecticide. Dialkylphosphates (DAPs) are the OP metabolites that are most often used as markers in such biomonitoring studies. However, abiotic hydrolysis, photolysis, and plant metabolism can convert OP chemicals (OP residues) to DAP residues on or in the fruits and vegetables. To evaluate the extent of these conversions, OPs and DAPs were measured in 153 produce samples. These samples from 2 lots were known to contain OP insecticide residues based on routine monitoring by California producers and shippers. A total of 12 OPs were quantified, including mevinphos, naled, acephate, methamidophos, oxidemeton-methyl, azinphos-methyl, dimethoate, malathion, methidathion, phosmet, chlorpyrifos, and diazinon. All OP insecticide residues were below their respective residue tolerances in 2002-2004. A total of 91 of 153 samples (60%) contained more DAP residues than parent OPs. The mean mole fractions [DAPs/(DAPs + OPs)] for the first and second lots of produce were 0.62 and 0.50, respectively, and the corresponding geometric means were 0.55 and 0.34. The corresponding mean mole ratios (DAPs/OP) were 7.1 and 3.4, with geometric means of 2.1 and 0.9. Any preformed DAPs ingested in the diet that are excreted in urine may inflate the estimated absorbed OP insecticide doses in occupational and environmental studies. In subsequent prospective studies, time-dependent production of dimethylphosphate (DMP) and dimethylthiophosphate (DMTP) in strawberries and leaves following malathion sprays occurred concomitant with the disappearance of the parent insecticide and its oxon. DAPs are more persistent in plants and produce at routinely measured levels than their parent OP insecticides.  
Keywords: dialkylphosphates  
Includes references 1022980896

1593. Zhang, Xuyang; Starner, Keith; Spurlock, Frank, and Zhang, Xuyang. Analysis of Chlorpyrifos Agricultural Use in Regions of Frequent Surface Water Detections in California, Usa. 2012 Nov; 89, ( 5): 978-984.   
Rec #: 38469  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Chlorpyrifos is a common surface water contaminant in California, USA. We evaluated five years of chlorpyrifos use and surface water monitoring data in California's principal agricultural regions. Imperial County and three central coastal regions accounted for only 10 % of chlorpyrifos statewide use, but displayed consistently high aquatic benchmark exceedances (13.2 %-57.1 %). In contrast, 90 % of use occurred in Central Valley regions where only 0.6 %-6.5 % of samples exceeded aquatic benchmarks. Differences among regions are attributable to crop type, use intensity, irrigation practices and monthly application patterns. Application method did not appear to be a factor.  
Keywords: Pollution monitoring  
Keywords: Data processing  
Keywords: USA, California, Imperial  
Keywords: Surface water  
Keywords: Irrigation  
Keywords: ENA 12:Oceans & Estuaries  
Keywords: Crops  
Keywords: Environmental Studies  
Keywords: Chlorpyrifos  
Keywords: Coastal zone  
Keywords: INE, USA, California  
Keywords: P 1000:MARINE POLLUTION  
Keywords: Pesticides  
Keywords: Environment Abstracts; Water Resources Abstracts; Aqualine Abstracts; Pollution Abstracts; Toxicology Abstracts  
Keywords: Contaminants  
Keywords: Benchmarks  
Keywords: X 24330:Agrochemicals  
Keywords: USA, California, Central Valley  
Date revised - 2012-11-01  
Language of summary - English  
Location - USA, California, Imperial; INE, USA, California; USA, California, Central Valley  
Pages - 978-984  
ProQuest ID - 1222819931  
SubjectsTermNotLitGenreText - Chlorpyrifos; Data processing; Surface water; Irrigation; Contaminants; Crops; Pollution monitoring; Coastal zone; Pesticides; Benchmarks; USA, California, Imperial; INE, USA, California; USA, California, Central Valley  
Last updated - 2012-12-06  
Corporate institution author - Zhang, Xuyang; Starner, Keith; Spurlock, Frank  
DOI - OB-3c36aca3-b109-4c37-bc0cmfgefd107; 17257400; 0007-4861; 1432-0800 English

1594. Zhang, Xuyang and Zhang, Minghua. Watershed Modeling of Bmp Scenarios to Improve Agricultural Water Quality a Case Study in the San Joaquin River Watershed, California. 2009: (UMI# 3376010 ).   
Rec #: 51849  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Quantifying effectiveness of agricultural BMPs at watershed scale is a challenging issue, requiring robust algorithms to simulate not only the agricultural production system but also pollutant transport and fate. **This research takes this challenge to simulate and potentially improve the performances of BMPs in reducing organophosphates (OPs) runoff at field and watershed scales.** A literature review with meta-analysis quantifies BMP effectiveness at field scale. Then, the SWAT model is calibrated and validated following a sensitivity analysis combining Latin Hypercube sampling and One-factor-At-a-Time simulation. Finally, the calibrated model is applied in the San Joaquin River Watershed and its sub-watershed Orestimba Creek Watershed to simulate BMPs including buffer strips, sediment ponds, vegetated ditches, use reduction, and their combinations. The meta-analysis revealed that buffer width, slope and vegetation were important factors in determining buffer's effectiveness. The model Y = K Â· (1- e -bÂ·w ) successfully captured the relationship between buffer width (w) and effectiveness (Y), where the estimated removal capacity (K) were 90.9 and 93.2 for sediment and pesticides. A 20 m buffer under favorable slope conditions ([approximate] 9%) would remove over 92% pesticides. The SWAT model was successfully calibrated with Nash-Sutcliffe coefficients over 0.92 and 0.82 for monthly simulation of diazinon and chlorpyrifos, respectively. Pesticide transport and fate is greatly impacted by surface runoff and their physico-chemical properties. BMP simulation suggested that combining vegetated ditches and buffer strips in addition to use reduction would decrease by over 94% the dissolved diazinon and chlorpyrifos. Buffer strips and vegetated ditches removed over 89% and 30% dissolved diazinon and chlorpyrifos, respectively, while sediment ponds removed 3-10%. Simulation of almond pest management practices found that OP concentrations in surface water were reduced by applying reduced-risk pesticides during summer and no spray during winter. This study has demonstrated that the SWAT model reasonably predict BMP effectiveness at watershed scale. However, the model can be further improved by enhancing the irrigation algorithm and by including more adjustable parameters to represent BMP mitigation processes. The findings can be widely applied to facilitate BMP implementation and evaluation through: (1) simulating BMP performance under various environmental conditions; (2) estimating annual pollutant removal, and (3) evaluating BMP design options.  
Start Page: 174  
ISSN/ISBN: 9781109368383  
Keywords: Applied sciences  
Keywords: 0329:Ecology  
Keywords: 0749:Agricultural chemicals  
Keywords: Pesticides  
Keywords: Best management practices  
Keywords: Water quality  
Keywords: Watershed  
Keywords: Biological sciences  
Keywords: Pure sciences  
Keywords: 0775:Environmental engineering  
2009  
3376010  
Applied sciences  
Zhang, Xuyang  
2012-07-19  
1876435261  
Best management practices  
66569  
Water quality  
Watershed  
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English  
Copyright ProQuest, UMI Dissertations Publishing 2009  
0775: Environmental engineering  
304854659  
Pesticides  
0329: Ecology  
46984581  
0749: Agricultural chemicals  
9781109368383  
Pure sciences  
Biological sciences English

1595. Zhang, Xuyang; Zhang, Minghua, and Zhang, Xuyang. Modeling Effectiveness of Agricultural Bmps to Reduce Sediment Load and Organophosphate Pesticides in Surface Runoff. 2011 Apr 15; 409, (10): 1949-1958.   
Rec #: 43429  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Quantifying effectiveness of agricultural BMPs at the watershed scale is a challenging issue, requiring robust algorithms to simulate not only the agricultural production system but also pollutant transport and fate. This research addresses the challenge to simulate performances of BMPs in reducing organophosphates (OPs) runoff at the watershed scale. The SWAT model is calibrated and validated following a sensitivity analysis combining Latin Hypercube sampling and One-factor-At-a-Time simulation. The calibrated model is then applied in the Orestimba Creek Watershed to simulate BMPs including buffer strips, sediment ponds, vegetated ditches, use reduction, and their combinations. BMP simulation suggested that sediment ponds trap 54-85% of sediment from field runoff, but less than 10% of dissolved diazinon and chlorpyrifos. Use reduction can reduce pesticide load in a close-to-linear fashion. Effectiveness of vegetated ditches and buffers depends on their physical dimension and vegetation cover. Combining individual BMPs provides enhanced mitigation effects. The combination of vegetated ditches, buffer strips and use reduction decreases diazinon and chlorpyrifos load by over 94%. This study has suggested that the SWAT model reasonably predicts BMP effectiveness at the watershed scale. Results will assist decision making in implementing BMPs to reduce pesticide loads in surface runoff.  
Keywords: Organophosphates  
Keywords: Agricultural pollution  
Keywords: Agricultural production  
Keywords: buffers  
Keywords: Pollution dispersion  
Keywords: Algorithms  
Keywords: Q5 01502:Methods and instruments  
Keywords: Watersheds  
Keywords: Ponds  
Keywords: Environmental Studies  
Keywords: Oil  
Keywords: mitigation  
Keywords: Agricultural Chemicals  
Keywords: Surface runoff  
Keywords: R2 23050:Environment  
Keywords: Agricultural runoff  
Keywords: AQ 00001:Water Resources and Supplies  
Keywords: SW 3050:Ultimate disposal of wastes  
Keywords: P 2000:FRESHWATER POLLUTION  
Keywords: Simulation  
Keywords: M2 556.16:Runoff (556.16)  
Keywords: Creek  
Keywords: Sediments  
Keywords: Model Studies  
Keywords: ENA 06:Food & Drugs  
Keywords: Risk Abstracts; Environment Abstracts; Meteorological & Geoastrophysical Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality; Pollution Abstracts; Aqualine Abstracts; Water Resources Abstracts  
Keywords: Chlorpyrifos  
Keywords: Numerical simulations  
Keywords: Sensitivity analysis  
Keywords: Pesticides  
Keywords: Rainfall-runoff modeling  
Keywords: Sediment load  
Keywords: Ditches  
Keywords: Environment management  
Keywords: Diazinon  
Keywords: Runoff  
Date revised - 2011-10-01  
Language of summary - English  
Pages - 1949-1958  
ProQuest ID - 886651909  
SubjectsTermNotLitGenreText - Agricultural pollution; Pollution dispersion; Pesticides; Sediment load; Creek; Watersheds; Environment management; Agricultural runoff; Ponds; Sensitivity analysis; Numerical simulations; Algorithms; Rainfall-runoff modeling; Surface runoff; Chlorpyrifos; mitigation; Organophosphates; Agricultural production; buffers; Simulation; Diazinon; Oil; Agricultural Chemicals; Ditches; Runoff; Sediments; Model Studies  
Last updated - 2012-08-02  
Corporate institution author - Zhang, Xuyang; Zhang, Minghua  
DOI - OB-4c889505-f2dd-4e41-ac18csamfg201; 14564214; CS1147216; 0048-9697 English

1596. Zhang, Y.; An, J.; Ye, W.; Yang, G. Y.; Qian, Z. G.; Chen, H. F.; Cui, L., and Feng, Y. Enhancing the Promiscuous Phosphotriesterase Activity of a Thermostable Lactonase (GkaP) for the Efficient Degradation of Organophosphate Pesticides. 2012; 78, (18): 6647-6655.   
Rec #: 72979  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The phosphotriesterase-like lactonase (PLL) enzymes in the amidohydrolase superfamily hydrolyze various lactones and exhibit latent phosphotriesterase activities. These enzymes serve as attractive templates for in vitro evolution of neurotoxic organophosphates (OPs) with hydrolytic capabilities that can be used as bioremediation tools. Here, a thermostable PLL from Geobacillus kaustophilus HTA426 (GkaP) was targeted for joint laboratory evolution with the aim of enhancing its catalytic efficiency against OP pesticides. By a combination of site saturation mutagenesis and whole-gene error-prone PCR approaches, several improved variants were isolated. The most active variant, 26A8C, accumulated eight amino acid substitutions and demonstrated a 232-fold improvement over the wild-type enzyme in reactivity (k(cat)/K(m)) for the OP pesticide ethyl-paraoxon. Concomitantly, this variant showed a 767-fold decrease in lactonase activity with delta-decanolactone, imparting a specificity switch of 1.8 x 10(5)-fold. 26A8C also exhibited high hydrolytic activities (19- to 497-fold) for several OP pesticides, including parathion, diazinon, and chlorpyrifos. Analysis of the mutagenesis sites on the GkaP structure revealed that most mutations are located in loop 8, which determines substrate specificity in the amidohydrolase superfamily. Molecular dynamics simulation shed light on why 26A8C lost its native lactonase activity and improved the promiscuous phosphotriesterase activity. These results permit us to obtain further insights into the divergent evolution of promiscuous enzymes and suggest that laboratory evolution of GkaP may lead to potential biological solutions for the efficient decontamination of neurotoxic OP compounds.  
Keywords: AMIDOHYDROLASE SUPERFAMILY, DIRECTED EVOLUTION, BACTERIAL  
ISI Document Delivery No.: 999SX

1597. Zhang, Y.; Liu, C. Z.; Li, X. J.; Wang, Z. L.; Zhang, H. T., and Miao, Z. G. Structures and energies of the radicals and anions generated from chlorpyrifos. 2010; 16, (8): 1369-1376.   
Rec #: 72989  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY   
Abstract: Abstract: The radicals and anions generated from chlorpyrifos by removing a hydrogen atom have been investigated using the hybrid density functional B3PW91 method. The results show that all the radicals have been classified as three groups and their stability order is methylene (radical 1, 3, 5, and 7) > methyl (radical 9, 11 and 13) > ring (15); the anions have the relative energetic order: methyl > methylene > ring. Moreover, some decomposition reactions are also reported. The large HOMO-LUMO gaps indicate that both radicals and anions are predicted to be high-kinetic stable molecules. We also find that radicals 9, 11 and 13 have the highest AEAs and anions 2, 4 and 6 have higher VDEs. Additionally, natural population analysis charges show that there is the lowest Delta q (0.14) for the C7 and C9 atoms. We hope that our theoretical results may provide a reference for further experiment and practical application.  
Keywords: Adiabatic electron affinity, Chlorpyrifos, Density functional theory,  
ISI Document Delivery No.: 631KM

1598. Zhang, Y.; Xiao, Z.; Chen, F.; Ge, Y.; Wu, J., and Hu, X. Degradation Behavior and Products of Malathion and Chlorpyrifos Spiked in Apple Juice by Ultrasonic Treatment.   
Rec #: 77699  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: Apple juice (13 degrees Brix) spiked with malathion and chlorpyrifos (2-3 mg l(-1) of each compound) was treated under different ultrasonic irradiations. Results showed that ultrasonic treatment was effective for the degradation of malathion and chlorpyrifos in apple juice, and the output power and treatment time significantly influenced the degradation of both pesticides (p < 0.05). The maximum degradations were achieved for malathion (41.7%) and chlorpyrifos (82.0%) after the ultrasonic treatment at 500 W for 120 min. The degradation kinetics of both pesticides were fitted to the first-order kinetics model well (R(2)>or=0.90). The kinetics parameters indicated that chlorpyrifos was much more labile to ultrasonic treatment than malathion. Furthermore, malaoxon and chlorpyrifos oxon were identified as the degradation products of malathion and chlorpyrifos by gas chromatography-mass spectrometry (GC-MS), respectively. The oxidation pathway through the hydroxyl radical attack on the P=S bond of pesticide molecules was proposed.  
MESH HEADINGS: Beverages/\*analysis  
MESH HEADINGS: Chlorpyrifos/\*chemistry/\*radiation effects  
MESH HEADINGS: Food Contamination/\*analysis  
MESH HEADINGS: Malathion/\*chemistry/\*radiation effects  
MESH HEADINGS: Malus/\*chemistry/\*radiation effects eng

1599. Zhang, Y. D.; Cai, Y. N.; Li, L.; Qian, Y. X., and Lu, L. High-throughput biosensing of neurotoxic insecticides using polystyrene microplate-immobilized acetylcholinesterase. 2012; 4, (11): 3830-3835.   
Rec #: 72999  
Keywords: METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Acetylcholinesterase (AChE) inhibition-based biosensors can be used as a screening test for neurotoxic insecticides. A high-throughput AChE inhibition assay was developed via AChE immobilized on a microplate using enzyme-linked immunosorbent assay (ELISA) reader. The presence of insecticide was confirmed by reactivation of the inhibited AChE immobilized on the microplate. The polystyrene (PS) surface of the microplates was first modified with amine groups. The aminated 96-well microplate was modified further with chitosan to generate more amine groups. Thus, AChE could be covalently immobilized onto the aminated microplate via cross-linking with glutaraldehyde. The activity of the immobilized AChE upon surface modification with chitosan was 12-fold higher than without spacer molecules. The activity of the immobilized AChE was measured before and after incubation with test samples to calculate the inhibition rate. The calibration curves showed a linear response ranging between 1.0 and 20.0 mu g L(-1) for paraoxon with detection limits (3 sigma) of 0.5 mu g L(-1) in buffer or organic milk. This assay format was applied directly to determine the insecticide in real milk samples with recovery rate 89-108%. The developed microplate assay format could be used as a convenient tool for high-throughput prescreening of insecticides in samples to increase the number of tested samples and ensure consumer safety.  
Keywords: CARBAMATE INSECTICIDES, ORGANOPHOSPHORUS COMPOUNDS, PESTICIDE-RESIDUES,  
ISI Document Delivery No.: 026MA

1600. Zhang, Yuanyuan; Hou, Yaxi; Chen, Fang; Xiao, Zhiyong; Zhang, Jianing; Hu, Xiaosong, and Zhang, Yuanyuan. The Degradation of Chlorpyrifos and Diazinon in Aqueous Solution by Ultrasonic Irradiation: Effect of Parameters and Degradation Pathway. 2011 Feb; 82, (8): 1109-1115.   
Rec #: 39989  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Results showed that chlorpyrifos and diazinon could be effectively and rapidly degraded by ultrasonic irradiation, and the degradation of both pesticides was strongly influenced by ultrasonic power, temperature and pH value. Furthermore, two and seven products for the degradation of chlorpyrifos and diazinon formed during ultrasonic irradiation have been identified by gas chromatography-mass spectrometry, respectively. The hydrolysis, oxidation, hydroxylation, dehydration and decarboxylation were deduced to contribute to the degradation reaction and the degradation pathway for each pesticide under ultrasonic irradiation was proposed. **Finally, the toxicity evaluation indicated that the toxicity decreased for diazinon solution after ultrasonic irradiation, but it increased for chlorpyrifos solution.** The detoxification of OPPs by ultrasonic irradiation was discriminative.  
Keywords: Detoxification  
Keywords: Degradation  
Keywords: ENA 09:Land Use & Planning  
Keywords: Toxicity  
Keywords: P 6000:TOXICOLOGY AND HEALTH  
Keywords: Hydrolysis  
Keywords: Light effects  
Keywords: Chlorpyrifos  
Keywords: Ultrasonics  
Keywords: Pollution Abstracts; ASFA 2: Ocean Technology Policy & Non-Living Resources; Environment Abstracts  
Keywords: Irradiation  
Keywords: Q2 02405:Oil and gas  
Keywords: Pesticides  
Keywords: Diazinon  
Keywords: pH  
Keywords: Decarboxylation  
Keywords: Dehydration  
Keywords: Abiotic factors  
Date revised - 2011-04-01  
Language of summary - English  
Pages - 1109-1115  
ProQuest ID - 860380869  
SubjectsTermNotLitGenreText - Detoxification; Ultrasonics; Pesticides; Toxicity; Hydrolysis; Decarboxylation; Light effects; Abiotic factors; Dehydration; Chlorpyrifos; Degradation; Irradiation; Diazinon; pH  
Last updated - 2012-09-10  
British nursing index edition - Chemosphere [Chemosphere]. Vol. 82, no. 8, pp. 1109-1115. Feb 2011.  
Corporate institution author - Zhang, Yuanyuan; Hou, Yaxi; Chen, Fang; Xiao, Zhiyong; Zhang, Jianing; Hu, Xiaosong  
DOI - 0530ff95-8420-4cf6-958fcsamfg201; 14363641; CS1130056; 0045-6535 English

1601. Zhang, Yueliang; Wang, Lihua; Guo, Huifang; Li, Guoqing; Zhang, Zhichun; Xie, Lin, and Fang, Jichao. A transcriptome-based screen of carboxylesterase-like genes that are involved in chlorpyrifos resistance in Laodelphax striatellus (Fall+\_n). 2012 Nov; 104, (3): 224-228.   
Rec #: 1010  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Carboxylesterase (CarE)-mediated detoxification is one of the most important mediators of resistance to organophosphate insecticides (OPs). However, the molecular mechanisms by which CarEs mediate OP resistance are largely unknown. Our previous studies indicated that increased CarE activity was critical for chlorpyrifos (an OP) resistance in Laodelphax striatellus. In this study, 28 CarE and CarE-like genes (CarEs) were identified in the transcriptome of L. striatellus. Real-time quantitative PCR (qPCR) was performed to assess the relative expression of these 28 CarEs. Compared with the susceptible (YN) strain, Ls.CarE1 and Ls.CarE2 were significantly overexpressed in the chlorpyrifos-resistant (YN-CPF) strain by 32.06- and 8.52-fold, respectively. The expression levels of Ls.CarE1 and Ls.CarE2 were analyzed by qPCR to verify the correlation between overexpressed CarEs in the YN-CPF strain and chlorpyrifos resistance. Chlorpyrifos bioassays and CarE activity assays were subsequently performed on the chlorpyrifos relaxed selection (YN-RSF) strain. The results demonstrated that CarE activity was significantly higher in the YN-CPF and YN-RSF strains (4.15- and 1.92-fold, respectively) than in the YN strain, which was consistent with their respective degrees of chlorpyrifos resistance (214.0-fold for YN-CPF and 83.3-fold for YN-RSF). Ls.CarE1 was significantly overexpressed in both the YN-CPF and the YN-RSF strains (32.06-fold for YN-CPF and 8.6-fold for YN-RSF) compared with the YN strain, and a high degree of proportionality was observed between the expression level of Ls.CarE1 and the degree of resistance to chlorpyrifos across the three strains. However, the expression level of Ls.CarE2 in the YN-RSF and the YN strains was not significantly different. These data suggest that overexpressed Ls.CarE1 might be involved in chlorpyrifos resistance in the YN-CPF strain of L. striatellus. Laodelphax striatellus/ Carboxylesterase/ Chlorpyrifos/ Metabolic resistance

1602. Zhang, Z. Y.; Yu, X. Y.; Wang, D. L.; Zhang, C. Z., and Liu, X. J. Uptake and Translocation of Chlorpyrifos in Two Leafy Vegetables. Institute of Food Safety, Jiangsu Academy of Agricultural Sciences, Nanjing 210014, China, Journal of Agro-Environment Science//: SOIL; 2010; 29, (3): 426-430(CHI) (ENG ABS).   
Rec #: 2670  
Keywords: NON-ENGLISH  
Call Number: NON-ENGLISH (CPY)  
Notes: Chemical of Concern: CPY

1603. Zhang, Z. Y.; Zhang, C. Z.; Liu, X. J., and Hong, X. Y. Dynamics of Pesticide Residues in the Autumn Chinese Cabbage (Brassica chinensis L.) Grown in Open Fields. SOIL; 2006; 62, (4): 350-355.   
Rec #: 1610  
Keywords: MIXTURE  
Call Number: NO MIXTURE (CPY,CTN,CYH,CYP,DM,DMT,FNV)  
Notes: Chemical of Concern: CPY,CTN,CYH,CYP,DM,DMT,FNV

1604. Zhao, L.; Teng, S. S., and Liu, Y. P. Characterization of a versatile rhizospheric organism from cucumber identified as Ochrobactrum haematophilum. 2012; 52, (2): 232-244.   
Rec #: 73049  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Several rhizobacteria play a vital role in promoting plant growth and protecting plants against fungal diseases and degrading pesticides in the environment. In this study, a bacterial strain, designated H10, was isolated from the rhizosphere at Laixi in Shandong Province, China, and was identified as Ochrobactrum haematophilum based on API 20 NE tests and 16S rRNA gene sequence analysis. The plant growth-promoting characteristics of the strain were further characterized, and the results showed that strain H10 produces siderophore, indol-3-acetic (IAA) and solubilized phosphate but lacks 1-aminocyclopropane-1-carboxylate (ACC) deaminase activity. Inoculation with the strain was found to significantly increase (p < 0.05) the growth of cucumber in pot experiments. Strain H10 was assessed in vitro for antagonism against several pathogenic fungi and showed high antifungal activity. The cell-free culture filtrates, which had high extracellular chitinase, beta-1,3-glucanase and protease activities, could inhibit the growth of all pathogenic fungi tested, indicating that growth suppression was partly due to extracellular antifungal metabolites present in the culture filtrates. Changes in hyphal morphology were observed in phytopathogenic fungi after treatment with the culture filtrates. Additionally, strain H10 was able to degrade 80%, 85% and 58% of the pesticides chlorpyrifos, beta-cypermethrin and imidacloprid, respectively, within 60 h in liquid culture. The inoculation of strain H10 into soil treated with 100 mg kg(-1) of the three pesticides accordingly resulted in a higher degradation rate than in noninoculated soils. These results highlight the potential of this bacterium for use as a biofertilizer and biopesticide and suggest that it may provide an alternative to the use of chemical fertilizers and pesticides in agriculture. Additionally, it may represent a bioremediation agent that can remove contaminating chemical pesticide residues from the environment.  
Keywords: Ochrobactrum haematophilum, Plant growth promoting rhizobacteria (PGPR),  
ISI Document Delivery No.: 915ZI

1605. ZHAO, Ren-bang; BAO, Hua-ying, and LIU, Yuan-xia. Isolation and Characterization of Penicillium oxalicum ZHJ6 for Biodegradation of Methamidophos. 2010 May; 9, (5): 695-703.   
Rec #: 4890  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: One methamidophos-degrading fungus strain, named as ZHJ6, was isolated from the soils contaminated with methamidophos. It was identified as Penicillium oxalicum based on its morphological characteristics and ITS rDNA gene sequence analysis. The effects of carbon source, nitrogen source and the concentration of methamidophos, temperature and pH on the degradation were investigated. The results showed that the strain could use glucose as carbon source and the methamidophos as sole nitrogen source. The degradation ratio of methamidophos, when the initial concentration was 1.0 +ů 10ęĆ3 mg mLęĆ1, could reach above 99.9% in 12 incubation days. The strain could use ethanol, glucose, fructose, sucrose, lactose, starch, and dextrin as its carbon and energy source to degrade the methamidophos. The favorable degrading condition of the strain ZHJ6 was in a mineral salt medium at pH 5.0 and 25-\_C with 1% glucose, and further studies showed that the strain could degrade folimat, phoxim and glyphosate with glucose as carbon source, but could not degrade chlorpyrifos, phosdrin, trichlorphon, and dichlorvos. fungus/ biodegradation/ methamidophos/ Penicillium oxalicum/ pesticide/ remediation

1606. Zhao, W-T; Yang, Z-H; Wei, Z-J; Zhao, J-Z, and Zhao, W-T. Dispersed Liquid Phase Microextraction Determination of Phosphorus, Sulfur Destroyed Line Malachy Phosphorus and Chlorpyrifos Residue. 2010 Sep 20; 29, (9): 1840-1844.   
Rec #: 40349  
Keywords: CHEM METHODS  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A rapid and sensitive method based on dispersive liquid-liquid microextraction (DLLME) and gas chromatography-flame photometric detection (GC-FPD) has been successfully applied to the determination of organphosphorus pesticides residues (OPPs) in apples. The factors that influenced the extraction were optimized in the experiment. The optimum conditions: 5.0 mL apple sample was placed in 10.0 mL centrifuge tube, then the mixture of 1.5 mL acetone (disperser) and 30 mu L l, 2-dichlorobenzene (extracter) was injected into the sample solution rapidly. Vibrate for 1 minute then centrifuge at the rate of 3 500 r times min super(-1) for 5 minutes, the extract phase was sedimented at the bottom of the centrifuge tube, transfer 1 mu L to GC system for analysis. Under the optimum condition, based on signal-to-noise ratio(S/N)of 3, limits of detection ranged form 1.32 to 3.58 mu g times mL super(-1). The relative standard deviations (RSD, n=3) were between 11.06% and 15.39%. Correlation coefficients varied from 0.977 3 to 0.997 6. The developed method was successfully applied in the analysis of apple samples. In order to evaluate the matrix effects of the samples, organophosphorus pesticide was added to the apples by using three different concentrations. The recoveries were ranged from 64.0% to 89.0%, and no matrix effect was observed. The results showed that the method was comparatively simple, fast and effective.  
Keywords: Sulfur  
Keywords: Correlation Coefficient  
Keywords: acetone  
Keywords: Apples  
Keywords: Residues  
Keywords: Pesticide residues  
Keywords: Phosphorus  
Keywords: Water Resources Abstracts; Pollution Abstracts; Aqualine Abstracts; Environment Abstracts  
Keywords: Pesticide Residues  
Keywords: Tubes  
Keywords: Chlorpyrifos  
Keywords: Organophosphorus Pesticides  
Keywords: Standard Deviation  
Keywords: Pesticides  
Date revised - 2011-01-01  
Language of summary - English  
Pages - 1840-1844  
ProQuest ID - 839698169  
SubjectsTermNotLitGenreText - Chlorpyrifos; Sulfur; acetone; Residues; Pesticide residues; Pesticides; Phosphorus; Correlation Coefficient; Organophosphorus Pesticides; Standard Deviation; Apples; Pesticide Residues; Tubes  
Last updated - 2012-09-24  
British nursing index edition - Journal of Agro-Environment Science [J. Agro-Environ. Sci.]. Vol. 29, no. 9, pp. 1840-1844. 20 Sep 2010.  
Corporate institution author - Zhao, W-T; Yang, Z-H; Wei, Z-J; Zhao, J-Z  
DOI - MD-0015179011; 14091941; 1672-2043 English

1607. Zhao, Wei-jun; Sun, Xiao-ke; Deng, Xiao-ni; Huang, Lin ; Yang, Ming-min, and Zhou, Zhi-ming. Cloud point extraction coupled with ultrasonic-assisted back-extraction for the determination of organophosphorus pesticides in concentrated fruit juice by gas chromatography with flame photometric detection. 2011 Jul 15-; 127, (2): 683-688.   
Rec #: 4150  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: A new method for the determination of nine organophosphorus pesticides (OPPs): Dichlorvos, methamidophos, acephate, diazinon, dimethoate, chlorpyrifos, parathion-methyl, malathion and parathion-ethyl in concentrated fruit juice was developed using the cloud point extraction coupled with ultrasonic-assisted back-extraction prior to gas chromatography with flame photometric detection (GC-FPD) analysis. The parameters and variables that affect the extraction were investigated. Under optimum conditions: a solution containing 6% (W/V) polyethylene glycol 6000 (PEG 6000) and 20% (W/V) Na2SO4 for the extraction of the OPPs. The coacervation phase obtained was back extracted with ethyl acetate. The upper ethyl acetate solution was centrifugated simply for further cleanup for the sake of automatic injection. A preconcentration factor of 50 was obtained for these nine pesticides. Using this method, the limits of detection (LOD) and limits of quantification (LOQ) were in the range of 0.5Çô3.0 and 1.5Çô9.0 ++g kgęĆ1 in concentrated fruit juice, respectively; the relative standard deviations (RSD) were &lt;9%. Cloud point extraction (CPE)/ Organophosphorus pesticides (OPPs)/ Ultrasonic-assisted back-extraction/ Gas chromatography with flame photometric detection (GC-FPD)/ Concentrated fruit juice

1608. Zhong, G. C.; Xie, Z. Y.; Cai, M. H.; Moller, A.; Sturm, R.; Tang, J. H.; Zhang, G.; He, J. F., and Ebinghaus, R. Distribution and Air-Sea Exchange of Current-Use Pesticides (CUPs) from East Asia to the High Arctic Ocean. 2012; 46, (1): 259-267.   
Rec #: 73099  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Surface seawater and marine boundary layer air samples were collected on the ice-breaker R/V Xuelong (Snow Dragon) from the East China Sea to the high Arctic (33.23-84.5 degrees N) in July to September 2010 and have been analyzed for six current-use pesticides (CUPs): trifluralin, endosulfan, chlorothalonil, chlorpyrifos, dacthal, and dicofol. In all oceanic air samples, the six CUPs were detected, showing highest level (>100 pg/m(3)) in the Sea of Japan. Gaseous CUPs basically decreased from East Asia (between 36.6 and 45.1 degrees N) toward Bering and Chukchi Seas. The dissolved CUPs in ocean water ranged widely from <MDL to 111 pg/L. Latitudinal trends of alpha-endosulfan, chlorpyrifos, and dicofol in seawater were roughly consistent with their latitudinal trends in air. Trifluralin in seawater was relatively high in the Sea of Japan (35.2 degrees N) and evenly distributed between 36.9 and 72.5 degrees N, but it remained below the detection limit at the highest northern latitudes in Chukchi Sea. In contrast with other CUPs, concentrations of chlorothalonil and dacthal were more abundant in Chukchi Sea and in East Asia. The air-sea gas exchange of CUPs was generally dominated by net deposition. Latitudinal trends of fugacity ratios of alpha-endosulfan, chlorothalonil, and dacthal showed stronger deposition of these compounds in East Asia than in Chukchi Sea, while trifluralin showed stronger deposition in Chukchi Sea (-455 +/- 245 pg/m(2)/day) than in the North Pacific (-241 +/-. 158 pg/m(2)/day). Air-sea gas exchange of chlorpyrifos varied from net volatilizaiton in East Asia (<40 degrees N) to equilibrium or net deposition in the North Pacific and the Arctic.  
Keywords: PERSISTENT ORGANIC POLLUTANTS, ORGANOCHLORINE PESTICIDES, ATMOSPHERIC  
ISI Document Delivery No.: 871UJ

1609. Zhong, G. C.; Xie, Z. Y.; Moller, A.; Halsall, C.; Caba, A.; Sturm, R.; Tang, J. H.; Zhang, G., and Ebinghaus, R. Currently used pesticides, hexachlorobenzene and hexachlorocyclohexanes in the air and seawater of the German Bight (North Sea). 2012; 9, (4): 405-414.   
Rec #: 73109  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Surface seawater and air samples collected from the German Bight (North Sea) in March, May and July 2010 were analysed for hexachlorobenzene (HCB) and hexachlorocyclohexanes (HCHs), five currently used pesticides (CUPs) (trifluralin, endosulfan, chlorpyrifos, dacthal and quintozene) and pentachloroanisole (metabolite). Volatilisation from local surfaces was considered to be the main source of these chemicals to the air (excluding trifluralin). Long-range transport from Western Europe partly contributed to the higher air concentrations observed in July whereas riverine input was the main source for HCHs and pentachloroanisole in seawater in March. Air-sea gas exchange of HCB and alpha-HCH in the German Bight was found to be near equilibrium, probably reflecting the past use of these chemicals, their wide dispersal in the environment and lack of contemporary use. Deposition of target compounds from the air to seawater was observed to be much higher in July compared with depositional fluxes for March and May, except for chlorpyrifos (with volatilisation fluxes in all sampling periods: similar to 25 ngm (2) day (1)). Concentrations of trifluralin in seawater appear to have decreased since its restriction of use in European Union member states, with net volatilisation from seawater observed in March (flux: 6.3 +/- 7.2 ng m(-2) day(-1)). With the exception of chlorpyrifos, our results indicate that volatilisation from local sources combined with long-range transport from Western Europe and subsequent deposition are important pathways for these compounds to German Bight seawater during summer periods.  
Keywords: PERSISTENT ORGANIC POLLUTANTS, WESTERN UNITED-STATES, WATER  
ISI Document Delivery No.: 990ZD

1610. Zhou, J.; Yu, Q., and Zou, T. Alternative Splicing of Exon 10 in the Tau Gene as a Target for Treatment of Tauopathies.   
Rec #: 51039  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: COMMENTS: Cites: Nat Rev Genet. 2007 Oct;8(10):749-61 (medline /17726481)  
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COMMENTS: Cites: Ann Neurol. 2001 Feb;49(2):263-7 (medline /11220749)  
COMMENTS: Cites: J Neuropathol Exp Neurol. 2000 Nov;59(11):990-1001 (medline /11089577)  
COMMENTS: Cites: J Struct Biol. 2000 Jun;130(2-3):271-9 (medline /10940231)  
COMMENTS: Cites: Ann Neurol. 2000 Dec;48(6):859-67 (medline /11117542)  
COMMENTS: Cites: Cell. 2000 Oct 27;103(3):367-70 (medline /11081623)  
COMMENTS: Cites: Exp Gerontol. 2000 Jul;35(4):461-71 (medline /10959034)  
COMMENTS: Cites: J Biol Chem. 2000 Jun 9;275(23):17700-9 (medline /10748133)  
COMMENTS: Cites: Ann Neurol. 2000 Jul;48(1):126 (medline /10894228)  
COMMENTS: Cites: Mol Cell Biol. 2000 Jun;20(11):4036-48 (medline /10805746)  
COMMENTS: Cites: Brain. 2000 May;123 ( Pt 5):880-93 (medline /10775534)  
COMMENTS: Cites: Ann Neurol. 2000 Apr;47(4):422-9 (medline /10762152)  
COMMENTS: Cites: J Neurochem. 2000 Feb;74(2):490-500 (medline /10646499)  
COMMENTS: Cites: J Neuropathol Exp Neurol. 1999 Dec;58(12):1207-26 (medline /10604746)  
COMMENTS: Cites: Nat Biotechnol. 1999 Nov;17(11):1097-100 (medline /10545916)  
COMMENTS: Cites: Ann Neurol. 1999 Nov;46(5):708-15 (medline /10553987)  
ABSTRACT: Tau aggregation is one of the major features in Alzheimer's disease and in several other tauopathies, including frontotemporal dementia with Parkinsonism linked to chromosome 17 (FTDP-17), and progressive supranuclear palsy (PSP). More than 35 mutations in the tau gene have been identified from FTDP-17 patients. A group of these mutations alters splicing of exon 10, resulting in an increase in exon 10 inclusion into tau mRNA. Abnormal splicing with inclusion of exon 10 into tau mRNA has also been observed in PSP and AD patients. These results indicate that abnormal splicing of exon 10, leading to the production of tau with exon 10, is probably one of the mechanisms by which tau accumulates and aggregates in tauopathic brains. Therefore, modulation of exon 10 splicing in the tau gene could potentially be targeted to prevent tauopathies. To identify small molecules or compounds that could potentially be developed into drugs to treat tauopathies, we established a cell-based high-throughput screening assay. In this review, we will discuss how realistic, specific biological molecules can be found to regulate exon 10 splicing in the tau gene for potential treatment of tauopathies.  
MESH HEADINGS: Alternative Splicing/drug effects/\*genetics  
MESH HEADINGS: Alzheimer Disease/drug therapy/genetics/pathology  
MESH HEADINGS: Animals  
MESH HEADINGS: Dementia/drug therapy/genetics/pathology  
MESH HEADINGS: Exons/genetics  
MESH HEADINGS: Humans  
MESH HEADINGS: Mutation  
MESH HEADINGS: Oligoribonucleotides, Antisense/genetics/therapeutic use  
MESH HEADINGS: Tauopathies/drug therapy/\*genetics/pathology  
MESH HEADINGS: tau Proteins/\*genetics eng

1611. Zhou, S. P.; Duan, C. Q.; Fu, H.; Chen, Y. H.; Wang, X. H., and Yu, Z. F. Toxicity assessment for chlorpyrifos-contaminated soil with three different earthworm test methods (vol 18, pg 854, 2007). 2007; 19, (8): 1019-1019.   
Rec #: 73149  
Keywords: NO SOURCE  
Notes: Chemical of Concern: CPY  
Abstract: ISI Document Delivery No.: 200AP

1612. Zhou, Y. J.; Xiang, B. R.; Wang, Z. W., and Chen, C. Y. Determination of Chlorpyrifos Residue by Near-Infrared Spectroscopy in White Radish Based on Interval Partial Least Square (iPLS) Model. 2009; 42, (10): 1518-1526.   
Rec #: 73199  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: This article presents a multivariate method of rapidly determining chlopyrifos residue in white radish, based on near-infrared spectroscopy and partial least squares (PLS) regression. Interval PLS (iPLS) was utilized to select the optimum wave number range. The number of PLS components and the number of intervals were optimized according to root mean square error of prediction (RMSEP) and correlation coefficient (R) in prediction set. The result showed that the iPLS model was more reliable than the full model and that near-infrared spectroscopy with iPLS algorithm could be used successfully to analyze chlorpyrifos residue in white radish.  
Keywords: Chlorpyrifos residue, interval partial least square (iPLS),  
ISI Document Delivery No.: 460PR

1613. Zhu, H. J. and Markowitz, J. S. Activation of the Antiviral Prodrug Oseltamivir Is Impaired by Two Newly Identified Carboxylesterase 1 Variants. 2009; 37, (2): 264-267.   
Rec #: 73209  
Keywords: HUMAN HEALTH  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Oseltamivir phosphate is an ethyl ester prodrug widely used in the treatment and prevention of both Influenzavirus A and B infections. The conversion of oseltamivir to its active metabolite oseltamivir carboxylate is dependent on ester hydrolysis mediated by carboxylesterase 1 (CES1). We recently identified two functional CES1 variants p. Gly143Glu and p. Asp260fs in a research subject who displayed significant impairment in his ability to metabolize the selective CES1 substrate, methylphenidate. In vitro functional studies demonstrated that the presence of either of the two mutations can result in severe reductions in the catalytic efficiency of CES1 toward methylphenidate, which is required for hydrolysis and pharmacological deactivation. The aim of the present study was to investigate the function of these mutations on activating (hydrolyzing) oseltamivir to oseltamivir carboxylate using the cell lines expressing wild type (WT) and each mutant CES1. In vitro incubation studies demonstrated that the S9 fractions prepared from the cells transfected with WT CES1 and human liver tissues rapidly convert oseltamivir to oseltamivir carboxylate. However, the catalytic activity of the mutant hydrolases was dramatically hindered. The V(max) value of p. Gly143Glu was approximately 25% of that of WT enzyme, whereas the catalytic activity of p. Asp260fs was negligible. These results suggest that the therapeutic efficacy of oseltamivir could be compromised in treated patients expressing either functional CES1 mutation. Furthermore, the potential for increased adverse effects or toxicity as a result of exposure to high concentrations of the nonhydrolyzed prodrug should be considered.  
Keywords: IN-VITRO, ESTERASE-ACTIVITIES, GENE, AGE, METHYLPHENIDATE, CHLORPYRIFOS,  
ISI Document Delivery No.: 396WV

1614. Zhu, J; Zhao, Y; Qiu, J, and Zhu, J. Isolation and Utilization of a Chlorpyrifos-Degrading Bacterium, Pseudomonas Fluorescens Zhu-6. 2011; 20, (4): 962-968.   
Rec #: 40109  
Keywords: BACTERIA  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: For the purpose of eliminating chlorpyrifos residue in soil or water, a strain ZHU-6 capable of utilizing chlorpyrifos as the sole carbon sources was isolated from soil. ZHU-6 was identified as Pseudomonas fluorescens based on Biolog Microbial Identification System and analysis of morphology, physiological and biochemical characters. The degradation rate of chlorpyrifos (100 mg L super(-1)) by ZHU-6 was at 99.9% in nutrient broth medium within 72 h, and this maybe imply that ZHU-6 held enormous capability of degrading chlorpyrifos. The growth of ZHU-6 was not interfered by 400 mg L super(-1) of chlorpyrifos and showed a high tolerance to chlorpyrifos. Bioremediation of chlorpyrifos-contaminated soil by using ZHU-6 was examined, and ZHU-6 addition to soil treated with 100 mg kg super(-1) chlorpyrifos resulted in a higher degradation rate than noninoculated soils. In addition, it was actualized to develop a new microbial preparation for dealing with chlorpyrifos pollution. The microbial preparation (soil amendment) added by strain ZHU-6 has developed a new function for degrading chlorpyrifos residue in soil, and the negative effect were not detected. Therefore, it was considered that ZHU-6 could be applied for bioremediation of chlorpyrifos pollution and development of microbial preparation. This study may provide theoretic basis and reference for prevention and control of pesticides pollution.  
Keywords: Bacteria  
Keywords: Bioremediation  
Keywords: Residues  
Keywords: Degradation  
Keywords: Biochemistry  
Keywords: ENA 09:Land Use & Planning  
Keywords: P 5000:LAND POLLUTION  
Keywords: Pseudomonas fluorescens  
Keywords: Chlorpyrifos  
Keywords: Soil  
Keywords: Pesticides  
Keywords: soil amendment  
Keywords: prevention  
Keywords: Water Resources Abstracts; Pollution Abstracts; Environment Abstracts  
Date revised - 2011-07-01  
Language of summary - English  
Pages - 962-968  
ProQuest ID - 886234470  
SubjectsTermNotLitGenreText - Soil; Chlorpyrifos; Bioremediation; Biochemistry; Degradation; Residues; Pesticides; prevention; soil amendment; Pseudomonas fluorescens; Bacteria  
Last updated - 2012-08-02  
Corporate institution author - Zhu, J; Zhao, Y; Qiu, J  
DOI - OB-MD-0016020681; 14806222; 1018-4619 English

1615. Zhu, L. J.; Zhang, W.; Zhang, J. C.; Zai, D. X., and Zhao, R. [Thermodynamics Adsorption and Its Influencing Factors of Chlorpyrifos and Triazophos on the Bentonite and Humus].   
Rec #: 76309  
Keywords: NON-ENGLISH  
Notes: Chemical of Concern: CPY  
Abstract: ABSTRACT: The adsorption of chlorpyrifos and triazophos on bentonite and humus was investigated by using the equilibrium oscillometry. The adsorption capacity of chlorpyrifos and triazophos on humus was great higher than bentonite at the same concentration. Equilibrium data of Langmuir, Freundlich isotherms showed significant relationship to the adsorption of chlorpyrifos and triazophos on humus (chlorpyrifos: R2 0.996 4, 0.996 3; triazophos: R2 0.998 9, 0.992 4). Langmuir isotherm was the best for chlorpyrifos and triazophos on bentonite (chlorpyrifos: R2 = 0.995 7, triazophos: R2 = 0.998 9). The pH value, adsorption equilibrium time and temperature were the main factors affecting adsorption of chlorpyrifos and triazophos on bentonite and humus. The adsorption equilibrium time on mixed adsorbent was 12h for chlorpyrifos and 6h for triazophos respectively. The mass ratio of humus and bentonite was 12% and 14% respectively, the adsorption of chlorpyrifos and triazophos was the stronglest and tended to saturation. At different temperatures by calculating the thermodynamic parameters deltaG, deltaH and deltaS, confirmed that the adsorption reaction was a spontaneous exothermic process theoretically. The adsorption was the best when the pH value was 6.0 and the temperature was 15 degrees C.  
MESH HEADINGS: Adsorption  
MESH HEADINGS: Bentonite/\*chemistry  
MESH HEADINGS: Chlorpyrifos/chemistry/\*isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: Environmental Pollutants/chemistry/isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: Humic Substances/\*analysis  
MESH HEADINGS: Organothiophosphates/chemistry/\*isolation &amp  
MESH HEADINGS: purification  
MESH HEADINGS: \*Thermodynamics  
MESH HEADINGS: Triazoles/chemistry/\*isolation &amp  
MESH HEADINGS: purification chi

1616. Zhu, Qing; Cao, Wei; Gao, Hui; Chen, Ni; Wang, Bini, and Yu, Shifeng. Effects of the processing steps on chlorpyrifos levels during honey production. 2010 Nov; 21, (11): 1497-1499.   
Rec #: 200  
Keywords: FOOD  
Notes: Chemical of Concern: CPY  
Abstract: The effects of different steps in honey production on chlorpyrifos levels were investigated. Chlorpyrifos residues were quantified by gas chromatography with flame photometric detection (GC-FPD) after each stage including preheating, filtration, vacuum concentration and pasteurization. The total loss of chlorpyrifos in honey was about 70% during the processing. Among these four stages, filtration and vacuum concentration had the significant effects on chlorpyrifos level, and the mean losses were 21.3 and 60.9, respectively. Honey/ Chlorpyrifos/ Processing

1617. Zhuang, H. M.; Wang, K. F.; Miyata, T.; Wu, Z. J.; Wu, G., and Xie, L. H. Identification and expression of caspase-1 gene under heat stress in insecticide-susceptible and -resistant Plutella xylostella (Lepidoptera: Plutellidae). 2011; 38, (4): 2529-2539.   
Rec #: 73239  
Keywords: NO TOXICANT  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A caspase gene in **Plutella xylostella** (DBM) was identified firstly and named Px-caspase-1. It had a full-length of 1172 bp and contained 900 bp open reading frame that encoded 300 amino acids with 33.6 kDa. The deduced amino acid of Px-caspase-1 had two domain profile including caspase\_p20 (position 61-184) and caspase\_p10 (position 203-298) (i.e. the big and small catalytic domains), and the highly conserved pentapeptide QACQG in caspase\_p20 domain (the recognized catalytic site of caspases). Being highly homologous to effector caspase genes in other insect and mammalian species, Px-caspase-1 was thought to be an effector caspase gene. Heat stress could result in significant mortality increase on adult DBM. Px-caspase-1 mRNA expression and caspase-3 enzyme activity (a effector caspase) were elevated with age and heat treatment. And, heat stress facilitated the procession of Px-caspase-1 expression. Significantly higher mRNA transcription levels were found in a chlorpyrifos-resistant DBM strain, as compared to those in insecticide-susceptible DBM. The results indicated that high temperature could significantly promote apoptosis process resulting in an the increased DBM mortality rate, and that insecticide-susceptible DBM had a significantly higher physiological fitness at high temperatures than insecticide-resistant DBM.  
Keywords: Px-caspase-1, Plutella xylostella, QPCR expression, Caspase-3 activity,  
ISI Document Delivery No.: 746OR

1618. Zimmerman, L. R.; Thurman, E. M., and Bastian, K. C. Detection of Persistent Organic Pollutants in the Mississippi Delta using Semipermeable Membrane Devices. 2000; 248, (2-3): 169-179.   
Rec #: 1620  
Keywords: FATE  
Call Number: NO FATE (CPY)  
Notes: Chemical of Concern: CPY

1619. Zioris, I. V.; Lambropoulou, D. A.; Danis, T. G.; Karagiozoglou, D. T., and Albanis, T. A. Assessment of pesticide residues in fresh peach samples produced under integrated crop management in an agricultural region of northern Greece. 2009; 26, (9): 1256-1264.   
Rec #: 73249  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A multi-residue method using selected ion monitoring mode GC/MS has been developed for the quantitative analysis of residue levels of 23 widely used pesticides in fresh peaches produced under integrated crop management process (ICM). The proposed methodology involved a sample extraction procedure using liquid-liquid partition with acetonitrile followed by a clean-up step based on solid-phase extraction (SPE). Fortification studies were performed at different concentration levels for various types of peaches that differ in properties, such as appearance, flavor and pit. The data showed that the different peach matrices had no significant effect on recoveries. Recoveries were greater than 80% for most of the pesticides with a RSD below 18%. The limits of quantification (LOQs) were in the range 0.002-0.050 mg kg-1, depending on the compound. To assess method performance with real samples and determine whether pesticide concentrations in peaches exceed their maximum residue levels (MRLs), the proposed method was successfully applied to the analysis of 104 fruit samples collected under integrated pest management (IPM) production during the 2006 cultivation period. Residues detected were lower than those established by legislation for all pesticides, except diazinon, where one positive sample was detected at a level of 0.03 mg kg-1.  
Keywords: chromatography, GC, MS, extraction, risk assessment, pesticide residues,  
ISI Document Delivery No.: 485DT

1620. Zioris, Ioannis; Petridis, Nikolaos; Lambropoulou, Dimitra; Raftopoulos, Christos; Albanis, Triantafyllos, and Zioris, Ioannis. Occurrence of Pesticides in Rainwater Samples in the Rivers Axios, Loudias and Alikmonas Estuaries, (N. Greece) by Spe and Liquid Chromatography (Lc-Ms/Ms). 2011 Sep.  
Rec #: 47149  
Keywords: FATE  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: The river basins of Axios, Loudias and Aliakmonas estuaries (central Macedonia, northern Greece) is one of the most developed agricultural areas of the country and receives annually a heavy load of numerous pesticides. In this area, the crop rotation schemes usually include high prices crops and very rare crops of low pesticide input. The occurrence of pesticide residues in most surface aquatic systems of the basin triggered the investigation of the presence of pesticides in rainwater of the basin. Thirty five (35) samples were collected, in seven rainwater collectors for four sampling stations of rivers basin during the period May to September of 2009. Isolation of the pesticides from the rainwater samples (100 mL) was performed off-line using a standard six-port SPE and SDB-RPS extractions disks. All river water samples were screened for 86 pesticides and chromatographic analyses were performed in a Thermo TSQ Quantum Access MAX triple quadrupole mass spectrometer. Recoveries were greater than 80% for most of the pesticides with RSD below 18%. The limits of quantification (LOQs) were in the range 0.002-0.050 mu g L super(-1), depending on the compound. Among 86 target pesticides only three pesticides (Dichlorvos, Chlorpyriphos and Methamidophos) were found in 10 rain water samples during two rain events on July of 2009.  
Start Page: 1133  
End Page: 1140  
Keywords: Rivers  
Keywords: Q5 01503:Characteristics, behavior and fate  
Keywords: River Basins  
Keywords: Mathematical models  
Keywords: SW 5040:Data acquisition  
Keywords: Water Analysis  
Keywords: Chromatographic techniques  
Keywords: Estuaries  
Keywords: Water Sampling  
Keywords: AQ 00008:Effects of Pollution  
Keywords: Aqualine Abstracts; Water Resources Abstracts; ASFA 3: Aquatic Pollution & Environmental Quality  
Keywords: River basins  
Keywords: Performance assessment  
Keywords: Freshwater  
Keywords: Crops  
Keywords: MED, Greece, Kentriki Makedonia, Imathia, Loudias Estuary  
Keywords: Macedonia  
Keywords: Agricultural Chemicals  
Keywords: Greece, Kentriki Makedonia, Thessaloniki, Axios Estuary  
Keywords: Pesticides  
Keywords: Rain  
Keywords: Chemical analysis  
Keywords: MED, Greece, Kentriki Makedonia, Pieria, Aliakmonas Estuary  
Date revised - 2012-07-01  
Language of summary - English  
Location - Macedonia; MED, Greece, Kentriki Makedonia, Imathia, Loudias Estuary; Greece, Kentriki Makedonia, Thessaloniki, Axios Estuary; MED, Greece, Kentriki Makedonia, Pieria, Aliakmonas Estuary  
Pages - 1133-1140  
ProQuest ID - 1024664957  
SubjectsTermNotLitGenreText - Mathematical models; Chromatographic techniques; Pesticides; River basins; Performance assessment; Rain; Chemical analysis; Rivers; River Basins; Agricultural Chemicals; Water Analysis; Water Sampling; Estuaries; Crops; Macedonia; MED, Greece, Kentriki Makedonia, Imathia, Loudias Estuary; Greece, Kentriki Makedonia, Thessaloniki, Axios Estuary; MED, Greece, Kentriki Makedonia, Pieria, Aliakmonas Estuary; Freshwater  
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British nursing index edition - Proceedings of the 12th International Conference on Environmental Science and Technology, Rhodes, Greece, 8-10 September 2011. Vol. 2, pp. 1133-1140. Proceedings of the International Conference on Environmental Science and Technology [Proc. Int. Conf. Environ. Sci. Technol.]. 2011.  
Corporate institution author - Zioris, Ioannis; Petridis, Nikolaos; Lambropoulou, Dimitra; Raftopoulos, Christos; Albanis, Triantafyllos  
DOI - MD-0018921584; 16859994; GR1200101; 1106-5516; 9789607475497 English

1621. Zohair, S. ; Khatoon, S., and Zaidi, S. CYTOLOGICAL STUDIES ON 14 PLANT SPECIES UNDER POLLUTED CONDITIONS. 2012; 44, (6): 1977-1982.   
Rec #: 73259  
Keywords: SURVEY  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: Thirty four specimens of 14 species belonging to Cyperaceae and Poaceae growing in the vicinity of industries, agricultural fields and a combination of both were collected in and around Karachi. The study aimed to find out how the plants are affected by a long-term exposure to a number of pollutants focusing on the meiotic behavior (precocious chromosomes, chromosomal stickening, split spindles, lagging chromosomes), dyads formation and pollen stertility. The percentage of meiotic abnormalities in the specimens from polluted sites was significantly higher as compared to their respective controls. The specimens from polluted localities showed a greater tendency to produce dyads as compared to controls. Voucher specimens of 9 species produced significant number of sterile pollens under polluted condition.  
Keywords: INSECTICIDE DURSBAN, PESTICIDES  
ISI Document Delivery No.: 065RF

1622. Zou, Z. X. ; Du, D.; Wang, J.; Smith, J. N.; Timchalk, C.; Li, Y. Q., and Lin, Y. H. Quantum Dot-Based Immunochromatographic Fluorescent Biosensor for Biomonitoring Trichloropyridinol, a Biomarker of Exposure to Chlorpyrifos. 2010; 82, (12): 5125-5133.   
Rec #: 73269  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: Abstract: A novel and portable fluorescent sensor that integrates an immunochromatographic test strip assay (ITSA) with a quantum dot (QD) label and a test strip reader was described in this study for simple, rapid, and sensitive biomonitoring of an organophosphorus pesticide metabolite. The principle of this sensor is based on a competitive immunoreaction that was performed on an immunochromatographic test strip, where analytes compete with competitors (QD-conjugated analogs) to bind to antibodies on a test zone. Captured QDs serve as signal vehicles for fluorescent readout. In this work, 3,5,6-trichloropyridinol (TCP) is used as a model analyte to demonstrate the performance of the immunosensor. QD-TCP conjugates were synthesized and characterized with X-ray photoelectron spectroscopy (XPS) and fluorescence spectroscopy. Some parameters (e.g., the amount of QD-modified TCP and immunoreaction time) that govern sensitivity and reproducibility of ITSA were optimized. Under optimal conditions, the sensor has a wide dynamic range and is capable of detecting a minimum 1.0 ng/mL TCP standard analyte in 15 min. The sensor has been successfully applied for detection of TCP spiked i**n rat plasma with a**verage recovery of 102.0%. Results demonstrate that this sensor provides a rapid, clinically accurate, and quantitative tool for TCP detection and shows great promise for in-field and point-of-care (POC) quantitative testing and screening for metabolite biomarkers, e.g., TCP, for humans exposed to pesticides.  
Keywords: PROSTATE-SPECIFIC ANTIGEN, LINKED-IMMUNOSORBENT-ASSAY, LATERAL-FLOW  
ISI Document Delivery No.: 608WG

1623. -îolovi-ç, Mirjana B.; Krsti-ç, Danijela Z. ; U+í-çumli-ç, Gordana S., and Vasi-ç, Vesna M. Single and simultaneous exposure of acetylcholinesterase to diazinon, chlorpyrifos and their photodegradation products. 2011 May; 100, (1): 16-22.   
Rec #: 910  
Keywords: IN VITRO  
Notes: Chemical of Concern: CPY  
Abstract: In vitro inhibition of electric eel acetylcholinesterase (AChE) by single and simultaneous exposure to organophosphorus insecticides diazinon and chlorpyrifos, and their transformation products, formed due to photoinduced degradation, was investigated. Increasing concentrations of diazinon, chlorpyrifos and their oxidation products, diazoxon and chlorpyrifos-oxon, inhibited AChE in a concentration-dependent manner. IC50 (20 min) values, obtained from the inhibition curves, were (in mol/l): (5.1 -\_ 0.3) +ů 10ęĆ8, (4.3 -\_ 0.2) +ů 10ęĆ6 and (3.0 -\_ 0.1) +ů 10ęĆ8 for diazoxon, chlorpyrifos and chlorpyrifos-oxon, respectively, while maximal diazinon concentration was lower than its IC50 (20 min). Calculated KI values, in mol/l, of 7.9 +ů 10ęĆ7, 9.6 +ů 10ęĆ6 and 4.3 +ů 10ęĆ7 were obtained for diazoxon, chlorpyrifos and chlorpyrifos-oxon, respectively. However, 2-isopropyl-4-methyl-6-pyrimidinol (IMP) and 3,5,6-trichloro-2-pyridinol, diazinon and chlorpyrifos hydrolysis products, did not noticeably affect the enzyme activity at all investigated concentrations. Additive inhibition effect was achieved for lower concentrations of the inhibitors (diazinon/diazoxon \_+1 +ů 10ęĆ4/1 +ů 10ęĆ8 mol/l i.e., chlorpyrifos/chlorpyrifos-oxon \_+2 +ů 10ęĆ6/3 +ů 10ęĆ8 mol/l), while an antagonistic effect was obtained for all higher concentrations of the organophosphates. Inhibitory power of 1 +ů 10ęĆ4 mol/l diazinon irradiated samples can be attributed mostly to the formation of diazoxon, while the presence of non-inhibiting photodegradation product IMP did not affect diazinon and diazoxon inhibitory efficiencies. Diazinon/ Chlorpyrifos/ Photodegradation products/ Acetylcholinesterase/ Simultaneous exposure

**Additional Papers that were Excluded (classified as “Not acceptable”) from the May 2013 Refresh**

1. Abd-Elghafar, S. F.; Appel, A. G., and Mack, T. P. Effects of Several Insecticide Formulations on Oothecal Drop and Hatchability in German Cockroaches (Dictyoptera: Blattellidae). MORTOP; 1991; 84, (2): 502-509.   
Rec #: 1010  
Call Number: NO ENDPOINT (CPY,CYF,CYP,FNV,MLN,PPX,PTP), TARGET (CYP,FNV,MLN,PPX,PTP)  
Notes: EcoReference No.: 113379  
Chemical of Concern: BDC,CPY,CYF,CYP,FNV,HMN,MLN,PPX,PTP,PYN

2. Abdou, R. F. and Abdel-Wahab, M. A. Cytological and Developmental Effects of Certain Insecticides in Vicia faba. CEL,GRO,REPSOIL,ENV; 1985; 27, (5): 123-125.   
Rec #: 800  
Call Number: NO ENDPOINT (CBL,CPY,CYP,MTM)  
Notes: EcoReference No.: 44263  
Chemical of Concern: CBL,CPY,CYP,MTM

3. Acker, C. I. and Nogueira, C. W. Chlorpyrifos Acute Exposure Induces Hyperglycemia and Hyperlipidemia in Rats. BCM,MORINJECT; 2012; 89, (5): 602-608.   
Rec #: 2980  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160201  
Chemical of Concern: CPY

4. Acker, C. I.; Souza, A. C. G.; Dos Santos, M. P.; Mazzanti, C. M., and Nogueira, C. W. Diphenyl Diselenide Attenuates Hepatic and Hematologic Toxicity Induced by Chlorpyrifos Acute Exposure in Rats. BCM,CEL,GRO,MOR,PHYINJECT,MIXTURE,ORAL; 2012; 19, (8): 3481-3490.   
Rec #: 2720  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160404  
Chemical of Concern: CPY

5. Adolfsson-Erici, M.; Akerman, G., and McLachlan, M. S. In-Vivo Passive Sampling to Measure Elimination Kinetics in Bioaccumulation Tests. ACC,BCMAQUA,INJECT; 2012; 88, (1): 62-68.   
Rec #: 2680  
Call Number: NO ENDPOINT (CPY,ES,PCBZ)  
Notes: EcoReference No.: 160107  
Chemical of Concern: CPY,DDT,ES,PCB,PCBZ

6. Ahdaya, S. and Guthrie, F. E. Stomach Absorption of Intubated Insecticides in Fasted Mice. ACCORAL; 1982; 22, (4): 311-317.   
Rec #: 1800  
Call Number: NO CONTROL (CBF,CBL,CPY,MLN,PMR), NO ENDPOINT (CBF,CBL,CPY,MLN,PMR)  
Notes: EcoReference No.: 110948  
Chemical of Concern: CBF,CBL,CPY,MLN,PMR

7. Ahdaya, S. M.; Monroe, R. J., and Guthrie, F. E. Absorption and Distribution of Intubated Insecticides in Fasted Mice. ACCORAL; 1981; 16, 38-46.   
Rec #: 500  
Call Number: NO CONTROL (CBF,CBL,CPY,DZ,MLN,PPX), NO ENDPOINT (CBF,CBL,CPY,DZ,MLN,PPX)  
Notes: EcoReference No.: 111365  
Chemical of Concern: CBF,CBL,CPY,DDT,DLD,DZ,EPRN,HCCH,MLN,PPCP,PPX,PRN

8. Aldridge, J. E.; Meyer, A.; Seidler, F. J., and Slotkin, T. A. Developmental Exposure to Terbutaline and Chlorpyrifos: Pharmacotherapy of Preterm Labor and an Environmental Neurotoxicant Converge on Serotonergic Systems in Neonatal Rat Brain Regions. BCM,CEL,GROINJECT,MIXTURE; 2005; 203, (2): 132-144.   
Rec #: 850  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 81273  
Chemical of Concern: CPY

9. All, J. N.; Javid, A., and Guillebeau, P. Control of Fall Armyworm with Insecticides in North Georgia Sweetcorn. POPENV,MIXTURE; 1986; 69, (3): 598-602.   
Rec #: 10  
Call Number: NO ENDPOINT (CPY,CYF,CYH,CYP,EFV,FNV,FVL,MOM,PMR,TLM), PESTS (EFV,FNV,FVL,MOM,PMR), TARGET2012 (CYF,CYH,CYP,TLM)  
Notes: EcoReference No.: 152705  
Chemical of Concern: CPY,CYF,CYH,CYP,EFV,FNV,FVL,FYT,MOM,PMR,TLM

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Rec #: 3040  
Call Number: NO CONTROL (CPY), NO ENDPOINT (CPY)  
Notes: EcoReference No.: 160327  
Chemical of Concern: CPY

11. Apperson, C. S. and Georghiou, G. P. Changes in Cross-Resistance Spectrum Resulting from Methyl Parathion Selection of Culex tarsalis Coq. MORAQUA; 1975; 24, (4): 698-703.   
Rec #: 640  
Call Number: NO CONTROL (CBL,CPY,FNT,MLN,MLO,MP,MPO,PPX,RSM,TMP), NO ENDPOINT (CBL,CPY,FNT,MLN,MLO,MP,MPO,PPX,RSM,TMP)  
Notes: EcoReference No.: 115427  
Chemical of Concern: CBL,CPY,DDT,DLD,EPRN,FNT,FNTH,MLN,MLO,MP,MPO,PPX,PRN,RSM,TMP

12. Ashauer, R.; Hintermeister, A.; Potthoff, E., and Escher, B. I. Acute Toxicity of Organic Chemicals to Gammarus pulex Correlates with Sensitivity of Daphnia magna Across Most Modes of Action. MOR,PHYAQUA; 2011; 103, (1/2): 38-45.   
Rec #: 2320  
Call Number: LITE EVAL CODED (ADC,CBF,IMC,MLN), NO REVIEW (24D,24DXY,ATZ,AZX,CBD,CBL,CPY,CYP,DCA,DZ,EFV,ES,FNV,FNZ,FYC,GCYH,IPD,LCYT,MOM,PCP,PIRM,PMR)  
Notes: EcoReference No.: 153561  
Chemical of Concern: 24D,24DC,24DXY,ACT,ADC,ATZ,AZX,CBD,CBF,CBL,CPY,CYD,CYP,DCA,DZ,EAC,EFV,EPRN,ES,FNTH,FNV,FNZ,FYC,GCYH,HCCH,IDC,IMC,IPD,LCYT,MLN,MOM,PCP,PIRM,PL,PMR,PPCP,PRN,TAP,TFY

13. Attia, F. I. Insecticide Resistance in Cadra cautella in New South Wales, Australia. MOR. (lepidoptera) New South Wales Dep. Agric.,Biol. Chem. Res. Inst.,Rydalmere,Australia//: MIXTURE,TOP; 1976; 69, (6): 773-774.   
Rec #: 2700  
Call Number: NO CONTROL (BRSM,CPY,CPYM,DDVP,DZ,FNT,MLN,MOM,MP,MVP,Naled,PIRM,PMR,PPB,SMT), TARGET2012 (BRSM,DDVP,DZ,FNT,MLN,MP,MVP,Naled,PIRM)  
Notes: EcoReference No.: 159310  
Chemical of Concern: BRSM,CPY,CPYM,DDT,DDVP,DLD,DZ,EN,EPRN,FNT,MLN,MOM,MP,MVP,Naled,PIRM,PMR,PPB,PRN,SMT

14. Aziz, S. A. Toxicity of Certain Insecticide Standards Against the Southern Armyworm. MORTOP; 1973; 66, (1): 68-70.   
Rec #: 1980  
Call Number: NO CONTROL (ADC,AZ,CBF,CBL,CMPH,CPY,DDVP,DMT,DS,DZ,MP,MVP,PRT,PSM,TCF,TMP), TARGET (CBF,CBL,CMPH,DDVP,DMT,DS,MP,MVP,PRT,PSM,TCF,TMP)  
Notes: EcoReference No.: 112632  
Chemical of Concern: ADC,AND,AZ,CBF,CBL,CMPH,CPY,DDT,DDVP,DEM,DLD,DMT,DS,DZ,EN,EPRN,HCCH,HPT,MP,MVP,PPCP,PRN,PRT,PSM,TCF,TMP,TXP

15. Baerg, R. J. Basis of Imazethapyr Selectivity in Cowpea (Vigna senensis), Interactions Between Insecticides and Cytochrome P450 Activities, and Cytochrome P450 Monooxyenase Metabolism of Imazethapyr. ACC,BCMSOIL,ENV; 1994: 135 p. (UMI# 9519769).   
Rec #: 20  
Call Number: NO IN VITRO (24D,24DXY,BT,CBF,CBL,CPY,CRME,DMB,MLN,PMR,PRT,TBS)  
Notes: EcoReference No.: 157920  
Chemical of Concern: 24D,24DXY,BT,CBF,CBL,CPY,CRME,DDA,DFP,DMB,FNF,IMQ,IZT,MLN,NSF,PMR,PRT,TBS

16. Bailey, J. A. and Kapusta, G. Soil Insecticide and Placement Influence Corn (Zea mays) Tolerance to Nicosulfuron. GRO,PHY,POPSOIL,ENV; 1994; 8, (3): 598-606.   
Rec #: 1770  
Call Number: NO MIXTURE (CEX,CPY,PRT,TBO)  
Notes: EcoReference No.: 63642  
Chemical of Concern: CEX,CPY,FNF,NSF,PRT,TBO,TFT

17. Baireddy, P.; Liu, J.; Hinsdale, M., and Pope, C. Comparative Effects of Chlorpyrifos in Wild Type and Cannabinoid Cb1 Receptor Knockout Mice. BCM,GRO,PHY. Department of Physiological Sciences, Center for Veterinary Health Sciences, Oklahoma State University, USA, Elsevier B.V., P.O. Box 211 Amsterdam 1000 AE Netherlands//: INJECT; 2011; 256, (3): 324-329.   
Rec #: 2840  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160221  
Chemical of Concern: CPY

18. Baireddy, P. R. Pre-Synaptic Cholinergic and Cannabinergic Signaling in the Expression of Organophosphate Toxicity. BCM,GRO,PHYINJECT; 2009: 214 p. (UMI# 3390952).   
Rec #: 2740  
Call Number: NO EXP TYPE (CPY,CPYO)  
Notes: EcoReference No.: 159943  
Chemical of Concern: CPY,CPYO,EPRN,PRN

19. Balanca, G. and De Visscher, M. N. Impacts on Nontarget Insects of a New Insecticide Compound used Against the Desert Locust [Schistocerca gregaria (Forskal 1775)]. POPENV; 1997; 32, (1): 58-62.   
Rec #: 1270  
Call Number: NO ENDPOINT (CPY,FPN)  
Notes: EcoReference No.: 40133  
Chemical of Concern: CPY,FPN

20. Balasubramani, V. and Swamiappan, M. Persistant Toxicity of Some Insecticides to the Green Lacewing Chrysoperia carnea (Chrysopidae: Neuroptera). MORENV; 1997; 7, (3): 197-200.   
Rec #: 1570  
Call Number: NO CONTROL (CPY,DCF,ES,FNV), TARGET2012 (DCF,ES,FNV)  
Notes: EcoReference No.: 63640  
Chemical of Concern: CPY,DCF,ES,FNV,PHSL

21. Banni, M.; Jebali, J.; Guerbej, H.; Dondero, F.; Boussetta, H., and Viarengo, A. Mixture Toxicity Assessment of Nickel and Chlorpyrifos in the Sea Bass Dicentrarchus labrax. ACC,BCM,MORINJECT,MIXTURE; 2011; 60, (1): 124-131.   
Rec #: 2190  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 156010  
Chemical of Concern: CPY

22. Basha, P. M. and Poojary, A. Chlorpyrifos Induced Region Specific Vulnerability in Rat CNS and Modulation by Age and Cold Stress: An Interactive Study. BCMINJECT; 2011; 36, (2): 241-249.   
Rec #: 2780  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160223  
Chemical of Concern: CPY

23. ---. Oxidative Macromolecular Alterations in the Rat Central Nervous System in Response to Experimentally Co-Induced Chlorpyrifos and Cold Stress: a Comparative Assessment in Aging Rats. BCM,CEL,GRO. Department of Zoology, Bangalore University, Bangalore, 560 056, India. pmbashabub@rediffmail.com//: INJECT; 2012; 37, (2): 335-348.   
Rec #: 2870  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160225  
Chemical of Concern: CPY

24. Ben-Yakir, D.; Gol'Berg, A. M., and Chen, M. Laboratory Efficacy Screening of Insecticides for Control of Maladera matrida Larvae. MOR. Dep. Entonol., ARO, Volcani Center, Bet Dagan 50250, Israel.//: ENV; 1995; 23, (2): 119-125.   
Rec #: 2240  
Call Number: NO ENDPOINT (ACP,CBL,CPY,DZ,EP,FNT,IMC,MTM,TBO), TARGET2012 (CBL,DZ,FNT,IMC,TBO)  
Notes: EcoReference No.: 153450  
Chemical of Concern: ACP,BDC,CBL,CPY,DZ,EP,FNT,IMC,IZF,MTM,TBO

25. Benezet, H. J.; Bowen, M. R.; Helms, C. W., and Huffman, B. B. Toxicity of Selected Insecticides to Lasioderma serricorne (F.) (Coleoptera: Anobiidae) by Three Methods of Exposure. MORENV; 1986; 22, (2): 93-96.   
Rec #: 2020  
Call Number: NO CONTROL (BFT,CPY,CYP,DDVP,NCTN,PIRM,PMR,RSM,TCF), TARGET (BFT,CYP,DDVP,NCTN,PIRM,PMR,TCF)  
Notes: EcoReference No.: 70536  
Chemical of Concern: BFT,CPY,CYP,DDVP,NCTN,PIRM,PMR,PYN,RSM,TCF

26. Benezet, H. J.; Huffman, B. B., and Helms, C. W. Comparative Toxicity of Selected Insecticides to the Cigarette Beetle at Different Temperatures. MORENV; 1988; 32, 41-43.   
Rec #: 730  
Call Number: NO CONTROL (BFT,CPY,CYP,DDVP,FNV,PIRM,PMR,RSM), TARGET2012 (BFT,CYP,DDVP,PIRM,RSM)  
Notes: EcoReference No.: 72099  
Chemical of Concern: BFT,CPY,CYP,DDVP,FNV,PIRM,PMR,PYN,RSM

27. Berberet, R. C.; Zarrabi, A. A., and Bisges, A. D. Early-Season Insect Control in Alfalfa, 1997. POPSOIL,ENV,MIXTURE; 1998; 23, 169-170 (1F).   
Rec #: 30  
Call Number: NO MIXTURE (CPY), OK (CBF,CYF,CYP,PMR)  
Notes: EcoReference No.: 150699  
Chemical of Concern: CBF,CPY,CYF,CYP,IDC,PMR

28. Berlinger, M. J.; Lebiush-Mordechi, S.; Dahan, R., and Taylor, R. A. J. A Rapid Method for Screening Insecticides in the Laboratory. MOR,POP. Dep. Entomol., Ohio Agric. Res. Dev. Center, Wooster, OH 44691//Pesticide science////: ENV; 1996; 46, (4): 345-353.   
Rec #: 490  
Call Number: NO CONTROL (ACP,AMZ,AZ,CPY,CPYM,DM,DMT,DZ,LCYT), NO ENDPOINT (ACP,ALSV,AMZ,AZ,CPY,CPYM,CYP,DM,DMT,DZ,LCYT), TARGET2012 (ACP,ALSV,AMZ,AZ,BFT,CYH,CYP,DM,DMT,DZ,FPP,LCYT)  
Notes: EcoReference No.: 109832  
Chemical of Concern: ACP,ALSV,AMZ,AZ,BFT,CPY,CPYM,CYH,CYP,DM,DMT,DZ,EPRN,FPP,FYT,LCYT,PRN,THO

29. Beugnet, F. and Chardonnet, L. Tick Resistance to Pyrethroids in New Caledonia. MORENV; 1995; 56, (4): 325-338.   
Rec #: 1930  
Call Number: NO CONTROL (CMPH,CPY,DM,DZ,FNV,PTP), TARGET (CMPH,DM,FNV,PTP)  
Notes: EcoReference No.: 115241  
Chemical of Concern: CMPH,CPY,DM,DZ,ETN,FNTH,FNV,PTP

30. Billauer-Haimovitch, H.; Slotkin, T. A.; Dotan, S.; Langford, R.; Pinkas, A., and Yanai, J. Reversal of Chlorpyrifos Neurobehavioral Teratogenicity in Mice by Nicotine Administration and Neural Stem Cell Transplantation. BEH,GROINJECT; 2009; 205, (2): 499-504.   
Rec #: 50  
Call Number: NO EXP TYPE (CPY,NCTN)  
Notes: EcoReference No.: 159941  
Chemical of Concern: CPY,NCTN

31. Biswas, A. K. and Mandal, S. K. Field Efficacy of Several Insecticides Against Rice Hispa. PHY,POPSOIL,ENV; 1992; 17, (1): 169.   
Rec #: 2350  
Call Number: NO ENDPOINT (CPY,ES,MP)  
Notes: EcoReference No.: 153761  
Chemical of Concern: CPY,ES,MP,PPHD

32. Bourguet, D.; Capela, R., and Raymond, M. An Insensitive Acetylcholinesterase in Culex pipiens (Diptera: Culicidae) from Portugal. BCM,MORAQUA; 1996; 89, (5): 1060-1066.   
Rec #: 540  
Call Number: NO CONTROL (CPY,MLN,PPX,TMP)  
Notes: EcoReference No.: 112658  
Chemical of Concern: CPY,MLN,PPX,TMP

33. Bourguet, D.; Prout, M., and Raymond, M. Dominance of Insecticide Resistance Presents a Plastic Response. MORAQUA; 1996; 143, (1): 407-416.   
Rec #: 880  
Call Number: NO ENDPOINT (CPY,PPX)  
Notes: EcoReference No.: 112554  
Chemical of Concern: CPY,PPX

34. Boyd, W. A.; Smith, M. V.; Kissling, G. E.; Rice, J. R.; Snyder, D. W.; Portier, C. J., and Freedman, J. H. Application of a Mathematical Model to Describe the Effects of Chlorpyrifos on Caenorhabditis elegans Development. PHYAQUA; 2009; 4, (9): 40 p.   
Rec #: 60  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 155627  
Chemical of Concern: CPY

35. Bozkurt, A.; Yardan, T.; Ciftcioglu, E.; Baydin, A.; Hakligor, A.; Bitigic, M., and Bilge, S. Time Course of Serum S100B Protein and Neuron-Specific Enolase Levels of a Single Dose of Chlorpyrifos in Rats. BCM,BEH,GRO,MOR,PHY. 1Department of Physiology, Ondokuz Mayis University, School of Medicine, Samsun, Turkey, Wiley-Blackwell, 111 River Street Hoboken NJ 07030-5774 USA//: INJECT; 2010; 107, (5): 893-898.   
Rec #: 2880  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160229  
Chemical of Concern: CPY

36. Brammall, R. A. Effect of Foliar Fungicide Treatment on Early Blight and Yield of Fresh Market Tomato in Ontario. GRO,POP. Horticultural Res. Inst. Ont., Horticulture Exp. Stn., Box 587, Simcoe, ON N3Y 4N5, Can.//: SOIL,ENV; 1993; 77, (5): 484-488.   
Rec #: 2490  
Call Number: LITE EVAL CODED (CTN), NO EFFECT (AZ,CPY)  
Notes: EcoReference No.: 156692  
Chemical of Concern: AZ,CPY,CTN

37. Branham, B. E. and Lickfeldt, D. W. Effect of Pesticide-Treated Grass Clippings Used as a Mulch on Ornamental Plants. GRO,MOR,PHYSOIL,ENV,MIXTURE; 1997; 32, (7): 1216-1219.   
Rec #: 930  
Call Number: NO ENDPOINT (CPY), NO MIXTURE (24D,24DXY,TPR), OK (FPD,IXB)  
Notes: EcoReference No.: 63342  
Chemical of Concern: 24D,24DXY,CPR,CPY,FPD,IXB,TPR

38. Braun, H. E.; Ritcey, G. M.; Frank, R.; McEwen, F. L., and Ripley, B. D. Dissipation Rates of Insecticides in Six Minor Vegetable Crops Grown on Organic Soils in Ontario, Canada. ACCSOIL,ENV; 1980; 11, (6): 605-616.   
Rec #: 870  
Call Number: NO ENDPOINT (CBX,CPY,DZ,ES,MOM,MTM)  
Notes: EcoReference No.: 117927  
Chemical of Concern: CBX,CPY,DZ,EPRN,ES,ETN,FNF,MOM,MTM,PIM,PRN

39. Brewer, L. W.; McQuillen, H. L. Jr.; Mayes, M. A.; Stafford, J. M., and Tank, S. L. Chlorpyrifos Residue Levels in Avian Food Items Following Applcations of a Commercial EC Formulation to Alfalfa and Citrus. ACC,GROSOIL,ENV; 2003; 59, 1179-1190.   
Rec #: 670  
Call Number: NO CONTROL (CPY), NO ENDPOINT (CPY)  
Notes: EcoReference No.: 119326  
Chemical of Concern: CPY

40. Bride, J. M. ; Cuany, A.; Amichot, M.; Brun, A.; Babault, M.; Le Mouel, T.; De Sousa, G.; Rahmani, R., and Berge, J. B. Cytochrome P-450 Field Insecticide Tolerance and Development of Laboratory Resistance in Grape Vine Populations of Drosophila melanogaster (Diptera: Drosophilidae). MORENV; 1997; 90, (6): 1514-1520.   
Rec #: 790  
Call Number: NO CONTROL (CPY,CYP,DCF,DM,DZ,FNT,FNV,FPN,MDT,MLN,MOM,TLM), TARGET2012 (CYP,DCF,DM,DZ,FNT,FNV,FPN,MDT,MLN,MOM,TLM)   
Notes: EcoReference No.: 114909  
Chemical of Concern: CPY,CYP,DCF,DDT,DM,DZ,EPRN,FNT,FNTH,FNV,FPN,MDT,MLN,MOM,PRN,TLM

41. Broerse, M. and Van Gestel, C. A. M. Mixture Effects of Nickel and Chlorpyrifos on Folsomia candida (Collembola) Explained from Development of Toxicity in Time. MORSOIL,ENV; 2010; 79, (9): 953-957.   
Rec #: 70  
Call Number: NO MIXTURE (CPY)  
Notes: EcoReference No.: 152197  
Chemical of Concern: CPY

42. Budai, P.; Lehel, J.; Tavaszi, J., and Kormos, E. Het-Cam Test for Determining the Possible Eye Irritancy of Pesticides. PHYENV,TOP; 2010; 58, (3): 369-377.   
Rec #: 2220  
Call Number: NO ENDPOINT (CPY,DIOSSNa,PDM,PIRM,PPG)  
Notes: EcoReference No.: 156770  
Chemical of Concern: ACT,CPY,DIOSSNa,LUF,PDM,PIRM,PPG

43. Busby-Hjerpe, A. L.; Campbell, J. A.; Smith, J. N.; Lee, S.; Poet, T. S.; Barr, D. B., and Timchalk, C. Comparative Pharmacokinetics of Chlorpyrifos Versus Its Major Metabolites Following Oral Administration in the Rat. ACCORAL; 2010; 268, (1/2): 55-63.   
Rec #: 80  
Call Number: NO ENDPOINT (CPY,DZ,TCP)  
Notes: EcoReference No.: 156466  
Chemical of Concern: CPY,DZ,TCP

44. Buschman, L. L.; Wildman, L.; Sloderbeck, P. E., and Currie, R. Western Corn Rootworm Larval Control, 1993. PHY,POPSOIL,ENV,MIXTURE; 1994; 19, 190-191 (26F).   
Rec #: 2080  
Call Number: NO CONTROL (TBO), NO ENDPOINT (TBO), NO MIXTURE (CEX,CPY,PRT)  
Notes: EcoReference No.: 112581  
Chemical of Concern: CEX,CPY,FNF,NSF,PRT,TBO,TFT

45. Butter, N. S.; Battu, G. S.; Kular, J. S.; Singh, T. H., and Brar, J. S. Integrated Use of Bacillus thuringiensis Berliner with Some Insecticides for the Management of Bollworms on Cotton. POPSOIL,ENV,MIXTURE; 1995; 19, (3): 255-263.   
Rec #: 90  
Call Number: EFFICACY (ES,FNV), NO MIXTURE (CBL,CPY,CYP,DM), PESTS MANUAL (ES,FNV), TARGET2012 (CBL)  
Notes: EcoReference No.: 154476  
Chemical of Concern: CBL,CPY,CYP,DM,ES,FNV

46. Bwye, A. M.; Proudlove, W.; Berlandier, F. A., and Jones, R. A. C. Effects of Applying Insecticides to Control Aphid Vectors and Cucumber Mosaic Virus in Narrow-Leafed Lupins (Lupinus angustifolius). GRO,PHY,POP. R.A.C. Jones, Agriculture Western Australia, Marine Terrace, Geraldton, WA 6530, Australia//: SOIL,ENV,MIXTURE; 1997; 37, (1): 93-102.   
Rec #: 960  
Call Number: LITE EVAL CODED (MTM), NO ENDPOINT (CPY,LCYT), OK (DS)  
Notes: EcoReference No.: 63391  
Chemical of Concern: CPY,DS,LCYT,MTM,PIM

47. Byford, R. L.; Sparks, T. C.; Green, B.; Knox, J., and Wyatt, W. Organophosphorus Insecticides for the Control of Pyrethroid-Resistant Horn Flies (Diptera: Muscidae). MOR,POPENV,MIXTURE,TOP; 1988; 81, (6): 1562-1566.   
Rec #: 1540  
Call Number: NO CONTROL (CMPH,CPY,DMT,DZ,FNV,MLN,PIRM,PMR,TCF), NO ENDPOINT (TVP), TARGET2012 (CMPH,DMT,DZ,FNV,MLN,PIRM,PMR,TCF,TVP)  
Notes: EcoReference No.: 114522  
Chemical of Concern: CMPH,CPY,DMT,DZ,ETN,FNV,MLN,PIRM,PMR,TCF,TVP

48. Carvajal, F. ; Sanchez-Amate, M. C.; Sanchez-Santed, F., and Cubero, I. Neuroanatomical Targets of the Organophosphate Chlorpyrifos by c-fos Immunolabeling. BCM,BEH,CELINJECT; 2005; 84, (2): 360-367.   
Rec #: 1460  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 80515  
Chemical of Concern: CPY

49. Chai, L. K.; Mohd-Tahir, N., and Bruun Hansen, H. C. Dissipation of Acephate, Chlorpyrifos, Cypermethrin and Their Metabolites in a Humid-Tropical Vegetable Production System. ACC. Agriculture Research Centre, Semongok, Department of Agriculture Sarawak, Borneo Height Road, 93720 Kuching, Sarawak, Malaysia. chailk@sarawaknet.gov.my//: SOIL,ENV,MIXTURE; 2009; 65, (2): 189-196.   
Rec #: 3170  
Call Number: NO ENDPOINT (ACP,CPY,CYP,FTF), NO MIXTURE (CPY,CYP)  
Notes: EcoReference No.: 160342  
Chemical of Concern: ACP,CPY,CYP,FTF

50. Chalfant, R. B.; Hall, M. R.; Johnson, A. W.; Seal, D. R., and Bondari, K. Effects of Application Methods, Timing, and Rates of Insecticides and Nematicides on Yield and Control of Wireworms (Coleoptera: Elateridae) and Nematodes (Tylenchida: Heteroderidae) that Affect Sweet Potato. MOR,POPSOIL,ENV,MIXTURE; 1992; 85, (3): 878-887.   
Rec #: 950  
Call Number: NO DURATION (CPY,DZ,EP), NO MIXTURE (CPY,DZ), OK (ADC,FMP)  
Notes: EcoReference No.: 85644  
Chemical of Concern: ADC,CPY,DZ,EP,EPRN,FMP,FNF,PRN

51. Champ, B. R. and Campbell-Brown, M. J. Insecticide Resistance in Australian Tribolium castaneum (Herbst) (Coleoptera, Tenebrionidae) - II. Malathion Resistance in Eastern Australia. BEH,MORENV; 1970; 6, (2): 111-131.   
Rec #: 2340  
Call Number: NO CONTROL (CBL,CPY,DDVP,DZ,FNT,PPX,TMP,TVP), TARGET2012 (CBL,DDVP,DZ,FNT,MLN,PPX,TMP,TVP)  
Notes: EcoReference No.: 153772  
Chemical of Concern: CBL,CPY,DDT,DDVP,DZ,FNT,HCCH,MLN,PPCP,PPX,PYN,TMP,TVP

52. Chen, W. Q.; Yuan, L.; Xue, R.; Li, Y. F.; Su, R. B.; Zhang, Y. Z., and Li, J. Repeated Exposure to Chlorpyrifos Alters the Performance of Adolescent Male Rats in Animal Models of Depression and Anxiety. BEH. Department of New Drug Evaluation, Beijing Institute of Pharmacology and Toxicology, 27 Taiping Road, Beijing, Haidian District, PR China.//: INJECT; 2011; 32, (4): 355-361.   
Rec #: 2910  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160251  
Chemical of Concern: CPY

53. Chen, X. P.; Chen, W. Z.; Wang, F. S., and Liu, J. X. Selective Cognitive Impairments are Related to Selective Hippocampus and Prefrontal Cortex Deficits After Prenatal Chlorpyrifos Exposure. BEH,CELINJECT; 2012; 1474, 19-28.   
Rec #: 3140  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160374  
Chemical of Concern: CPY

54. Chen, X. P.; Wang, X., and Dong, J. Y. Different Reaction Patterns of Dopamine Content to Prenatal Exposure to Chlorpyrifos in Different Periods. BCM. College of Biological and Environmental Engineering, Zhejiang University of Technology, 18 Chao-Wang Road, Hangzhou 310032, China, Wiley-Blackwell, 111 River Street Hoboken NJ 07030-5774 USA//: INJECT; 2011; 31, (4): 355-359.   
Rec #: 3020  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160275  
Chemical of Concern: CPY

55. Cheng, H. H. Toxicity and Persistence of Pyrethroid Insecticides as Foliar Sprays Against Darksided Cutworm (Lepidoptera: Noctuidae) on Tobacco in Ontario. POPENV; 1980; 112, (5): 451-456.   
Rec #: 100  
Call Number: NO ENDPOINT (CPY,CYP,FNV,PMR,TCF), TARGET2012 (CYP,TCF)  
Notes: EcoReference No.: 152141  
Chemical of Concern: CPY,CYP,FNV,PMR,TCF

56. Chung, B. K. ; Kang, S. W., and Choo, H. Y. Joint Toxic Action of Bifenthrin and Prothiofos Mixture for the Control of Insecticide-Resistant Diamondback Moth, Plutella xylostella L. MOR,POPENV,MIXTURE; 1997; 36, (1): 105-110.   
Rec #: 1360  
Call Number: NO MIXTURE (BFT,CPY,MLX), PESTS (FNV), TARGET2012 (BFT,CYP)  
Notes: EcoReference No.: 116691  
Chemical of Concern: BFT,CPY,CYP,FNV,MLX,TPM

57. Civen, M.; Lifrak, E., and Brown, C. B. Studies on the Mechanism of Inhibition of Adrenal Steroidogenesis by Organophosphate and Carbamate Compounds. BCMORAL; 1977; 7, (2): 169-182.   
Rec #: 1810  
Call Number: LITE EVAL CODED (DDVP), NO IN VITRO (CBF,CBL,CPY,CPYO,DZ,PPX)  
Notes: EcoReference No.: 103151  
Chemical of Concern: CBF,CBL,CPY,CPYO,DDVP,DZ,EPRN,PPX,PRN

58. Clark, B. W. Molecular Mechanisms Underlying Adaptation to PAHs in Fundulus heteroclitus. BCM,CEL,GRO,MORAQUA,MIXTURE; 2010: 230 p. (UMI# 3413843).   
Rec #: 2230  
Call Number: LITE EVAL CODED (CST,FNV), NO PUBL AS (CBL,CPY,FA,PAHs,PMR)  
Notes: EcoReference No.: 159931  
Chemical of Concern: BAP,CBL,CPY,CST,FA,FNV,PAHs,PCB,PMR

59. Clements, R. O.; Gilbey, J.; Bentley, B. R.; French, N., and Cragg, I. A. Effects of Pesticide Combinations on the Herbage Yield of Permanent Pasture in England & Wales. POPSOIL,ENV,MIXTURE; 1985; 6, 126-127.   
Rec #: 1000  
Call Number: LITE EVAL CODED (OML), NO MIXTURE (CPY,FSTAL,MCB,PCZ,PPCP,PPCP2011)  
Notes: EcoReference No.: 97760  
Chemical of Concern: CPY,FSTAL,HCCH,MCB,OML,PCZ,PPCP,PPCP2011

60. Cochran, D. G. Monitoring for Insecticide Resistance in Field-Collected Strains of the German Cockroach (Dictyoptera: Blattellidae). MORENV; 1989; 82, (2): 336-341.   
Rec #: 1440  
Call Number: NO CONTROL (ACP,ATN,CPY,DZ,FNV,MLN,PPX), TARGET (ACP,ATN,FNV,MLN,PPX)  
Notes: EcoReference No.: 113738  
Chemical of Concern: ACP,ATN,BDC,CPY,DZ,FNV,MLN,PPX

61. Cochran, D. G. Standard Insecticide-Susceptible Strain for the German Cockroach (Dictyoptera: Blattellidae). MORENV; 1995; 88, (6): 1542-1544.   
Rec #: 1790  
Call Number: NO CONTROL (ACP,ATN,CPY,CYF,DZ,EFV,FNV,MLN,PMR,PPX), TARGET (ACP,ATN,EFV,FNV,MLN,PMR,PPX)  
Notes: EcoReference No.: 112350  
Chemical of Concern: ACP,ATN,BDC,CPY,CYF,DZ,EFV,FNV,MLN,PMR,PPX,PTR,PYN

62. Colburn, R. and Asquith, D. Tolerance of Stethorus punctum Adults and Larvae to Various Pesticides. MORENV; 1973; 66, (4): 961-962.   
Rec #: 1940  
Call Number: NO ENDPOINT (CPY), OK (BMY,Captan,DOD,THM), TARGET (AZ,CBL,MCB,SFR)  
Notes: EcoReference No.: 114793  
Chemical of Concern: AZ,BMY,CBL,CPY,Captan,DOD,MCB,PHSL,PPHD,SFR,THM,Zineb

63. Cole, T. B.; Beyer, R. P.; Bammler, T. K.; Park, S. S.; Farin, F. M.; Costa, L. G., and Furlong, C. E. Repeated Developmental Exposure of Mice to Chlorpyrifos Oxon is Associated with Paraoxonase 1 (PON1)-Modulated Effects on Cerebellar Gene Expression. BCM,CEL,GRO,MORINJECT; 2011; 123, (1): 155-169.   
Rec #: 2480  
Call Number: NO EXP TYPE (CPYO)  
Notes: EcoReference No.: 160388  
Chemical of Concern: CPYO

64. Cole, T. B.; Fisher, J. C.; Burbacher, T. M.; Costa, L. G., and Furlong, C. E. Neurobehavioral Assessment of Mice Following Repeated Postnatal Exposure to Chlorpyrifos-Oxon. BEH,GRO,PHY. Department of Environmental and Occupational Health Sciences, University of Washington, Seattle, WA, United States, Elsevier B.V., Box 882 New York NY 10159 USA, [mailto:usinfo-f@elsevier.com]//: INJECT; 2012; 34, (3): 311-322.   
Rec #: 2860  
Call Number: NO EXP TYPE (CPYO)  
Notes: EcoReference No.: 160249  
Chemical of Concern: CPYO

65. Coppage, D. L. Organophosphate Pesticides: Specific Level of Brain AChE Inhibition Related to Death in Sheepshead Minnows. BCM,MOR. 14659//: AQUA; 1972; 101, (3): 534-536.   
Rec #: 1520  
Call Number: NO CONC (DDVP,DMT,DZ,MLN,MP,Naled), NO CONTROL (AZ,CPY,DDVP,DMT,DZ,MLN,MP,Naled,PRT), NO ENDPOINT (AZ,CPY,DDVP,DMT,DZ,MLN,MP,Naled,PRT)  
Notes: EcoReference No.: 45307  
Chemical of Concern: AZ,CPY,DDVP,DMT,DZ,EPRN,MLN,MP,Naled,PPHD,PRN,PRT

66. Creffield, J. W. and Chew, N. Efficacy of Chlorothalonil and Chlorothalonil plus Chlorpyrifos Against Termite Attack. BEH,MORENV,MIXTURE,ORAL; 1995; 45, (2): 46-50.   
Rec #: 1030  
Call Number: NO ENDPOINT (As,CPY,CTN,Cr,Cr element,Cu)  
Notes: EcoReference No.: 89751  
Chemical of Concern: As,CPY,CTN,Cr,Cr element,Cu,TOL

67. Csinos, A. S.; Johnson, A. W., and Golden, A. M. Management of the Tobacco Black Shank-Root-Knot Complex with Combinations of Soil Fumigants and Metalaxyl. GRO,PHY,POPSOIL,ENV,MIXTURE; 1994; 78, (6): 565-568.   
Rec #: 1390  
Call Number: NO EFFECT (ACP,APAC,CPY,MLH,MOM,PDM), NO MIXTURE (FMP,MLX,TC17), OK (MB)  
Notes: EcoReference No.: 93672  
Chemical of Concern: ACP,APAC,CPY,FMP,IPN,MB,MLH,MLX,MOM,PDM,PEB,TC17

68. Davis, M. G. K.; Grafius, E., and Ebert, S. Onion Maggot Control, 1996. POPSOIL,ENV,MIXTURE; 1997; 22, 143-(70E).   
Rec #: 1490  
Call Number: NO MIXTURE (CPY,CYR,FPN)  
Notes: EcoReference No.: 104017  
Chemical of Concern: CPY,CYR,FPN

69. De Solla, S. R. and Martin, P. A. Absorption of Current Use Pesticides by Snapping Turtle (Chelydra serpentina) Eggs in Treated Soil. ACCENV,MIXTURE; 2011; 85, (5): 820-825.   
Rec #: 2530  
Call Number: NO CONTROL (ATZ,AZ,CBL,CPY,CTN,Captan,DMT,ES,MTL,SZ), NO ENDPOINT (ATZ,AZ,CBL,CPY,CTN,Captan,DMT,ES,MTL,SZ)  
Notes: EcoReference No.: 156415  
Chemical of Concern: ATZ,AZ,CBL,CPY,CTN,Captan,DMT,ES,MTL,SZ

70. Del Socorro, A. P.; Gregg, P. C., and Hawes, A. J. Development of a Synthetic Plant Volatile-Based Attracticide for Female Noctuid Moths. III. Insecticides for Adult Helicoverpa armigera (Hubner) (Lepidoptera: Noctuidae). MOR,POPENV,MIXTURE,ORAL; 2010; 49, (1): 31-39.   
Rec #: 2500  
Call Number: NO ENDPOINT (BFT,CPY,DMT,FPN,IMC,MFZ), NO MIXTURE (PPB), PESTS (ES,FPN,MOM), TARGET2012 (BFT,CYF,IMC,MFZ,TDC)  
Notes: EcoReference No.: 156622  
Chemical of Concern: ABM,ACT,BFT,CPY,CYF,DMT,EMMB,ES,FPN,IDC,IMC,MFZ,MOM,PPB,SS,TDC

71. Deole, S. A. ; Bodhade, S. N.; Mahajan, L. B.; Deotale, V. Y., and Sharnagat, B. K. Residual Toxicity of Some Pesticides Used in Cotton Pest Management Against a Chrysopid, (C. carnea). MORENV; 2000; 10, (2): 279-281.   
Rec #: 1700  
Call Number: NO ENDPOINT (CPY,CYP,DM,ES,FNV,NMK,NMO), TARGET2012 (CYP,DM,ES,FNV,NMK,NMO)  
Notes: EcoReference No.: 69361  
Chemical of Concern: CPY,CYP,DM,ES,FNV,NMK,NMO

72. DeSouza, O.; Miramontes, O.; Santos, C. A., and Bernardo, D. L. Social Facilitation Affecting Tolerance to Poisoning in Termites (Insecta, Isoptera). MORTOP; 2001; 48, (1): 21-24.   
Rec #: 2380  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 160310  
Chemical of Concern: CPY

73. Devaud, L. L. and Murray, T. F. Involvement of Peripheral-Type Benzodiazepine Receptors in the Proconvulsant Actions of Pyrethroid Insecticides. PHYINJECT; 1988; 247, (1): 14-22.   
Rec #: 1350  
Call Number: NO EXP TYPE (ATN,CPY,CYP,DM,MCPMR,PCPMR,PMR,TMT), NO IN VITRO (DM)  
Notes: EcoReference No.: 91945  
Chemical of Concern: ATN,CPY,CYP,DM,MCPMR,PCPMR,PMR,TMT

74. Dhamdhere, S. V.; Deole, J. Y.; Singh, O. P.; Misra, U. S., and Kapoor, K. N. Note on the Toxicity of Insecticides Against the Grubs of Lucerne Weevil. MORENV; 1982; 52, (4): 265-266.   
Rec #: 110  
Call Number: NO ENDPOINT (CBL,CPY,ES,FNT,MLN,MP,PMR,PSM,TDC), PESTS (ES,PMR), TARGET2012 (CBL,FNT,MLN,MP,PSM,TDC)  
Notes: EcoReference No.: 121416  
Chemical of Concern: CBL,CPY,ES,FNT,IFP,MLN,MP,PMR,PSM,TDC

75. Dickson, D. W. and Hewlett, T. E. Efficacy of Fumigant and Nonfumigant Nematicides for Control of Meloidogyne arenaria on Peanut. POPSOIL,ENV,MIXTURE; 1988; 2, 95-101.   
Rec #: 1040  
Call Number: LITE EVAL CODED (ADC), NO EFFECT (CPY,CTN,PQT), NO ENDPOINT (CPY,CTN,PQT), OK (13DPE,DPDP,EP,FMP,MBCP,MITC)  
Notes: EcoReference No.: 87162  
Chemical of Concern: 13DPE,ADC,BFL,CPY,CTN,DPDP,EP,FMP,MBCP,MITC,PQT,VNT

76. Dodd, C. A. and Klein, B. G. Pyrethroid and Organophosphate Insecticide Exposure in the 1-Methyl-4-Phenyl-1,2,3,6-Tetrahydropyridine Mouse Model of Parkinson's Disease: An Immunohistochemical Analysis of Tyrosine Hydroxylase and Glial Fibrillary Acidic Protein in Dorsolateral Striatum. CEL,PHYINJECT,MIXTURE; 2009; 25, (1): 25-39.   
Rec #: 1660  
Call Number: NO EXP TYPE (CPY,PMR)  
Notes: EcoReference No.: 117764  
Chemical of Concern: CPY,PMR

77. Dolmans, N. G. M. and Van Tol, R. W. H. M. Prospects for Chemical Control of Black Vine Weevil (Otiorhynchus sulcatus) in Nursery Stock. ACC,MOR,POPENV; 1996: 108-112.   
Rec #: 120  
Call Number: NO CONTROL (ACP,CBF,CPY,FPN,MP,MTM,PIRM), NO ENDPOINT (ACP,CBF,CPY,FPN,MP,MTM,PIRM), PESTS (ACP,CBF,MTM), TARGET2012 (FPN,MP,PIRM)  
Notes: EcoReference No.: 153360  
Chemical of Concern: ACP,CBF,CPY,FPN,MP,MTM,PIRM

78. Drummond, R. O. Susceptibility of the Gulf Coast Tick (Acari: Ixodidae) to Acaricides. REPTOP; 1988; 81, (4): 1140-1142.   
Rec #: 1840  
Call Number: NO CONTROL (AMZ,CBL,CMPH,CPY,DZ,MLN,PMR,PSM,TVP), TARGET (AMZ,CBL,CMPH,MLN,PMR,PSM,TVP)  
Notes: EcoReference No.: 114521  
Chemical of Concern: AMZ,AsTO,CBL,CMPH,CPY,DZ,HCCH,MLN,PMR,PPCP,PSM,TVP,TXP

79. Drummond, R. O.; Ernst, S. E.; Trevino, J. L.; Gladney, W. J., and Graham, O. H. Boophilus annulatus and B. microplus. Sprays and Dips of Insecticides for Control on Cattle. MOR,POPENV; 1972; 65, (5): 1354-1357.   
Rec #: 600  
Call Number: NO CONTROL (CBF,CPY,DZ,MLN,PSM,TCF), NO ENDPOINT (CBF,DZ,MLN,PSM,TCF), TARGET (CBF,MLN,PSM,TCF)  
Notes: EcoReference No.: 114991  
Chemical of Concern: CBF,CPY,DZ,FNTH,HCCH,MLN,MXC,PPCP,PSM,TCF,TXP

80. Drummond, R. O.; Ernst, S. E.; Trevino, J. L., and Graham, O. H. Insecticides for Control of the Cattle Tick and the Southern Cattle Tick on Cattle. POPTOP; 1968; 61, (2): 467-470.   
Rec #: 1320  
Call Number: NO ENDPOINT (CBL,CMPH,CPY,DZ,PPX,PSM), TARGET (CBL,CMPH,PPX,PSM)  
Notes: EcoReference No.: 113241  
Chemical of Concern: CBL,CMPH,CPY,DZ,ETN,FNTH,PPX,PSM

81. Durairaj, C.; Babu, P. C. S., and Venugopal, M. S. Toxicity of Insecticides on Rice Gall-Midge (Orseolia oryzae) and Its Parasitoid (Platygaster oryzae). POPENV; 1989; 59, (10): 683-684.   
Rec #: 1990  
Call Number: NO ENDPOINT (CPY,ES)  
Notes: EcoReference No.: 73023  
Chemical of Concern: CPY,ES,FNTH,PHSL,PPHD

82. Duron, O.; Labbe, P.; Berticat, C.; Rousset, F.; Guillot, S.; Raymond, M., and Weill, M. High Wolbachia Density Correlates with Cost of Infection for Insecticide Resistant Culex pipiens Mosquitoes. MORAQUA; 2006; 60, (2): 303-314.   
Rec #: 1240  
Call Number: NO CONTROL (CPY,PPX)  
Notes: EcoReference No.: 111719  
Chemical of Concern: CPY,PPX

83. Duso, C.; Pozzebon, A.; Capuzzo, C.; Malagnini, V.; Otto, S., and Borgo, M. Grape Downy Mildew Spread and Mite Seasonal Abundance in Vineyards: Effects on Tydeus caudatus and Its Predators. POP. carlo.duso@unipd.it//: ENV,MIXTURE; 2005; 32, (1): 143-154.   
Rec #: 1230  
Call Number: LITE EVAL CODED (CuOH,Folpet,MZB), NO MIXTURE (AZX,CPY,FNT,MLX,SFR), TARGET2012 (SFR)  
Notes: EcoReference No.: 98633  
Chemical of Concern: AZX,CMX,CPY,CuOH,FNT,Folpet,HCZ,MLX,MZB,SFR

84. Duysen, E. G.; Cashman, J. R.; Schopfer, L. M.; Nachon, F.; Masson, P., and Lockridge, O. Differential Sensitivity of Plasma Carboxylesterase-Null Mice to Parathion, Chlorpyrifos and Chlorpyrifos Oxon, but not to Diazinon, Dichlorvos, Diisopropylfluorophosphate, Cresyl Saligenin Phosphate, Cyclosarin Thiocholine, Tabun Thiocholine, and Carbofuran. BCM,BEH,PHY. [Duysen, EG; Schopfer, LM; Masson, P; Lockridge, O] Univ Nebraska Med Ctr, Eppley Inst, Omaha, NE 68198 USA [Cashman, JR] Human BioMol Res Inst, San Diego, CA 92121 USA [Nachon, F; Masson, P] Inst Rech Biomed Armees, Dept Toxicol, F-38702 La Tronche, France//: INJECT,TOP; 2012; 195, (3): 189-198.   
Rec #: 2630  
Call Number: NO ENDPOINT (CBF,CPY,DDVP,DZ,TCP)  
Notes: EcoReference No.: 159326  
Chemical of Concern: CBF,CPY,DDVP,DZ,EPRN,PRN,TCP

85. El-Amrani, S.; Pena-Abaurrea, M.; Sanz-Landaluze, J.; Ramos, L.; Guinea, J., and Camara, C. Bioconcentration of Pesticides in Zebrafish Eleutheroembryos (Danio rerio). ACC. Department of Analytical Chemistry, Faculty of Chemistry, University Complutense de Madrid, Ciudad Universitaria, 28040 Madrid, Spain,//: AQUA; 2012; 425, 184-190.   
Rec #: 2640  
Call Number: NO ENDPOINT (CPY), OK (ATZ,DCF)  
Notes: EcoReference No.: 159195  
Chemical of Concern: ATZ,CPY,DCF

86. El-Guindy, M. A.; Rahman, A.; El-Refai, M., and Abdel-Sattar, M. M. The Pattern of Cross-Resistance to Insecticides and Juvenile Hormone Analogues in a Diflubenzuron-Resistant Strain of the Cotton Leaf Worm Spodoptera littoralis Boisd. GRO,MORTOP; 1983; 14, (3): 235-245.   
Rec #: 1910  
Call Number: NO CONTROL (CPY,CYF,CYP,DFZ,DM,FNT,FNV,FPP,MOM,MP,MTM,MTPN,PFF,PMR,PPB,TBF,TDC), NO MIXTURE (PPB,TBF), PESTS (FNV,FPP,MOM,MTM,PMR), TARGET2012 (CYF,DFZ,DM,FNT,MP,MTPN,PFF,TDC)  
Notes: EcoReference No.: 93120  
Chemical of Concern: CPY,CYF,CYP,DFZ,DM,EN,FNT,FNV,FPP,MOM,MP,MTM,MTPN,PFF,PMR,PPB,SPS,TBF,TDC

87. Elad, Y.; Katan, J., and Chet, I. Physical, Biological, and Chemical Control Integrated for Soilborne Diseases in Potatoes. PHY,POPSOIL,ENV; 1980; 70, (5): 418-422.   
Rec #: 1610  
Call Number: EFFICACY (MBCP,PNB), NO MIXTURE (AZ,CPY,DZ,MOM), OK (NH3), TARGET2012 (MTAS)  
Notes: EcoReference No.: 72271  
Chemical of Concern: AZ,CPY,DZ,MBCP,MOM,MTAS,NH3,PNB

88. Ellison, C. A.; Smith, J. N.; Lein, P. J., and Olson, J. R. Pharmacokinetics and Pharmacodynamics of Chlorpyrifos in Adult Male Long-Evans Rats Following Repeated Subcutaneous Exposure to Chlorpyrifos. ACC,BCM,PHYINJECT; 2011; 287, (1-3): 137-144.   
Rec #: 2410  
Call Number: NO ENDPOINT (CPY,CPYM), NO EXP TYPE (CPY,CPYM)  
Notes: EcoReference No.: 160400  
Chemical of Concern: CPY,CPYM

89. Elzen, G. W. Evaluation of Beet Armyworm (Lepidoptera: Noctuidae) Tolerance to Insecticides and Response to IGR's. MORENV,MIXTURE; 1996; 21, (2): 127-133.   
Rec #: 1080  
Call Number: NO ENDPOINT (ACP,AMZ,BFT,CPY,DFZ,MOM,PFF,TDC,TLM), PESTS (ACP,MOM), TARGET2012 (AMZ,BFT,CFP,DFZ,PFF,TDC,TLM)  
Notes: EcoReference No.: 68418  
Chemical of Concern: ACP,AMZ,BFT,CFP,CPY,DFZ,MOM,PFF,SPS,TDC,TLM

90. Escuder-Gilabert, L.; Martin-Biosca, Y.; Sagrado, S.; Villanueva-Camanas, R. M., and Medina-Hernandez, M. J. Biopartitioning Micellar Chromatography to Predict Ecotoxicity. ACC,MOR. Departamento de Quimica Analitica, Universitat de Valencia, C/Vicente Andres Estelles s/n, E-46100 Burjassot, Valencia, Spain//: AQUA; 2001; 448, (1-2): 173-185.   
Rec #: 590  
Call Number: NO CONTROL (24D,24DP,24DXY,ANT,BMY,BPH,CBD,CBL,CPY,DCF,DCNA,DMB,DMT,DPP1,DU,DZ,HFR,HTX,MDT,MLN,MLX,PAHs,PCP,PPG,TPR)  
Notes: EcoReference No.: 114535  
Chemical of Concern: 24D,24DC,24DP,24DXY,2CP,4NP,ANT,BMY,BNZ,BPH,BPZ,CBD,CBL,CPY,DCF,DCNA,DMB,DMT,DPP1,DU,DZ,FMU,FNTH,HFR,HTX,ILL,MDT,MLN,MLX,PCP,PIM,PL,PPG,TBA,TPR

91. Estevez de Jensen, C.; Percich, J. A., and Graham, P. H. Integrated Management Strategies of Bean Root Rot with Bacillus subtilis and Rhizobium in Minnesota. GRO,PHY,POP,REPSOIL,ENV,MIXTURE; 2002; 74, (2/3): 107-115.   
Rec #: 1330  
Call Number: NO MIXTURE (CPY,MLX,STRP), OK (Captan)  
Notes: EcoReference No.: 92817  
Chemical of Concern: CPY,Captan,MLX,STRP

92. Fenoll, J.; Hellin, P.; Lopez, J.; Gonzalez, A., and Flores, P. Simplified Multiresidue Method for Determination of Pesticide Residues in Lettuce by Gas Chromatography with Nitrogen-Phosphorus Detection. ACCSOIL,ENV; 2007; 389, (2): 643-651.   
Rec #: 1760  
Call Number: NO CONTROL (AZX,CPY,CYF,CYP,DM,DMT,FNT,IPD,MLN,MLX,PDM,PZM,VCZ), NO ENDPOINT (AZX,CPY,CYF,CYP,DM,DMT,FNT,IPD,MLN,MLX,PDM,PZM,VCZ)  
Notes: EcoReference No.: 110128  
Chemical of Concern: AZX,CPY,CYF,CYP,DM,DMT,FNT,IPD,MLN,MLX,PDM,PIM,PZM,VCZ

93. Fergusson-Kolmes, L. A.; Scott, J. G., and Dennehy, T. J. Dicofol Resistance in Tetranychus urticae (Acari: Tetranychidae): Cross-Resistance and Pharmacokinetics. MORENV; 1991; 84, (1): 41-48.   
Rec #: 860  
Call Number: NO DURATION (AMZ,AZ,BFT,CPY,ES,FBOX,FPP,FTT,MOM,OML,PPG), NO ENDPOINT (DCF,HTX), TARGET (AMZ,BFT,DCF,ES,FBOX,FPP,FTT,HTX,MOM,OML,PPG)  
Notes: EcoReference No.: 112259  
Chemical of Concern: AMZ,AV,AZ,BFT,CHX,CPY,DCF,DINO,EPRN,ES,FBOX,FPP,FTT,HTX,MOM,OML,OTQ,PHSL,PPG,PRN

94. Ford, M. G.; Reay, R. C.; Lane, P., and El Jadd, L. Factors Affecting the Performance of Applications of Cypermethrin for the Control of Spodoptera littoralis (Boisd.). MORENV,MIXTURE; 1987; 14, 217-232.   
Rec #: 2420  
Call Number: NO TOX DATA (CPY), TARGET2012 (CYP)  
Notes: EcoReference No.: 155185  
Chemical of Concern: CPY,CYP,DDT

95. Fouche, C. F. and Van Steenwyk, R. A. Codling Moth Control with Insect Growth Regulators, 1992. POPENV,MIXTURE; 1993; 18, 79-(13D).   
Rec #: 130  
Call Number: NO MIXTURE (AZ,CPY), TARGET2012 (AZ,PSM,TUZ)  
Notes: EcoReference No.: 150445  
Chemical of Concern: AZ,CPY,PSM,TUZ

96. Gaines, T. B. Acute Toxicity of Pesticides. MORORAL,TOP; 1969; 14, (3): 515-534.   
Rec #: 520  
Call Number: NO CONTROL (ADC,AMSV,AZ,CBL,CMPH,CPY,DCF,DCTP,DDVP,DMT,DPC,DS,DZ,ES,FNT,KCN,MLN,MP,MVP,Naled,OXD,PCP,PPB,PPCP,PPG,PPX,PQT,PRT,PSM,TBF,TCF,THM,TMP,TVP,WFN)  
Notes: EcoReference No.: 36729  
Chemical of Concern: ADC,AMSV,AND,AZ,CBL,CHD,CMPH,CPY,DCF,DCTP,DDE,DDT,DDVP,DEM,DLD,DMT,DPC,DS,DZ,EN,EPRN,ES,FNT,FNTH,HCCH,HPT,KCN,MLN,MP,MRX,MVP,Naled,OTQ,OXD,PCP,PPB,PPCP,PPG,PPHD,PPX,PQT,PRN,PRT,PSM,PVL,TBF,TCF,THM,TMMC,TMP,TVP,TXP,WFN,Zineb

97. Galietta, G.; Egana, E.; Gemelli, F.; Maeso, D.; Casco, N.; Conde, P., and Nunez, S. Pesticide Dissipation Curves in Peach, Pear and Tomato Crops in Uruguay. ACC. Tecnologia de Alimentos, Facultad de Agronomia, Universidad de la Republica (UDELAR), Montevideo, Uruguay. Taylor & Francis Group Ltd., 2 Park Square Oxford OX14 4RN UK//: SOIL,ENV; 2010; 45, (8): 862-867.   
Rec #: 3190  
Call Number: NO CONTROL (AZ,AZX,CBL,CFP,CPY), NO ENDPOINT (AZ,AZX,CBL,CFP,CPY), TARGET2012 (CBL)  
Notes: EcoReference No.: 160344  
Chemical of Concern: ACT,AZ,AZX,CBL,CFP,CPY,TAP

98. Georghiou, G. P.; Metcalf, R. L., and Gidden, F. E. Carbamate-Resistance in Mosquitos. Selection of Culex pipiens fatigans Wiedemann (=C. quinquefasciatus Say) for Resistance to Baygon. MORAQUA,TOP; 1966; 35, (5): 691-708.   
Rec #: 630  
Call Number: NO CONTROL (CPY,FNT,MLN,PPX)  
Notes: EcoReference No.: 115010  
Chemical of Concern: CPY,DDT,DLD,FNT,FNTH,MLN,PPX

99. Gifford, J. R.; Oliver, B. F., and Trahan, G. B. Insecticidal Seed Dressings on Drill-Seeded Rice to Control the Rice Water Weevil. REPSOIL,ENV; 1972; 65, 1380-1383.   
Rec #: 1300  
Call Number: NO CONTROL (CBF,CPY,DZ,MCB,MOM,PRT), NO ENDPOINT (CBF,CPY,DZ,MCB,MOM,PRT)  
Notes: EcoReference No.: 40581  
Chemical of Concern: AND,CBF,CPY,DZ,FNTH,MCB,MOM,PRT

100. Harris, C. R. and Gore, F. Laboratory Tests on the Contact Toxicity of Some Insecticides to Adults of the Cabbage Flea Beetle, Phyllotreta cruciferae. MORTOP; 1970; 63, (3): 1025-1026.   
Rec #: 1370  
Call Number: NO ENDPOINT (CBL,CPY,DMT,DS,DZ,ES,MOM,Naled,PSM,TVPM), TARGET (CBL,DMT,DS,ES,MLN,MOM,Naled,PSM,TVPM)  
Notes: EcoReference No.: 113242  
Chemical of Concern: AND,CBL,CPY,DMT,DS,DZ,END,EPRN,ES,HCCH,MLN,MOM,Naled,PPCP,PRN,PSM,TVPM

101. Harris, C. R.; Svec, H. J., and Sans, W. W. Toxicological Studies on Cutworms. II. Field Studies on the Control of the Dark-Sided Cutworm with Soil Insecticides. ACC,PHYSOIL,ENV; 1968; 61, (4): 961-965.   
Rec #: 2040  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 113765  
Chemical of Concern: CPY,DDT

102. ---. Toxicological Studies on Cutworms. VII. Microplot Field Experiments on Effectiveness of 4 Experimental Insecticides Applied as Rye Cover Crop and Soil Treatments for Control of the Dark-Sided Cutworm. ACC,PHYSOIL,ENV; 1971; 64, 493 p.   
Rec #: 2050  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 113761  
Chemical of Concern: CPY

103. Hart, R. J.; Cavey, W. A.; Moore, B., and Strong, M. B. Efficiency and Safety of Methidathion Applied as a Pour-on Systemic Insecticide for Control of Cattle Lice. BCM,POPTOP; 1979; 55, (12): 575-579.   
Rec #: 1060  
Call Number: NO ENDPOINT (CPY,MDT)  
Notes: EcoReference No.: 111693  
Chemical of Concern: CPY,FNTH,MDT

104. Hassan, S. A.; Bigler, F.; Bogenschutz, H.; Boller, E.; Brun, J.; Chiverton, P.; Edwards, P.; Mansour, F.; Naton, E.; Oomen, P. A.; Overmeer, W. P. J.; Polgar, L.; Rieckmann, W.; Samsoe-Petersen, L.; Staubli, A.; Sterk, G.; Tavares, K.; Tuset, J. J.; Viggiani, G., and Vivas, A. G. Results of the Fourth Joint Pesticide Testing Programme Carried Out by the IOBC/WPRS-Working Group. Pesticides and Beneficial Organisms. MOR,PHYENV; 1988; 105, (4): 321-329.   
Rec #: 1730  
Call Number: LITE EVAL CODED (FRM), NO ENDPOINT (ATZ,CPY,CYP,DMT,DZ,Folpet,GYP,MEM,MVP,PCZ,PPCP,PPCP2011)  
Notes: EcoReference No.: 70387  
Chemical of Concern: ATZ,BMN,CPY,CYP,DMT,DZ,FRM,FZFB,Folpet,GYP,MEM,MVP,PCZ,PPCP,PPCP2011,PPHD

105. Hastings, F. L.; Jones, A. S., and Franklin, C. K. Observations on Phytotoxicity. MOR,PHY,POPSOIL,ENV; 1981: 6 p.   
Rec #: 1470  
Call Number: NO CONTROL (ACP,CBF,CBL,CPY,CPYM,DCTP,DMT,DZ,FNT,MOM,MTM,Naled,PIRE,PIRM,PMR,PPX,PSM,TCF,TVP)  
Notes: EcoReference No.: 44231  
Chemical of Concern: ACP,CBF,CBL,CPY,CPYM,DCTP,DMT,DZ,FNF,FNT,HCCH,MOM,MTM,MXC,Naled,PIRE,PIRM,PMR,PPCP,PPX,PSM,TCF,TVP

106. Haviland, J. A.; Butz, D. E., and Porter, W. P. Long-Term Sex Selective Hormonal and Behavior Alterations in Mice Exposed to Low Doses of Chlorpyrifos In Utero. BEH,PHY. University of Wisconsin - Madison, Zoology Department, 1117 W. Johnson St., Madison, WI 53706, United States, Elsevier Science, Box 882 New York NY 10159 USA//: INJECT; 2010; 29, (1): 74-79.   
Rec #: 2930  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160396  
Chemical of Concern: CPY

107. Helal, H. and El-Sebay, Y. Contribution on the Wood Borers Attacking Date Palm Trees and Its Control in Egypt. GRO,MOR,POPENV; 1994; 21, (1): 25-46.   
Rec #: 140  
Call Number: LITE EVAL CODED (DM,FNV), NO ENDPOINT (CPY), TARGET2012 (CYP,DDVP,DM,FNT)  
Notes: EcoReference No.: 154664  
Chemical of Concern: CPY,CYP,DDVP,DM,FNT,FNV,KER

108. Heller, P. R. and Walker, R. Evaluation of Bifenthrin, Diazinon, and Dursban Granular Formulations for Management of Black Cutworm on Creeping Bentgrass, 1997. PHY,POPSOIL,ENV; 1998; 23, 315-(7G).   
Rec #: 2520  
Call Number: LITE EVAL CODED (BFT), NO ENDPOINT (CPY,DZ), TARGET MANUAL (DZ)  
Notes: EcoReference No.: 156556  
Chemical of Concern: BFT,CPY,DZ

109. Hellman, J. L. and Patton, T. W. Control of Green June Beetle Grubs on a Golf Course, 1986. POPENV; 1988; 13, 363-(68G).   
Rec #: 770  
Call Number: NO ENDPOINT (ACP,CBL,CPY,CYF,DZ,PMR,TCF)  
Notes: EcoReference No.: 88823  
Chemical of Concern: ACP,CBL,CPY,CYF,DZ,IFP,IZF,PMR,TCF

110. Hill, M. G. ; Allan, D. J., and Maindonald, J. M. Efficiency of Insecticides for Greasy Cutworm Control. POPENV; 1986; 14, (3): 369-372.   
Rec #: 150  
Call Number: NO ENDPOINT (CPY,DM,DZ,ES,FNV,PMR), TARGET2012 (DM,ES,FNV,PMR)  
Notes: EcoReference No.: 121464  
Chemical of Concern: CPY,DM,DZ,ES,FNV,FYT,PMR

111. Hodgins, S. M.; Kasten, S. A.; Harrison, J.; Otto, T. C.; Oliver, Z. P.; Rezk, P.; Reeves, T. E.; Chilukuri, N., and Cerasoli, D. M. Assessing Protection Against OP Pesticides and Nerve Agents Provided by Wild-Type HuPON1 Purified from Trichoplusia ni Larvae or Induced via Adenoviral Infection. BCM,BEH,MOR,PHYINJECT; 2013; PRESS, 4 p. (doi: 10.1016/j.cbi.2012.10.015).   
Rec #: 3070  
Call Number: NO CONTROL (CPYO,DZ), NO ENDPOINT (CPYO), NO EXP TYPE (CPYO,DZ)  
Notes: EcoReference No.: 159922  
Chemical of Concern: CPYO,DZ

112. Hogmire, H. W. and Winfield, T. Insecticide Evaluation I, 1997. POPENV,MIXTURE; 1998; 23, 8-10 (7A).   
Rec #: 160  
Call Number: EFFICACY (ACP,DZ), NO MIXTURE (AZ,CPY,EFV,ES,FBOX,FPP,IMC,MOM,MP,OML,PSM,TUZ)  
Notes: EcoReference No.: 150739  
Chemical of Concern: ACP,AZ,CPY,DZ,EFV,ES,FBOX,FPP,IMC,MOM,MP,OML,PSM,SS,TAP,TUZ

113. Hogmire, H. W. Jr.; Winfield, T.; Cheves, R., and Wei, X. Insecticide Evaluation, 1991. POPSOIL,ENV,MIXTURE; 1992; 17, 6-7 (9A).   
Rec #: 2650  
Call Number: NO MIXTURE (AZ,CFP,CPY,FPP,MP), OK (TUZ)  
Notes: EcoReference No.: 158018  
Chemical of Concern: AZ,CFP,CPY,FPP,MP,TUZ

114. Horsburgh, R. L.; Kilmer, S. W., and Cook II, K. E. Apple, Seasonal Insecticide Evaluations, 1991. POPENV,MIXTURE; 1993; 18, 27-30 (27A).   
Rec #: 170  
Call Number: LITE EVAL CODED (FPP), NO MIXTURE (CPY,MOM), TARGET2012 (AZ,CFP,PSM)  
Notes: EcoReference No.: 150453  
Chemical of Concern: AZ,CFP,CPY,FPP,MOM,PSM

115. Hughes, J. M.; Harrison, D. A., and Arthur, J. M. Genetic Variation at the Pgi Locus in the Mosquito Fish Gambusia affinis (Poecilidae) and a Possible Effect on Susceptibility to an Insecticide. MORAQUA; 1991; 44, (2): 153-167.   
Rec #: 1220  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 13432  
Chemical of Concern: CPY

116. Hull, L. A. and Knight, A. L. Effect of Late-Season Fenvalerate and Flucythrinate Applications on European Red Mite (Acari: Tetranychidae) and Tufted Apple Bud Moth (Lepidoptera: Tortricidae) Populations on Apple. PHY,POPSOIL,ENV; 1989; 82, (4): 1174-1179.   
Rec #: 920  
Call Number: NO CONTROL (AZ,FNV), NO MIXTURE (CPY,MOM,MP,PSM)  
Notes: EcoReference No.: 113751  
Chemical of Concern: AZ,CPY,FNV,FYT,MOM,MP,PSM

117. Ignoffo, C. M.; Hostetter, D. L.; Garcia, C., and Pinnell, R. E. Sensitivity of the Entomopathogenic Fungus Nomuraea rileyi to Chemical Pesticides Used on Soybeans. GRO,MORENV; 1975; 4, 765-768.   
Rec #: 1750  
Call Number: NO ENDPOINT (BMY,CPY,CTN,LNR,MLN,MP,MZB,Maneb)  
Notes: EcoReference No.: 108373  
Chemical of Concern: 24DB,BMY,CHD,CPY,CTN,ETN,HPT,LNR,MLN,MP,MZB,Maneb,TXP

118. Inguagiato, J. C.; Murphy, J. A., and Clarke, B. B. Anthracnose Severity on Annual Bluegrass Influenced by Nitrogen Fertilization, Growth Regulators, and Verticutting. PHY,POP,REPSOIL,ENV,MIXTURE; 2008; 48, 1595-1607.   
Rec #: 550  
Call Number: LITE EVAL CODED (TXE), NO EFFECT (BFT,CPY,CTN,FTL,VCZ), OK (MFD)  
Notes: EcoReference No.: 118057  
Chemical of Concern: BDC,BFT,BSC,CPY,CTN,FTL,MFD,TXE,VCZ

119. Isa, A. L.; Awadallah, W. H.; Tantawy, A. M., and Bishara, M. A. On the Chemical Control of the Rice Stem Borer (Lepidoptera: Crambidae). POP. 17338//: SOIL,ENV; 1970; 4, 117-125.   
Rec #: 1480  
Call Number: NO ENDPOINT (AZ,CBL,CPY,DZ,ES,FNT,MLN,MP,TCF)  
Notes: EcoReference No.: 50503  
Chemical of Concern: AZ,CBL,CPY,DDT,DZ,ES,FNT,HCCH,MLN,MP,PHSL,PPCP,TCF

120. Ishaaya, I. and Casida, J. E. Pyrethroid Detoxification and Synergism in Insects. BCM,GRO,MORMIXTURE,ORAL,TOP; 1983: 307-310.   
Rec #: 1670  
Call Number: NO CONTROL (CYP,PCPMR,PTPMR), NO ENDPOINT (CYP,PCPMR,PTPMR), NO MIXTURE (CPY,FBOX,PPB), TARGET (CYP,FBOX,PCPMR,PTPMR)  
Notes: EcoReference No.: 117183  
Chemical of Concern: CPY,CYP,FBOX,PCPMR,PPB,PTPMR

121. Itziou, A.; Kaloyianni, M., and Dimitriadis, V. K. Effects of Organic Contaminants in Reactive Oxygen Species, Protein Carbonylation and DNA Damage on Digestive Gland and Haemolymph of Land Snails. CEL. Department of Genetics, Development and Molecular Biology, School of Biology, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece.//: MIXTURE,ORAL; 2011; 85, (6): 1101-1107.   
Rec #: 2540  
Call Number: NO ENDPOINT (ANT,CPY,MP,PAHs,PHE), NO MIXTURE (ANT,PAHs,PHE)  
Notes: EcoReference No.: 160307  
Chemical of Concern: ANT,CPY,MP,PAHs,PHE

122. Jamnback, H. and Frempong-Boadu, J. Testing Blackfly Larvicides in the Laboratory and in Streams. BEH,POPAQUA,ENV; 1966; 34, 405-421.   
Rec #: 1860  
Call Number: LITE EVAL CODED (ATN,CBL,CPY,DDVP,DMT,DZ,FNT,MDT,Naled,PPX,PSM,TMP,TVP), NO ENDPOINT (ATN,CBL,CPY,DDVP,DMT,DZ,FNT,MDT,Naled,PPX,PSM,TMP,TVP)  
Notes: EcoReference No.: 2837  
Chemical of Concern: ATN,CBL,CPY,DDT,DDVP,DEET,DMT,DTM,DZ,FNT,FNTH,MDT,MXC,Naled,PPX,PSM,TMP,TVP

123. Jansen, K. L.; Cole, T. B.; Park, S. S.; Furlong, C. E., and Costa, L. G. Paraoxonase 1 (PON1) Modulates the Toxicity of Mixed Organophosphorus Compounds. BCMMIXTURE,TOP; 2009; 236, (2): 142-153.   
Rec #: 1560  
Call Number: NO ENDPOINT (CPYO,DZ,MLO)  
Notes: EcoReference No.: 116109  
Chemical of Concern: CPYO,DZ,MLO

124. Jiang, W.; Duysen, E. G.; Hansen, H.; Shlyakhtenko, L.; Schopfer, L. M., and Lockridge, O. Mice Treated with Chlorpyrifos or Chlorpyrifos Oxon have Organophosphorylated Tubulin in the Brain and Disrupted Microtubule Structures, Suggesting a Role for Tubulin in Neurotoxicity Associated with Exposure to Organophosphorus Agents. BCM,CEL,GRO,PHYINJECT; 2010; 115, (1): 183-193.   
Rec #: 180  
Call Number: NO EXP TYPE (CPY,CPYO)  
Notes: EcoReference No.: 156200  
Chemical of Concern: CPY,CPYO

125. Jiang, W.; Duysen, E. G., and Lockridge, O. Mice Treated with a Nontoxic Dose of Chlorpyrifos Oxon have Diethoxyphosphotyrosine Labeled Proteins in Blood up to 4 Days Post Exposure, Detected by Mass Spectrometry. BCM,BEH,PHYINJECT; 2012; 295, (1-3): 15-22.   
Rec #: 2610  
Call Number: NO ENDPOINT (CPYO), NO EXP TYPE (CPYO)  
Notes: EcoReference No.: 160100  
Chemical of Concern: CPYO

126. Johnson, J. W. and Wise, J. C. Apple, Early Season Rosy Apple Aphid Control, 1990. POPENV,MIXTURE; 1992; 17, 24-(18A).   
Rec #: 2660  
Call Number: NO MIXTURE (CPY), TARGET2012 (FPP)  
Notes: EcoReference No.: 158014  
Chemical of Concern: CPY,FPP,PPHD

127. ---. Grape, Season-Long Control of Grape Berry Moth, 1990. POPENV,MIXTURE; 1992; 17, 62-63 (5C).   
Rec #: 2390  
Call Number: LITE EVAL CODED (EFV,FPP), NO MIXTURE (CBL,CPY,ES), PESTS (EFV,ES,FPP), TARGET2012 (AZ,CBL,MP)  
Notes: EcoReference No.: 154743  
Chemical of Concern: AZ,CBL,CPY,EFV,ES,FPP,MP

128. Johnston, G.; Walker, C. H., and Dawson, A. Interactive Effects Between EBI Fungicides (Prochloraz, Propiconazole and Penconazole) and OP Insecticides (Dimethoate, Chlorpyrifos, Diazinon and Malathion) in the Hybrid Red-Legged Partridge. BCM. G.Johnston, Sch. Anim. Microb. Sci., Univ. Reading, Reading, RG6 2AJ, UK//: MIXTURE,ORAL; 1994; 13, (4): 615-620.   
Rec #: 10  
Call Number: NO ENDPOINT (CPY,DMT,DZ,MLN,PCZ,PPCP,PPCP2011), NO MIXTURE (PCZ,PPCP,PPCP2011)  
Notes: EcoReference No.: 67235  
Chemical of Concern: CPY,DMT,DZ,MLN,PCZ,PPCP,PPCP2011

129. Johnston, G.; Walker, C. H.; Dawson, A., and Furnell, A. Interactive Effects of Pesticides in the Hybrid Red-Legged Partridge. BCM,MORINJECT,MIXTURE,ORAL; 1990; 4, 309-314.   
Rec #: 1340  
Call Number: LITE EVAL CODED (CBL,MLN), NO CONTROL (CPY,DMT), NO ENDPOINT (CPY,DMT), NO IN VITRO (MLO)  
Notes: EcoReference No.: 69372  
Chemical of Concern: CBL,CPY,DMT,MLN,MLO

130. Jones, K. H.; Sanderson, D. M., and Noakes, D. N. Acute Toxicity Data for Pesticides (1968). MORORAL,TOP; 1968; 7, (3): 135-143.   
Rec #: 510  
Call Number: NO CONTROL (24D,24DXY,ACL,ADC,ATN,ATZ,AZ,BMC,BS,BTY,CBL,CMPH,CPP,CPY,CQTC,Captan,Cu,CuFRA,DCNA,DCPA,DDVP,DMB,DMT,DOD,DQTBr,DS,DU,DZ,DZM,EP,EPTC,ES,FNT,Folpet,LNR,MCB,MCPB,MCPP1,MDT,MLH,MLN,MLT,MTM,MVP,Maneb,Naled,PCP,PHMD,PMT,PPN,PPX,PPZ,PQT,PRO,PRT,PYZ,RTN,SFT,SID,SZ,TCF,TFN,THM)  
Notes: EcoReference No.: 70074  
Chemical of Concern: 24D,24DXY,ABT,ACL,ADC,AMTL,AMTR,AND,ASM,ATN,ATZ,AZ,BFL,BMC,BMN,BS,BTY,CBL,CCA,CHD,CMPH,CPP,CPY,CQTC,CTHM,Captan,Cu,CuFRA,DBN,DCNA,DCPA,DDD,DDT,DDVP,DEM,DINO,DLD,DMB,DMT,DOD,DPP,DQTBr,DS,DU,DZ,DZM,EDT,EN,EP,EPRN,EPTC,ES,ETN,FLAC,FMU,FNF,FNT,FNTH,Folpet,HCCH,HPT,LNR,MCB,MCPA,MCPB,MCPP1,MDT,MLH,MLN,MLT,MRX,MTM,MVP,MXC,Maneb,NPM,Naled,PCH,PCL,PCP,PEB,PHMD,PHSL,PMT,PPCP,PPHD,PPN,PPX,PPZ,PQT,PRN,PRO,PRT,PYN,PYZ,RTN,SFT,SID,SZ,TCF,TFN,THM,TRB,TRL,TXP,VNT,Zineb

131. Jukes, A. A.; Collier, R. H., and Finch, S. Cabbage Root Fly Control Using Non-Organophosphorus Insecticides. MORSOIL,ENV,MIXTURE; 2001; 66, (2a): 395-402.   
Rec #: 620  
Call Number: NO ENDPOINT (CBF,CPY,CYR,DFZ,FPN,IMC)  
Notes: EcoReference No.: 96263  
Chemical of Concern: CBF,CPY,CYR,DFZ,FPN,IMC,SS

132. Juraske, R.; Vivas, C. S. M.; Velasquez, A. E.; Santos, G. G.; Moreno, M. B. B.; Gomez, J. D.; Binder, C. R.; Hellweg, S., and Dallos, J. A. G. Pesticide Uptake in Potatoes: Model and Field Experiments. ACCSOIL,ENV; 2011; 45, (2): 651-657.   
Rec #: 2200  
Call Number: NO ENDPOINT (CPY,CTN,GYP,MTM,MZB,PAQT,PQT), TARGET2012 (GYP,PAQT,PQT)  
Notes: EcoReference No.: 160356  
Chemical of Concern: CMX,CPY,CTN,GYP,MTM,MZB,PAQT,PQT

133. Kalra, V. K.; Sharma, S. S.; Chauhan, R., and Bhanot, J. P. Shift in the Level of Resistance Together with Relative Toxicity of Some Commonly Used and Important Insecticides to Diamond Back Moth, Plutella xylostella (L.) in Haryana, India. MOR. Department of Entomology, C.C.S. Haryana Agricultural University, Hisar-125 004, Haryana, India//: ENV; 1997; 21, (4): 351-354.   
Rec #: 190  
Call Number: NO CONTROL (CPY,CYP,DDVP,DM,ES,FNV,FVL,MLN), PESTS (ES,FNV,FVL), TARGET2012 (DDVP,DM,MLN)  
Notes: EcoReference No.: 159520  
Chemical of Concern: ACYP,CPY,CYP,DDVP,DM,ES,FNV,FVL,MLN

134. Kanga, L. H. B.; Pree, D. J.; Van Lier, J. L., and Walker, G. M. Monitoring for Resistance to Organophosphorus, Carbamate, and Pyrethroid Insecticides in the Oriental Fruit Moth (Lepidoptera: Tortricidae). MORENV; 1999; 131, (4): 441-450.   
Rec #: 1450  
Call Number: LITE EVAL CODED (CBF,ES,OML), NO EFFECT (CPY,DM), PESTS (ACP,ES,MOM,MTM), TARGET2012 (AZ,CBF,CBL,CYP,DM,DZ,FNT,IMC,MLN,Naled,OML,PSM)  
Notes: EcoReference No.: 64709  
Chemical of Concern: ACP,AZ,CBF,CBL,CPY,CYP,DM,DZ,EPRN,ES,FNT,IMC,MLN,MOM,MTM,Naled,OML,PRN,PSM

135. Kard, B. M. and McDaniel, C. A. Field Evaluation of the Persistence and Efficacy of Pesticides Used for Termite Control. POPENV; 1993: 46-61.   
Rec #: 1170  
Call Number: NO ENDPOINT (CPY,CYP,FNV,PMR), TARGET2012 (CYP,FNV,PMR)  
Notes: EcoReference No.: 64714  
Chemical of Concern: CPY,CYP,FNV,IFP,PMR

136. Kaur, P. and Grover, I. S. Cytological Effects of Some Organophosphorus Pesticides II. Meiotic Effects. CELSOIL,ENV; 1985; 50, (1): 199-211.   
Rec #: 810  
Call Number: NO ENDPOINT (CPY,DMT,DZ,FNT,MP)  
Notes: EcoReference No.: 44279  
Chemical of Concern: CPY,DMT,DZ,FNT,MP

137. ---. Cytological Effects on Some Organophosphorus Pesticides I. Mitotic Effects. CEL. 1381//: SOIL,ENV; 1985; 50, (1): 187-197.   
Rec #: 820  
Call Number: NO ENDPOINT (CPY,DMT,DZ,FNT,MP)  
Notes: EcoReference No.: 44281  
Chemical of Concern: CPY,DMT,DZ,FNT,MP

138. Kerby, J. L. and Storfer, A. Combined Effects of Atrazine and Chlorpyrifos on Susceptibility of the Tiger Salamander to Ambystoma tigrinum Virus. MORAQUA; 2009; PRESS, 8 p. (DOI: 10.1007/s10393-009-0234-0).   
Rec #: 690  
Call Number: LITE EVAL CODED (ATZ,), NO ENDPOINT (CPY)  
Notes: EcoReference No.: 117314  
Chemical of Concern: ATZ,CPY

139. Keum, Y. S.; Lee, Y. H., and Kim, J. H. Metabolism of Methoxychlor by Cunninghamella elegans ATCC36112. ACCSOIL,ENV; 2009; 57, (17): 7931-7937.   
Rec #: 1420  
Call Number: NO ENDPOINT (CPY,PPB)  
Notes: EcoReference No.: 119772  
Chemical of Concern: CPY,MXC,PPB

140. Khatri-Chhetri, H. B.; Timsina, G. P.; Manandhar, H. K., and Moens, M. Potential of Nepalese Entomopathogenic Nematodes as Biocontrol Agents Against Holotrichia longipennis Blanch. (Coleoptera: Scarabaeidae). MOR,POPSOIL,ENV; 2011; 84, (4): 457-469.   
Rec #: 2790  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 160302  
Chemical of Concern: CPY

141. Khokhar, J. Y. and Tyndale, R. F. Rat Brain CYP2B-Enzymatic Activation of Chlorpyrifos to the Oxon Mediates Cholinergic Neurotoxicity. BCM,BEHINJECT; 2012; 126, (2): 325-335.   
Rec #: 2620  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160399  
Chemical of Concern: CPY

142. Kisha, J. S. A. Comparison of the Electrodynamic Spraying Technique with Other Conventional Methods for Control of Vegetable Pests in the Sudan Gezira Control of Jassid and Budworm on Eggplant. POPSOIL,ENV,MIXTURE; 1986; 7, 8-9.   
Rec #: 200  
Call Number: LITE EVAL CODED (CYF,DM), NO MIXTURE (CBF,CPY,DDVP,DS,FNT,FNV,PFF), OK (ACP,CYP), TARGET2012 (CBL)  
Notes: EcoReference No.: 153366  
Chemical of Concern: ACP,CBF,CBL,CPY,CYF,CYP,DDVP,DM,DS,FNT,FNV,PFF

143. Kumar, N. P. V. V.; Murthy, M. M. K., and Reddy, G. P. V. Effective Insecticidal Schedule for Major Insect Pests of Rice (Oryza sativa). POPENV,MIXTURE; 1988; 58, (9): 734-735.   
Rec #: 210  
Call Number: NO ENDPOINT (ACP,CBF,CPY,CYP,DM,FNV,PRT), PESTS (ACP,FNV,PRT), TARGET2012 (ACP,CBF,CYP,DM,FNV,PRT)  
Notes: EcoReference No.: 153364  
Chemical of Concern: ACP,CBF,CPY,CYP,DM,FNV,FYT,PRT

144. Laetz, C. A.; Baldwin, D. H.; Collier, T. K.; Hebert, V.; Stark, J. D., and Scholz, N. L. The Synergistic Toxicity of Pesticide Mixtures: Implications for Risk Assessment and the Conservation of Endangered Pacific Salmon. BCM,MORAQUA,MIXTURE; 2009; 117, (3): 348-353.   
Rec #: 1920  
Call Number: NO ENDPOINT (CBF,CBL,CPY,DZ,MLN,MOL)  
Notes: EcoReference No.: 114293  
Chemical of Concern: CBF,CBL,CPY,DZ,MLN,MOL

145. Langton, S. J. Field Corn Tolerance to Acetolactate Synthase Inhibiting Herbicides and Weed Control in Sethoxydim Resistant Field Corn. ACC,GRO,POPSOIL,ENV,MIXTURE; 1997: 209 p.   
Rec #: 1160  
Call Number: LITE EVAL CODED (DMB,SXD), NO MIXTURE (24D,24DXY,24DXYEE,ATZ,BT,CPY,DMDP,FMC,FTS,PDM,SZ,TBO)  
Notes: EcoReference No.: 99110  
Chemical of Concern: 24D,24DXY,24DXYEE,ACO,ATZ,BMN,BT,CPR,CPY,DMB,DMDP,DMM,FMC,FNF,FTS,MBZ,NSF,PDM,PSF,PYD,RIM,SXD,SZ,TBO,TFT,THF

146. Le, D. P.; Thirugnanam, M.; Lidert, Z.; Carlson, G. R., and Ryan, J. B. RH-2485: A New Selective Insecticide for Caterpillar Control. MOR,POPENV,MIXTURE,MULTIPLE,ORAL,TOP; 1996; 2, 481-486.   
Rec #: 1740  
Call Number: LITE EVAL CODED (MFZ), NO ENDPOINT (FNV), NO MIXTURE (AZ,CBL,CPYM), NO PUBL AS (CPY,EFV,MP)  
Notes: EcoReference No.: 82537  
Chemical of Concern: AZ,CBL,CPY,CPYM,EFV,FNV,MFZ,MP

147. Lee, K. Y.; Strand, S. E., and Doty, S. L. Phytoremediation of Chlorpyrifos by Populus and Salix. ACC,MORENV; 2012; 14, (1): 48-61.   
Rec #: 3150  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 160349  
Chemical of Concern: CPY

148. Lee, S.; Poet, T. S.; Smith, J. N.; Busby-Hjerpe, A. L., and Timchalk, C. Effect of In Vivo Nicotine Exposure on Chlorpyrifos Pharmacokinetics and Pharmacodynamics in Rats. BCM. Pacific Northwest National Laboratory, Center for Biological Monitoring and Modeling, 902 Battelle Boulevard, Richland, WA 99352, USA.//: INJECT,MIXTURE,ORAL; 2010; 184, (3): 449-457.   
Rec #: 2920  
Call Number: NO ENDPOINT (CPY), NO EXP TYPE (NCTN), NO MIXTURE (NCTN)  
Notes: EcoReference No.: 160383  
Chemical of Concern: CPY,NCTN

149. Lee, S.; Poet, T. S.; Smith, J. N.; Hjerpe, A. L.; Gunawan, R., and Timchalk, C. Impact of Repeated Nicotine and Alcohol Coexposure on In Vitro and In Vivo Chlorpyrifos Dosimetry and Cholinesterase Inhibition. BCM. Food and Drug Administration, Atlanta, Georgia, USA.//: INJECT,MIXTURE,ORAL; 2011; 74, (20): 1334-1350.   
Rec #: 2460  
Call Number: NO ENDPOINT (CPY), NO IN VITRO (CPYO), NO MIXTURE (NCTN), OK (ETHN)  
Notes: EcoReference No.: 160384  
Chemical of Concern: CPY,CPYO,ETHN,NCTN

150. Leuck, D. B.; Bowman, M. C., and Beck, E. W. Dursban Insecticide Persistence in Grass and Corn Forage. ACCENV; 1968; 61, (3): 689-690.   
Rec #: 2130  
Call Number: NO CONTROL (CPY), NO ENDPOINT (CPY)  
Notes: EcoReference No.: 160355  
Chemical of Concern: CPY

151. Lin, S. C.; Funke, B. R., and Schulz, J. T. Effects of Some Organophosphate and Carbamate Insecticides on Nitrification and Legume Growth. GRO. 9691//: SOIL,ENV; 1972; 37, 489-496.   
Rec #: 1020  
Call Number: NO ENDPOINT (1Major ions,ADC,CBF,CPY,FMP,Halides,NaCl,PPX,TCF)  
Notes: EcoReference No.: 41153  
Chemical of Concern: 1Major ions,ADC,CBF,CPY,FMP,FNF,Halides,NaCl,PPX,TCF

152. Linduska, J. J.; Embrey, M., and Dively, G. Foliar Sprays to Control Corn Earworms, Dusky Sap Beetle, Fall Armyworm and European Corn Borers in Sweet Corn, 1990. POPENV,MIXTURE; 1991; 16, 76-(35E).   
Rec #: 1190  
Call Number: LITE EVAL CODED (EFV,LCYT), NO MIXTURE (CPY), TARGET2012 (TDC)  
Notes: EcoReference No.: 92310  
Chemical of Concern: CPY,EFV,LCYT,TDC

153. Lo, P. L. Toxicity of Pesticides to Halmus chalybeus (Coleoptera: Coccinellidae) and the Effect of Three Fungicides on Their Densities in a Citrus Orchard. MOR,POPENV,MIXTURE; 2004; 32, (1): 69-76.   
Rec #: 2000  
Call Number: LITE EVAL CODED (CTN,TAUF), NO ENDPOINT (BMY,CPY,IPD,MZB), OK (CuOH), TARGET2012 (ALSV,DZ,MOIL,TFR)  
Notes: EcoReference No.: 78126  
Chemical of Concern: ALSV,BMY,BPZ,CPY,CTN,CuOH,DZ,IPD,MOIL,MZB,TAUF,TFR

154. Lockridge, O.; Duysen, E. G.; Voelker, T.; Thompson, C. M., and Schopfer, L. M. Life Without Acetylcholinesterase: The Implications of Cholinesterase Inhibitor Toxicity in AChE-Knockout Mice. BCM,MOR,PHYINJECT; 2005; 19 , (3): 463-469.   
Rec #: 1380  
Call Number: NO EXP TYPE (CPYO,DDVP,DZ,MLO), NO IN VITRO (DDVP,MLO)  
Notes: EcoReference No.: 89554  
Chemical of Concern: CPYO,DDVP,DZ,MLO

155. Lopez-Crespo, G. A.; Carvajal, F.; Flores, P.; Sanchez-Santed, F., and Sanchez-Amate, M. C. Time Course of Biochemical and Behavioural Effects of a Single High Dose of Chlorpyrifos. BCM,BEH,GRO. Uni Almeria, Dept Neurociencia & Ciencias La Salud, La Canada De San Urbano 04120, Almeria, Spain//: INJECT,MIXTURE; 2007; 28, (3): 541-547.   
Rec #: 3110  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160166  
Chemical of Concern: CPY

156. Lopez-Crespo, G. A.; Flores, P.; Sanchez-Santed, F., and Sanchez-Amate, M. C. Acute High Dose of Chlorpyrifos Alters Performance of Rats in the Elevated Plus-Maze and the Elevated T-Maze. BEH. Departamento de Psicologia Basica y Metodologia, Universidad de Murcia, Spain.//: INJECT; 2009; 30, (6): 1025-1029.   
Rec #: 2940  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160390  
Chemical of Concern: CPY

157. Lopez-Granero, C.; Canadas, F.; Cardona, D.; Yu, Y.; Gimenez, E.; Lozano, R.; Avila, D. S.; Aschner, M., and Sanchez-Santed, F. Chlorpyrifos-, Diisopropylphosphorofluoridate-, and Parathion-Induced Behavioral and Oxidative Stress Effects: Are They Mediated by Analogous Mechanisms of Action? BCM,BEHINJECT; 2013; 131, (1): 206-216.   
Rec #: 3120  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160398  
Chemical of Concern: CPY,EPRN,PRN

158. Ludwig, P. D.; McNeill IV, J. C., and Miller, W. O. Preliminary Results Obtained with Dursban in the Biotic Community. MORAQUA; 1967; 22, (4): 3-5.   
Rec #: 2140  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 160316  
Chemical of Concern: CPY

159. Lundqvist, A.; Bertilsson, S., and Goedkoop, W. Effects of Extracellular Polymeric and Humic Substances on Chlorpyrifos Bioavailability to Chironomus riparius. ACCAQUA; 2010; 19, (4): 614-622.   
Rec #: 220  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 150327  
Chemical of Concern: CPY

160. Lydy, M. J. and Linck, S. L. Assessing the Impact of Triazine Herbicides on Organophosphate Insecticide Toxicity to the Earthworm Eisenia fetida. MORENV,MIXTURE; 2003; 45, (3): 343-349.   
Rec #: 570  
Call Number: LITE EVAL CODED (ATZ,CPY,SZ), NO CONC (CPYO,TCP)  
Notes: EcoReference No.: 71459  
Chemical of Concern: ATZ,CPY,CPYO,CZE,SZ,TCP

161. Lyon, R. L. ; Brown, S. J., and Robertson, J. L. Contact Toxicity of Sixteen Insecticides Applied to Forest Tent Caterpillars Reared on Artificial Diet. MORTOP; 1972; 65, (3): 928-930.   
Rec #: 740  
Call Number: NO CONTROL (CBL,CPY,FNT,MLN,MOM,Naled,TCF,TMT), PESTS (MOM), TARGET2012 (CBL,FNT,MLN,Naled,TCF,TMT)  
Notes: EcoReference No.: 112783  
Chemical of Concern: CBL,CPY,DDT,FNT,FNTH,MLN,MOM,Naled,PYN,TCF,TMT

162. Macek, K. J.; Hutchinson, C., and Cope, O. B. The Effects of Temperature on the Susceptibility of Bluegills and Rainbow Trout to Selected Pesticides. MORAQUA; 1969; 4, (3): 174-183.   
Rec #: 1880  
Call Number: NO CONTROL (CPY,DU,ES,MLN,Naled,TFN), NO ENDPOINT (CPY,ES)  
Notes: EcoReference No.: 2085  
Chemical of Concern: AND,CHD,CPY,DLD,DU,EN,ES,HCCH,HPT,MLN,MXC,Naled,PPCP,TFN,TXP

163. Mandal, T. K. and Das, N. S. Correlation of Testicular Toxicity and Oxidative Stress Induced by Chlorpyrifos in Rats. BCM,CEL,GRO. tapask.mandal@saha.ac.in//Animal Physiology Research Laboratory, Belgachia Biophysics Laboratory, Biophysics Division, Saha Institute of Nuclear Physics, Kolkata, West Bengal, India. //: INJECT; 2011; 30, (10): 1529-1539.   
Rec #: 2470  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160196  
Chemical of Concern: CPY

164. ---. Testicular Gametogenic and Steroidogenic Activities in Chlorpyrifos Insecticide-Treated Rats: a Correlation Study with Testicular Oxidative Stress and Role of Antioxidant Enzyme Defence Systems in Sprague-Dawley Rats. BCM,CEL,GRO,PHY,REPINJECT; 2012; 44, (2): 102-115.   
Rec #: 2800  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160417  
Chemical of Concern: CPY

165. Manoharan, T. and Uthamasamy, S. Evaluation of Plant Products for Synergistic Action with Insecticides for Control of Gram-Podborer (Helicoverpa armigera). MORENV,MIXTURE; 1993; 63, (11): 759-761.   
Rec #: 230  
Call Number: NO CONTROL (CPY,CYP,ES,FNV,NMO,SESME), NO ENDPOINT (CYP,ES,FNV), NO MIXTURE (NMO,SESME), PESTS (ES,FNV), TARGET2012 (NMO)  
Notes: EcoReference No.: 154485  
Chemical of Concern: ACYP,CPY,CYP,ES,FNV,NMO,PHSL,SESME

166. Mascarenhas, V. J. and Griffin, J. L. Weed Control Interactions Associated with Roundup and Insecticide Mixtures. POP. Louisiana Agricultural Experiment Station, Louisiana State University Agricultural Center,Baton Rouge,LA////: SOIL,ENV,MIXTURE; 1997; 1, 799-801.   
Rec #: 2070  
Call Number: NO ENDPOINT (ACP,CPY,DCTP,ES,FPN,GYPI,IMC,LCYT,MOM,MTM,OML), NO MIXTURE (ACP,CPY,DCTP,ES,FPN,IMC,LCYT,MOM,MTM,OML)  
Notes: EcoReference No.: 101515  
Chemical of Concern: ACP,CPY,DCTP,ES,FPN,GYPI,IMC,LCYT,MOM,MTM,OML

167. Maya, K.; Upadhyay, S. N.; Singh, R. S., and Dubey, S. K. Degradation Kinetics of Chlorpyrifos and 3,5,6-Trichloro-2-Pyridinol (TCP) by Fungal Communities. POPENV; 2012; 126, 216-223.   
Rec #: 3200  
Call Number: NO CONTROL (CPY,TCP), NO ENDPOINT (CPY,TCP)  
Notes: EcoReference No.: 160341  
Chemical of Concern: CPY,TCP

168. Mayer, F. L. Jr. Pesticides as Pollutants. ACC,GRO,MOR,REPAQUA,Unspecified; 1974: 405-418 (Publ in Part As 6797).   
Rec #: 1600  
Call Number: LITE EVAL CODED (13DPE,24DXYBEE,ACL,ARM,ATM,ATN,ATZ,AZ,As,CAP,CBL,CPY,Captan,CuS,DCF,DD,DMB,DPDP,DQT,DQTBr,DU,DZ,ES,MLH,MLN,MVP,Naled,PPB,PPG,PQT,RTN,SZ,TBTO,TCF,TFN,TMP), NO CONTROL (13DPE,24DXYBEE,ACL,ARM,ATM,ATN,ATZ,AZ,As,CAP,CBL,CPY,Captan,CuS,DCF,DD,DMB,DPDP,DQT,DQTBr,DU,DZ,ES,MLH,MLN,MVP,Naled,PPB,PPG,PQT,RTN,SZ,TBTO,TCF,TFN,TMP)  
Notes: EcoReference No.: 70421  
Chemical of Concern: 13DPE,24DIO,24DXY,24DXYBEE,ACL,AND,ARM,ATM,ATN,ATZ,AZ,As,AsO3Na,CAP,CBL,CHD,CPY,Captan,CuS,DBN,DCF,DD,DDT,DLD,DMB,DPDP,DQT,DQTBr,DU,DZ,EDT,EN,EPRN,ES,FNTH,HCCH,HPT,MLH,MLN,MRX,MVP,MXC,Naled,PCL,PPB,PPCP,PPG,PPHD,PQT,PRN,PYN,RTN,SZ,TBT,TBTO,TCF,TFN,TMP,TPTH,TXP,VNT

169. Mayer, F. L. Jr. and Ellersieck, M. R. Manual of Acute Toxicity: Interpretation and Data Base for 410 Chemicals and 66 Species of Freshwater Animals. MOR,PHYAQUA; 1986: 505 p. (USGS Data File).   
Rec #: 1400  
Call Number: LITE EVAL CODED (13DPE,24D,24DXY,24DXYBEE,ACP,ACR,ADC,ALSV,AMSV,ARM,ATM,ATN,ATZ,AZ,BMY,BPPG,BS,BTY,CAP,CBF,CBL,CMPH,CPY,CPYM,CQTC,CaPS,Captan,CuS,DBAC,DCB,DCF,DCPA,DCTP,DD,DDVP,DFZ,DMB,DMDP,DMT,DOD,DPDP,DQTBr,DS,DTATN,DU,DZ,EPTC,ES,ETHB,ETHN,FBOX,FDE,FLU,FNT,FNV,FOSNH,Folpet,GER,GYP,HXZ,IGS,LNR,MBTZ,MCB,MCPB,MDT,MLN,MLT,MOL,MOM,MP,MTAS,MTL,MTPN,MVP,NaN3,NaPCP,Naled,OML,OXD,OYZ,PAHs,PCP,PFF,PHA,PMR,PPB,PPCP,PPN,PPX,PQT,PRT,PSM,RSM,RTN,SZ,TBF,TBO,TCF,TFN,TMP,TVP,WFN,ZnS,nBUT), NO CONTROL (13DPE,24D,24DXY,24DXYBEE,ACR,ARM,BMY,BPPG,BS,BSO,BTY,CAP,CMPH,CPY,CPYM,Captan,DCF,DCPA,DCTP,DD,DDVP,DFZ,DMDP,DPDP,DQTBr,DS,DU,EFV,EPTC,ES,ETHN,FBOX,FDE,FLU,FNT,FNV,FOSNH,Folpet,GER,GYP,HXZ,LNR,MBTZ,MCB,MDT,MLN,MOL,MP,MVP,Naled,OML,OXD,OYZ,PAHs,PEPPG,PFF,PHA,PMR,PPG,PPN,PPX,PQT,PSM,TBF,TBO,TCF,TFN,TMP,TVP,TVPM,ZnS,nBUT), OK (As,PAQT,Zn,Zn element)  
Notes: EcoReference No.: 6797  
Chemical of Concern: 13DPE,24D,24DB,24DIO,24DXY,24DXYBEE,ACP,ACR,ADC,ALSV,AMSV,AMTL,AMTR,AND,ANZ,ARM,ATM,ATN,ATZ,AZ,Al,AlN,AlS,As,AsO3Na,BBZ,BFL,BMY,BNZ,BPPG,BS,BSO,BTY,CAP,CBF,CBL,CHD,CHX,CMPH,CPY,CPYM,CQTC,CYT,CZE,CaOCl,CaPS,Captan,CuS,DBAC,DBN,DCB,DCF,DCPA,DCTP,DD,DDE,DDT,DDVP,DEET,DEM,DFPM,DFZ,DINO,DLD,DMB,DMDP,DMM,DMT,DOD,DPDP,DQTBr,DS,DTATN,DTM,DU,DZ,EDTK,EFS,EFV,EGY,EN,EPRN,EPTC,ES,ETHB,ETHN,ETN,FBOX,FDE,FLU,FMU,FNF,FNT,FNTH,FNV,FO,FOSNH,Folpet,GER,GYP,HCB,HCCH,HMN,HPT,HXZ,IGS,LNR,MBTZ,MBZ,MCB,MCPAD,MCPB,MDT,MLN,MLT,MOL,MOM,MP,MRX,MSMA,MTAS,MTL,MTPN,MVP,MXC,NAA,NTP,NaN3,NaPCP,Naled,OML,OTQ,OXD,OYZ,PAHs,PAQT,PBDE,PCB,PCH,PCL,PCP,PEB,PEPPG,PFF,PHA,PHSL,PHTH,PMR,PPB,PPCP,PPG,PPGL,PPHD,PPN,PPR,PPX,PQT,PRN,PRT,PSM,PYN,RSM,RTN,RYA,SCFNNa,SZ,Se,TBF,TBO,TCF,TFN,TMP,TOL,TPTH,TRL,TVP,TVPM,TXP,VNT,WFN,Zn,Zn element,ZnS,nBUT

170. Mehta, A.; Verma, R. S., and Srivastava, N. Chlorpyrifos Induced Alterations in the Levels of Hydrogen Peroxide, Nitrate and Nitrite in Rat Brain and Liver. BCMINJECT; 2006; 94, (2/3): 55-59.   
Rec #: 240  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160197  
Chemical of Concern: CPY

171. ---. Chlorpyrifos-Induced DNA Damage in Rat Liver and Brain. CEL. School of Studies in Biochemistry, Jiwaji University, Gwalior, India.//: INJECT; 2008; 49, (6): 426-433.   
Rec #: 2960  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160386  
Chemical of Concern: CPY

172. Metcalf, R. L. A Laboratory Model Ecosystem for Evaluating the Chemical and Biological Behaviour of Radiolabelled Micropollutants. ACC,MORSOIL,AQUA,ENV; 1974: 49-63.   
Rec #: 470  
Call Number: NO CONTROL (CPY,CPYM,PPX), NO ENDPOINT (CPY,CPYM,PPX)  
Notes: EcoReference No.: 60012  
Chemical of Concern: AND,CPY,CPYM,DDE,DDT,DLD,EN,HCCH,MRX,PHTH,PPCP,PPX

173. ---. A Laboratory Model Ecosystem to Evaluate Compounds Producing Biological Magnification. ACC. 7249//: SOIL,AQUA,ENV,MIXTURE; 1974: 17-38.   
Rec #: 480  
Call Number: NO CONTROL (CBF,CPY,CPYM,PPB), NO ENDPOINT (CBF,CPY,CPYM,PPB), NO MIXTURE (PPB)  
Notes: EcoReference No.: 65409  
Chemical of Concern: AND,CBF,CPY,CPYM,DDT,MXC,PPB

174. Meyer, F. P. Quarterly Report of Progress. MORAQUA,Unspecified; 1981: 34 p.   
Rec #: 1680  
Call Number: NO CONTROL (CPY), NO ENDPOINT (CPY)  
Notes: EcoReference No.: 2211  
Chemical of Concern: CPY,CaOCl,TPTH

175. Middlemore-Risher, M. L.; Buccafusco, J. J., and Terry, A. V. Jr. Repeated Exposures to Low-Level Chlorpyrifos Results in Impairments in Sustained Attention and Increased Impulsivity in Rats. BCM,BEH. Program of Clinical and Experimental Therapeutics, University of Georgia, College of Pharmacy, Augusta, GA, 30912, United States.//: INJECT; 2010; 32, (4): 415-424.   
Rec #: 2890  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160385  
Chemical of Concern: CPY

176. Miota, F.; Scharf, M. E.; Ono, M.; Marcon, P.; Meinke, L. J.; Wright, R. J.; Chandler, L. D., and Siegfried, B. D. Mechanisms of Methyl and Ethyl Parathion Resistance in the Western Corn Rootworm (Coleoptera: Chrysomelidae). ACC,MORMIXTURE,TOP; 1998; 61, (1): 39-52.   
Rec #: 1410  
Call Number: NO ENDPOINT (BFT,CBF,CBL,CPY,DMT,FPN,MPO), NO MIXTURE (PPB,TBF), NO PUBL AS (BFT,CBL), PESTS (CBF,DMT), TARGET2012 (BFT,CBL,FPN,MP)  
Notes: EcoReference No.: 62880  
Chemical of Concern: 4NP,BFT,CBF,CBL,CPY,DMT,EPRN,FPN,MP,MPO,PPB,PRN,TBF

177. Mirajkar, N. S. Cholinergic Modulation of Cardiac Function: Selective Disruption by Organophosphorus Anticholinesterases. BCM,GRO,PHYINJECT; 2008: 366 p. (UMI# 3324404).   
Rec #: 2770  
Call Number: NO EXP TYPE (CPY,CPYO)  
Notes: EcoReference No.: 159942  
Chemical of Concern: CPY,CPYO,EPRN,PRN

178. Mitri, S. H. and Kamel, A. A. M. Initial and Residual Effect Studies of Certain Insecticides on Spodoptera littoralis (Boisd) in 1970 Season (Lepidoptera: Noctuidae). MORENV,MIXTURE; 1973; 7, 261-264.   
Rec #: 2250  
Call Number: NO CONTROL (CPY,DCTP,MOM,MP,MTM), NO MIXTURE (DCTP,MP), PESTS (MOM,MTM), TARGET2012 (DCTP,MP)  
Notes: EcoReference No.: 153286  
Chemical of Concern: CPY,DCTP,DDT,EN,HCCH,MOM,MP,MTM,PPCP

179. Montes De Oca, L.; Moreno, M.; Cardona, D.; Campa, L.; Sunol, C.; Galofre, M.; Flores, P., and Sanchez-Santed, F. Long Term Compulsivity on the 5-Choice Serial Reaction Time Task After Acute Chlorpyrifos Exposure. BCM,BEH,GROINJECT,MIXTURE; 2013; 216, (2/3): 73-85.   
Rec #: 3090  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160174  
Chemical of Concern: CPY

180. More, G. D. ; Kadu, N. R., and Lokhande, S. P. Field Evaluation of Some Modern Insecticides for the Control of Leucinodes orbonalis Gn. on Brinjal. POPENV; 1987; 11, (2): 178.   
Rec #: 250  
Call Number: NO CONTROL (CBL,CPY,FNV,MTM), NO ENDPOINT (CBL,CPY,FNV,MTM), PESTS (FNV,MTM), TARGET2012 (CBL)  
Notes: EcoReference No.: 153287  
Chemical of Concern: CBL,CPY,FNV,FYT,MTM

181. Moreira, E. G.; Yu, X.; Robinson, J. F.; Griffith, W.; Hong, S. W.; Beyer, R. P.; Bammler, T. K., and Faustman, E. M. Toxicogenomic Profiling in Maternal and Fetal Rodent Brains Following Gestational Exposure to Chlorpyrifos. BCM,CEL,GRO,REP. Department of Environmental and Occupational Health Sciences, University of Washington, Seattle, WA//: INJECT; 2010; 245, (3): 310-325.   
Rec #: 2120  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160198  
Chemical of Concern: CPY

182. Morse, J. G. and Sakovich, N. J. Control of Helix aspersa on Citrus and Avocado. POPENV,MIXTURE; 1986; 3, (4): 342-349.   
Rec #: 780  
Call Number: NO MIXTURE (CPY), TARGET2012 (MAL,MCB,TDC)  
Notes: EcoReference No.: 89615  
Chemical of Concern: CPY,MAL,MCB,TDC

183. Muirhead-Thomson, R. C. and Merryweather, J. Effect of Larvicides on Simulium Eggs. MORAQUA; 1969; 221, 858-859.   
Rec #: 910  
Call Number: NO CONTROL (CPY,TMP), NO ENDPOINT (CPY,TMP)  
Notes: EcoReference No.: 66459  
Chemical of Concern: CPY,DDT,FNTH,HCCH,MXC,PPCP,TMP

184. Munoz, A. R.; Trevisan, M., and Capri, E. Sorption and Photodegradation of Chlorpyrifos on Riparian and Aquatic Macrophytes. ACC,BCM. ettore.capri@unicatt.it//: AQUA; 2009; 44, (1): 7-12.   
Rec #: 1780  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 120283  
Chemical of Concern: CPY

185. Mutze, G. and Sinclair, R. Efficacy of Zinc Phosphide, Strychnine and Chlorpyrifos as Rodenticides for the Control of House Mice in South Australian Cereal Crops. POPSOIL,ENV; 2004; 31, (3): 249-257.   
Rec #: 1050  
Call Number: NO ENDPOINT (CPY,STCH,ZnP)  
Notes: EcoReference No.: 101322  
Chemical of Concern: CPY,STCH,ZnP

186. Myers, C. M.; Lewallen, L. L., and Nobe, B. Residue Studies of Fenthion (Baytex) and Dursban in Central California Pastures. ACCSOIL,ENV; 1968; 15, (5): 51.   
Rec #: 2150  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 160352  
Chemical of Concern: CPY,FNTH

187. Nadaroglu, H. and Demir, N. In Vivo Effects of Chlorpyrifos and Parathion-Methyl on Some Oxidative Enzyme Activities in Chickpea, Bean, Wheat, Nettle and Parsley Leaves. BCMSOIL,ENV; 2009; 18, (5): 647-652.   
Rec #: 2330  
Call Number: NO ENDPOINT (DZ,MP), NO TOX DATA (CPY)  
Notes: EcoReference No.: 153608  
Chemical of Concern: CPY,DZ,MP

188. Nallapaneni, A. Modulation of Cholinergic Toxicity by Cannabinergic Compounds. BCM,BEH,PHYINJECT,MIXTURE; 2008: 162 p. (UMI# 3342180).   
Rec #: 2750  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160165  
Chemical of Concern: CPY,EPRN,PRN

189. Narra, M. R.; Begum, G.; Rajender, K., and Rao, J. V. Sub-Lethal Effect of Chlorpyrifos on Protein Metabolism of the Food Fish Clarias batrachus and Monitoring of Recovery. BCM. Department of Zoology, College of Science, Osmania University, Hyderabad 500 007, Andhra Pradesh, India. Taylor & Francis Group Ltd., 2 Park Square Oxford OX14 4RN United Kingdom//: AQUA; 2011; 93, (8): 1650-1658.   
Rec #: 2850  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 160290  
Chemical of Concern: CPY

190. Narra, M. R.; Begum, G.; Rajender, K., and Rao, J. V. Toxic Impact of Two Organophosphate Insecticides on Biochemical Parameters of a Food Fish and Assessment of Recovery Response. BCM,MOR,PHY. Department of Zoology, College of Science, Osmania University, Hyderabad, Andhra Pradesh, India, Sage Publications Ltd.//: AQUA; 2012: 1-10.   
Rec #: 2970  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 160291  
Chemical of Concern: CPY

191. Naseh, M.; Vatanparast, J.; Baniasadi, M., and Hamidi, G. A. Alterations in Nitric Oxide Synthase-Expressing Neurons in the Forebrain Regions of Rats After Developmental Exposure to Organophosphates. CELINJECT; 2013; PRESS, 10 p. (doi: 10.1016/j.ntt.2013.02.003).   
Rec #: 2990  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160377  
Chemical of Concern: CPY

192. Nasruddin, A. and Smitley, D. R. Relationship of Frankliniella occidentalis (Thysanoptera: Thripidae) Population Density and Feeding Injury to the Frequency of Insecticide Applications to Gloxinia. PHY,POPSOIL,ENV; 1991; 84, (6): 1812-1817.   
Rec #: 1690  
Call Number: NO ENDPOINT (CPY,CYF)  
Notes: EcoReference No.: 66897  
Chemical of Concern: ABM,CPY,CYF

193. Neel, P. L. and Reinert, J. A. Phytotoxicity Evaluations of Ten Insecticides on Twenty-Three Species of Ornamental Plants Under Slat Shed Conditions. PHYSOIL,ENV; 1976; 88, 586-590.   
Rec #: 1620  
Call Number: NO ENDPOINT (CBF,CBL,CPY,DZ,FTT,TCF), NO MIXTURE (OXD)  
Notes: EcoReference No.: 25306  
Chemical of Concern: CBF,CBL,CPY,DZ,FTT,OXD,TCF

194. Nermut, J. and Mracek, Z. The Influence of Pesticides on the Viability and Infectivity of Entomopathogenic Nematodes (Nematoda: Steinernematidae). MOR. [Nermut', J] ASCR, Ctr Biol, Inst Entomol, VVI, Ceske Budejovice 37005, Czech Republic [Mracek, Z] Univ S Bohemia, Fac Agr, Ceske Budejovice 37005, Czech Republic//: ENV; 2010; 18, (2): 141-148.   
Rec #: 2560  
Call Number: NO CONTROL (ATON,CPY,Captan,FNT,LCYT,MNPNa,MZB,OML,PPG,SFR,TFN)  
Notes: EcoReference No.: 156757  
Chemical of Concern: ATON,CPR,CPY,Captan,FNT,FXPM,LCYT,MNPNa,MZB,OML,PPG,PPM,SFR,TFN

195. Nielsen, D. G. and Dunlap, M. J. Elm, Control of Elm Leaf Beetle Larvae, Wooster, Ohio, 1990. PHY,POPSOIL,ENV; 1992; 17, 360-361 (8H).   
Rec #: 2450  
Call Number: NO ENDPOINT (ALSV,CBL,CPY,LCYT,MOIL)  
Notes: EcoReference No.: 155223  
Chemical of Concern: ALSV,CBL,CPY,LCYT,MOIL

196. ---. Flowering Crab, Control of Fall Webworm, Wooster, Ohio, 1990. PHY,POPSOIL,ENV,MIXTURE; 1992; 17, 343-344 (51G).   
Rec #: 2440  
Call Number: NO ENDPOINT (ALSV,CBL,CPY,LCYT,MOIL), TARGET2012 (CBL)  
Notes: EcoReference No.: 155229  
Chemical of Concern: ALSV,CBL,CPY,LCYT,MOIL

197. Nishiuchi, Y. and Asano, K. Toxicity of Agricultural Chemicals to Some Freshwater Organisms - 59. MORAQUA,Unspecified; 1979; 27, (1): 48-55(JPN) (ENG TRANSL).   
Rec #: 1970  
Call Number: LITE EVAL CODED (ACP,ACR,AMZ,ATZ,As,BMC,BMY,BT,CAP,CBL,CPP,CTN,Captan,CuOH,CuOX,CuS,DAED,DCB,DCF,DDVP,DMDP,DMT,DQT,DS,DU,DZ,EPTC,ES,FNT,Folpet,LNR,LQN,MAL,MDT,MEM,MITC,MLN,MOM,MZB,Maneb,NaPCP,Naled,PHMD,PMT,PNB,PPG,PPN,PPX,PPZ,PQT,PSM,PYZ,PZM,QOC,RTN,SFR,SMS,SZ,TBC,TCF,TFN,TVP,Ziram), NO CONTROL (ACP,ACR,AMZ,ATZ,As,BMC,BMY,BT,CAP,CBL,CPP,CPY,CPYM,CTN,Captan,CuOH,CuOX,CuS,DAED,DCB,DCF,DDVP,DMDP,DMT,DQT,DS,DU,DZ,EPTC,ES,FNT,Folpet,LNR,LQN,MAL,MDT,MEM,MITC,MLN,MOM,MZB,Maneb,NaPCP,Naled,PHMD,PMT,PNB,PPG,PPN,PPX,PPZ,PQT,PSM,PYZ,PZM,QOC,RTN,SFR,SMS,SZ,TBC,TCF,TFN,TVP,Ziram)  
Notes: EcoReference No.: 6954  
Chemical of Concern: 24DXY,ACP,ACR,AMTL,AMZ,AND,ATZ,As,BFL,BMC,BMY,BT,BTC,CAP,CBL,CHD,CPP,CPY,CPYM,CTN,CYC,CZE,Captan,CuOH,CuOX,CuS,DAED,DBN,DCB,DCF,DDT,DDVP,DINO,DLD,DMDP,DMT,DQT,DS,DU,DZ,EPTC,ES,FBM,FLAC,FML,FNT,FNTH,FZFB,Folpet,HCCH,HPT,HYX,LNR,LQN,MAL,MCPA,MCPAK,MCPANa,MCPBNa,MDT,MEM,MITC,MLN,MOM,MZB,Maneb,NaClO,NaFS,NaPCP,Naled,ODZ,PCL,PEB,PHMD,PHSL,PMT,PNB,PPCP,PPG,PPN,PPX,PPZ,PQT,PSM,PYZ,PZM,QOC,RTN,SFR,SMS,SZ,TBA,TBC,TCF,TFN,TPE,TPM,TPN,TPTH,TVP,TZL,VNT,Zineb,Ziram

198. Nomura, D. K. Organophosphate Interactions with the Serine Hydrolase Superfamily Exemplified by KIAA1363 and the Endocannabinoid System. BCM,MOR,PHYINJECT; 2008: 146 p. (UMI# 3334273).   
Rec #: 2760  
Call Number: NO EXP TYPE (CPY,CPYO)  
Notes: EcoReference No.: 160164  
Chemical of Concern: CPY,CPYO,EPRN,PRN

199. Nord, J. C. Toxicities of Insecticide Residues on Loblolly Pine Foliage to Leaffooted Pine Seed Bug Adults (Heteroptera: Coreidae). MORENV; 1990; 25, (1): 3-9.   
Rec #: 1960  
Call Number: LITE EVAL CODED (AZ,DM,FNV,MLN,MOM,PMR,PPX,PSM), NO DURATION (CPY,CPYM,DMT,FNT,TCF), TARGET2012 (AZ,DM,DMT,FNT,FNV,MLN,MOM,PMR,PPX,PSM,TCF)  
Notes: EcoReference No.: 64390  
Chemical of Concern: AZ,CPY,CPYM,DM,DMT,FNT,FNV,MLN,MOM,PMR,PPX,PSM,SPS,TCF

200. Oberheu, J. C.; Soule, R. D., and Wolf, M. A. The Correlation of Cholinesterase Levels in Test Animals and Exposure Levels Resulting from Thermal Fog and Aerial Spray Applications of Dursban Insecticide. BCM,MORAQUA,ENV; 1970; 26, (1): 12-16.   
Rec #: 1870  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 9656  
Chemical of Concern: CPY

201. Oi, D. H. and Mau, R. F. L. Control of Broad Mites, 1988. POPSOIL,ENV; 1988; 14, 134-(74E).   
Rec #: 760  
Call Number: NO ENDPOINT (BFT,CPY,ES,FTTCl), TARGET (BFT,ES,FTTCl)  
Notes: EcoReference No.: 115130  
Chemical of Concern: ABM,BFT,CPY,ES,FNF,FTTCl

202. Oseto, C. Y. and Burr, W. F. Timing Insecticide Applications for Control of the Red Sunflower Seed Weevil (Coleoptera: Curculionidae) on Cultivated Sunflower. POPENV; 1990; 7, (4): 337-341.   
Rec #: 260  
Call Number: NO CONTROL (CBF,CPY,CYF,CYP,ES,FNV,LCYT,MLN,PMR), NO ENDPOINT (CBF,CPY,CYF,CYP,ES,FNV,LCYT,MLN,PMR), TARGET (CBF,CYP,ES,FNV,LCYT,MLN,PMR)  
Notes: EcoReference No.: 121467  
Chemical of Concern: CBF,CPY,CYF,CYP,ES,FNV,FYT,LCYT,MLN,PMR

203. Palanisami, S.; Prabaharan, D., and Uma, L. Fate of Few Pesticide-Metabolizing Enzymes in the Marine Cyanobacterium Phormidium valderianum BDU 20041 in Perspective with Chlorpyrifos Exposure. BCM,MOR,POPAQUA; 2006; 94, (2/3): 68-72.   
Rec #: 270  
Call Number: NO CONTROL (CPY), NO ENDPOINT (CPY)  
Notes: EcoReference No.: 159783  
Chemical of Concern: CPY

204. Pandey, A. K. Bio-efficacy of Different Insecticides Against Gypsy Moth, Lymantria spp. (Lepidoptera: Lymantriidae). MORENV; 2005; 29, (2): 119-122.   
Rec #: 280  
Call Number: NO CONTROL (CPY,CYP,DM,DMT,ES,FNV,MLN,PMR), TARGET (CYP,DM,DMT,ES,FNV,MLN,PMR)  
Notes: EcoReference No.: 121435  
Chemical of Concern: CPY,CYP,DM,DMT,ES,FNV,MLN,PMR

205. Passarella, I.; Elia, I.; Guarino, B.; Bourlot, G., and Negre, M. Evaluation of the Field Dissipation of Fungicides and Insecticides Used on Fruit Bearing Trees in Northern Italy. ACCSOIL,TOP; 2009; 44, (2): 137-143.   
Rec #: 290  
Call Number: NO CONTROL (CPY,Captan,FNT,MLN)  
Notes: EcoReference No.: 159239  
Chemical of Concern: CPY,CYD,Captan,FDX,FNT,MLN,TEZ

206. Pereira, J. L.; Da Silva, A. A.; Picanco, M. C.; De Barros, E. C., and Jakelaitis, A. Effects of Herbicide and Insecticide Interaction on Soil Entomofauna Under Maize Crop. POPENV,MIXTURE; 2005; 40, (1): 45-54.   
Rec #: 970  
Call Number: NO ENDPOINT (ATZ,CPY)  
Notes: EcoReference No.: 79698  
Chemical of Concern: ATZ,CPY,NSF

207. Perez-Carreon, J. I.; Dargent, C.; Merhi, M.; Fattel-Fazenda, S.; Arce-Popoca, E.; Villa-Trevino, S., and Rouimi, P. Tumor Promoting and Co-Carcinogenic Effects in Medium-Term Rat Hepatocarcinogenesis are not Modified by Co-Administration of 12 Pesticides in Mixture at Acceptable Daily Intake. BCM,CEL,GROMIXTURE,ORAL; 2009; 47, (3): 540-546.   
Rec #: 2100  
Call Number: NO MIXTURE (ACR,ATZ,CBF,CPY,DCF,DZ,ES,IPD,MZB,Maneb,RTN)  
Notes: EcoReference No.: 150839  
Chemical of Concern: ACR,ATZ,CBF,CPY,DCF,DZ,ES,IPD,MZB,Maneb,RTN

208. Picco, E. J.; Fernandez, H. R.; Diaz David, D. C.; San Andres, M. I.; Boggio, J. C., and Rodriguez, C. Use of Cholinesterase Activity in Monitoring Chlorpyrifos Exposure of Steer Cattle After Topical Administration. ACC,BCM. Facultad de Ciencias Veterinarias, Universidad Nacional del Litoral, R.P. Esperanza, Argentine. Taylor & Francis Group Ltd., 2 Park Square Oxford OX14 4RN UK//: TOP; 2008; 43, (5): 405-409.   
Rec #: 3050  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 160177  
Chemical of Concern: CPY

209. Plapp, F. W. Jr. Chlordimeform as a Synergist for Insecticides Against the Tobacco Budworm. MORENV; 1976; 69, (1): 91-92.   
Rec #: 660  
Call Number: NO CONTROL (ACP,CBL,CPY,CPYM,DFZ,DMT,DZ,FNT,MLN,MOM,MP,PSM,TCF,TMT), TARGET (ACP,CBL,DFZ,DMT,FNT,MLN,MOM,MP,PSM,TCF)  
Notes: EcoReference No.: 114517  
Chemical of Concern: ACP,CBL,CPY,CPYM,DFZ,DMT,DZ,FNT,MLN,MOM,MP,PSM,PYN,TCF,TMT,TXP

210. Pope, C. N. and Chakraborti, T. K. Dose-Related Inhibition of Brain and Plasma Cholinesterase in Neonatal and Adult Rats Following Sub-Lethal Organophosphate Exposure. BCMINJECT; 1992; 73, (1): 35-43.   
Rec #: 300  
Call Number: NO CONTROL (CPY,MP), NO EXP TYPE (CPY,MP)  
Notes: EcoReference No.: 160410  
Chemical of Concern: CPY,EPRN,MP,PRN

211. Prasad, V. D.; Devi, C. T.; Rao, K. R., and Krishnayya, P. V. Host Plant-Induced Response to Insecticides and Haemolymph Esterase Patterns in Spodoptera litura (Fabricius). BCM,MORTOP; 1995; 20, (3/4): 245-248.   
Rec #: 310  
Call Number: NO CONTROL (CBL,CPY,CYP,ES,FNV), PESTS (ES,FNV), TARGET2012 (CBL,CYP)  
Notes: EcoReference No.: 154765  
Chemical of Concern: CBL,CPY,CYP,ES,FNV

212. Presley, S. M. and Wright, R. E. Field Test of Pyrethroid Ear Tags, Sprays, and a Pour-on Formulation for Control of Horse Flies on Cattle. MORENV,MIXTURE; 1986; 3, (4): 369-373.   
Rec #: 1180  
Call Number: NO MIXTURE (CPY,CYP,DDVP), TARGET MANUAL (CMPH,CYP,DDVP,FNV,PMR)  
Notes: EcoReference No.: 92549  
Chemical of Concern: CMPH,CPY,CYP,DDVP,FNV,FYT,PMR

213. Pretorius, M. W.; Van Ark, H., and Mohr, J. D. Preliminary Mound-Fumigation Trials for the Control of Trinervitermes trinervoides Colonies (Isoptera: Termitidae). POPSOIL,ENV ; 1991; 23, (1): 89-90.   
Rec #: 1650  
Call Number: NO ENDPOINT (AlP,CPY,CST,DDVP), TARGET2012 (DDVP)  
Notes: EcoReference No.: 74747  
Chemical of Concern: AlP,CPY,CST,CTC,DDVP,HCCH,PPCP

214. Rahman, A. and James, T. K. Enhanced Activity of Nicosulfuron in Combination with Soil-Applied Insecticides in Corn (Zea mays). PHY,POPSOIL,ENV,MIXTURE; 1993; 7, (4): 824-829.   
Rec #: 1070  
Call Number: NO MIXTURE (ACR,ATZ,CPY,PRT,TBO), TARGET2012 (ACR,ATZ)  
Notes: EcoReference No.: 64240  
Chemical of Concern: ACR,ATZ,CPY,FNF,NSF,PRT,TBO

215. Raju, N.; Gopalan, M., and Balasubramanian, G. Ovicidal Action of Insecticides, Moult Inhibitor and Fungicides on the Eggs of Rice Leaf Folder and Stem Borer. MORENV; 1990; 18, (1): 5-9.   
Rec #: 320  
Call Number: NO ENDPOINT (CBD,CBL,CPY,CYP,DDVP,DFZ,DM,ES,FNV,MLN,MZB,PMR,TMP), TARGET (CBL,CYP,DDVP,DFZ,DM,ES,FNV,MLN,PMR,TMP)  
Notes: EcoReference No.: 121449  
Chemical of Concern: CBD,CBL,CPY,CYP,DDVP,DFZ,DM,ES,FNTH,FNV,MLN,MZB,PMR,TMP

216. Ramke, D. J.; Gillies, P. A., and Schaefer, C. H. Aedes nigromaculis Control Crisis in the Southern San Joaquin Valley. POPENV,MIXTURE; 1969; 16, (2): 19-20.   
Rec #: 530  
Call Number: NO CONTROL (CPY,DDVP,MLN,MP,Naled,PPX,TMP), NO ENDPOINT (CPY,DDVP,MLN,MP,Naled,PPX,TMP)  
Notes: EcoReference No.: 67299  
Chemical of Concern: CPY,DDVP,EPRN,FNTH,MLN,MP,Naled,PPX,PRN,TMP

217. Rao, B. V.; Rao, B. G. S., and Sharma, C. B. S. R. Cytological Effects of Herbicides and Insecticides on Allium cepa Root Meristems. CEL. B.V.Rao, Dep. Bot., Andhra Univ., Waltair, 530 003, India//: SOIL,AQUA; 1988; 53, (2): 255-261.   
Rec #: 830  
Call Number: NO ENDPOINT (CPY,ES)  
Notes: EcoReference No.: 67883  
Chemical of Concern: CPY,ES,FBM,MSMA

218. Rao, C. S.; Rao, N. V., and Razvi, S. A. Chemical Control as Ecological Basis in Rice Pest Management. GRO,POPSOIL,ENV; 1985; 19, (7): 20-23.   
Rec #: 650  
Call Number: NO ENDPOINT (CBF,CPY,DZ,EFV,EP,MTM,PRT)  
Notes: EcoReference No.: 109033  
Chemical of Concern: CBF,CPY,DZ,EFV,EP,MTM,PRT

219. Rao, P. S.; Babu, N. B., and Raju, R. R. Study the Effect of Chlorpyrifos on Proteins in Fresh Water Fish Labeo rohita by Using HPLC Method. ACC,BCM,CEL. rrraju1@gmail.com//Department of Chemistry, Acharya Nagarjuna University, Guntur, A. P., India////: AQUA; 2010; 1, (1): 1-5.   
Rec #: 2430  
Call Number: NO CONTROL (CPY), NO ENDPOINT (CPY)  
Notes: EcoReference No.: 159762  
Chemical of Concern: CPY

220. Reddy, G. V. P. and Manjunatha, M. Laboratory and Field Studies on the Integrated Pest Management of Helicoverpa armigera (Hubner) in Cotton, Based on Pheromone Trap Catch Threshold Level. MOR,POPENV,MIXTURE,ORAL; 2000; 124, (5/6): 213-221.   
Rec #: 330  
Call Number: LITE EVAL CODED (DMT,FNV), NO EFFECT (CPY,DCF,DM,MLN,MP), NO MIXTURE (CBL), OK (CYP,ES,MOM)  
Notes: EcoReference No.: 154644  
Chemical of Concern: ACYP,CBL,CPY,CYP,DCF,DM,DMT,ES,FNV,MLN,MOM,MP,PHSL

221. Reissig, W. H. and Combs, D. Evaluation of Seasonal Insecticide Programs Against New York Apple Pests, 2005. POPENV,MIXTURE; 2006; 31, 3 p. (A21).   
Rec #: 1110  
Call Number: LITE EVAL CODED (EFV), NO MIXTURE (CPY,DM,HTX,LCYT,MDT,PSM), OK (AZ)  
Notes: EcoReference No.: 93017  
Chemical of Concern: ACT,AZ,CPY,CTD,DM,EFV,EMMB,HTX,LCYT,MDT,PSM,TAP

222. Robbins, P. S.; Hessney, M. L., and Eckenrode, C. J. Onion Maggot Control, 1988. POPSOIL,ENV,MIXTURE; 1988; 14, 133-(72E).   
Rec #: 1500  
Call Number: NO ENDPOINT (CPY,CYR)  
Notes: EcoReference No.: 115160  
Chemical of Concern: CPY,CYR

223. Robertson, J. L.; Lyon, R. L.; Shon, F. L., and Gillette, N. L. Contact Toxicity of Twenty Insecticides Applied to Symmerista canicosta. MORTOP; 1972; 65, (6): 1560-1562.   
Rec #: 750  
Call Number: NO CONTROL (CBL,CPY,FNT,MLN,MOM,MTM,PPX,PSM,TCF,TVP), TARGET (CBL,FNT,MLN,MOM,MTM,PPX,PSM,TCF,TVP)  
Notes: EcoReference No.: 114519  
Chemical of Concern: CBL,CPY,DDT,FNT,FNTH,MLN,MOM,MTM,PPX,PSM,PYT,TCF,TVP

224. Rodriguez, E.; Campos, M.; Raya, A. J. S., and Pena, A. Effect of the Combined Treatment of Insecticides and an Attractant for the Control of Phloeotribus scarabaeoides, a Pest of Olea europea. ACC,MOR,POPSOIL,ENV,MIXTURE; 2003; 59, (3): 339-346.   
Rec #: 940  
Call Number: LITE EVAL CODED (DM), NO EFFECT (DDVP), NO MIXTURE (CPY,CYP,EPH,FNT), OK (DMT,MDT)  
Notes: EcoReference No.: 69897  
Chemical of Concern: CPY,CYP,DDVP,DM,DMT,EPH,FNT,MDT

225. Rodriguez, M. A.; Bosch, D., and Avilla, J. Resistance of Spanish Codling Moth (Cydia pomonella) Populations to Insecticides and Activity of Detoxifying Enzymatic Systems. BCM,MORTOP; 2011; 138, (3): 184-192.   
Rec #: 2600  
Call Number: NO ENDPOINT (AZ,CPY,CPYM,DFZ,FYC,TUZ), TARGET2012 (AZ,DFZ,FYC,TUZ)  
Notes: EcoReference No.: 157543  
Chemical of Concern: AZ,CPY,CPYM,DFZ,FYC,PHSL,TAP,TUZ

226. Rogers-Cotrone, T.; Burgess, M. P.; Hancock, S. H.; Hinckley, J.; Lowe, K.; Ehrich, M. F., and Jortner, B. S. Vacuolation of Sensory Ganglion Neuron Cytoplasm in Rats with Long-Term Exposure to Organophosphates. CELINJECT,MIXTURE,ORAL; 2010; 38, (4): 554-559.   
Rec #: 2360  
Call Number: NO ENDPOINT (CPY), NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160408  
Chemical of Concern: CPY

227. Ross, D. C. ; Crim, J. W.; Brown, M. R.; Herzog, G. A., and Lea, A. O. Toxic and Antifeeding Actions of Melittin in the Corn Earworm, Heliothis zea (Boddie): Comparisons to Bee Venom and the Insecticides Chlorpyriphos and Cyromazine. BEH,GRO,MOR,PHYINJECT; 1987; 25, (3): 307-313.   
Rec #: 1950  
Call Number: NO EXP TYPE (CPY,CYR), PESTS (CYR)  
Notes: EcoReference No.: 68739  
Chemical of Concern: CPY,CYR

228. Ruiz-Munoz, A. M.; Nieto-Escamez, F. A.; Aznar, S.; Colomina, M. T., and Sanchez-Santed, F. Cognitive and Histological Disturbances After Chlorpyrifos Exposure and Chronic Abeta (1-42) Infusions in Wistar Rats. BEH,CEL,GRO,MOR,PHY. Department Neuroscience and Health Sciences, Faculty of Psychology, University of Almeria, Crta. Sacramento S/N, 04120 Almeria, Spain, Elsevier B.V., P.O. Box 211 Amsterdam 1000 AE Netherlands//: INJECT; 2011; 32, (6): 836-844.   
Rec #: 2830  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160372  
Chemical of Concern: CPY

229. Saleh, M. S.; Kelada, N. L., and Abdeen, M. I. Factors Affecting Efficacy of Bacillus thuringiensis H-14 Against Mosquito Larvae with Special Reference to the Joint Action of the Pathogen with Three Chemical Insecticides. 1990; 63, (1): 10-13.   
Rec #: 1140  
Call Number: NO ENDPOINT (CPY,FNV,MLN)  
Notes: EcoReference No.: 93061  
Chemical of Concern: CPY,FNV,MLN

230. Samriti; Chauhan, R., and Kumari, B. Persistence and Effect of Processing on Reduction of Chlorpyriphos Residues in Okra Fruits. ACCSOIL,ENV; 2011; 87, (2): 198-201.   
Rec #: 2400  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 160351  
Chemical of Concern: CPY

231. Schaefer, C. H. and Mulligan III, F. S. Potential for Resistance to Pyriproxyfen: A Promising New Mosquito Larvicide. MORAQUA; 1991; 7, (3): 409-411.   
Rec #: 1640  
Call Number: NO CONTROL (CPY,MLN)  
Notes: EcoReference No.: 9642  
Chemical of Concern: CPY,EPRN,FNTH,MLN,PRN,PYX

232. Schuster, D. J. and Polston, J. E. Management of Whiteflies and Armyworm on Fresh Market Tomatoes, Fall 1995. PHY,POPSOIL,ENV,MIXTURE; 1997; 22, 180-181 (109E).   
Rec #: 2260  
Call Number: LITE EVAL CODED (LCYT), NO MIXTURE (CPY,EFV,FYC,MTM,NMO,OML), OK (IMC,NMX)  
Notes: EcoReference No.: 153497  
Chemical of Concern: ABM,CPY,EFV,FYC,IMC,LCYT,MTM,NMO,NMX,OML,PMZ

233. Sechriest, R. E.; Petty, H. B., and Kuhlman, D. E. Toxicity of Selected Insecticides to Clivina impressifrons. MORENV,MIXTURE; 1971; 64, (1): 210-213.   
Rec #: 2030  
Call Number: NO MIXTURE (CPY,DMT,PPX), OK (CBF,Captan,EP,PRT), TARGET2012 (DS,DZ,PPX,TVP)  
Notes: EcoReference No.: 113792  
Chemical of Concern: AND,CBF,CPY,Captan,DLD,DMT,DS,DZ,EP,EPRN,FNF,HCCH,HPT,PPCP,PPX,PRN,PRT,TVP

234. Seidler, F. J. and Slotkin, T. A. Developmental Neurotoxicity Targeting Hepatic and Cardiac Sympathetic Innervation: Effects of Organophosphates are Distinct from Those of Glucocorticoids. BCM. slliang@mail.cgu.edu.tw//Department of Pharmacology and Cancer Biology, Box 3813 DUMC, Duke University Medical Center, Durham, NC 27710//: INJECT; 2011; 85, (3/4): 225-230.   
Rec #: 2690  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160357  
Chemical of Concern: CPY,DXM,EPRN,PPCP,PPCP2011,PRN

235. Semtner, P. J.; Clarke, J., and Wilkinson III, W. B. Systemic Insecticides for Aphid and Flea Beetle Control on Flue-Cured Tobacco, 1998. POPSOIL,ENV,MIXTURE; 1999; 24, 309-311 (F129).   
Rec #: 1850  
Call Number: LITE EVAL CODED (ACP,CBF,IMC), NO MIXTURE (ADC,CPY,EP,FMP)  
Notes: EcoReference No.: 88148  
Chemical of Concern: ACP,ADC,CBF,CPY,EP,FMP,IMC

236. Semtner, P. J.; Dara, S. K., and Wilkinson III, W. B. Insect Control on Flue-Cured Tobacco with Systemic Insecticides, 1995. POPSOIL,ENV,MIXTURE; 1996; 21, 306-308 (147F).   
Rec #: 2290  
Call Number: LITE EVAL CODED (ACP,ADC,CBF,FMP,IMC), NO MIXTURE (CPY,EP)  
Notes: EcoReference No.: 153398  
Chemical of Concern: ACP,ADC,CBF,CPY,EP,FMP,IMC

237. Semtner, P. J. and Wilkinson III, W. B. Aphid and Flea Beetle Control of Tobacco Grown in Fumigated Soil, 1994. POPSOIL,ENV,MIXTURE; 1995; 20, 261-262 (138F).   
Rec #: 2280  
Call Number: LITE EVAL CODED (ADC,EP), NO MIXTURE (ACP,CPY,FMP)  
Notes: EcoReference No.: 153396  
Chemical of Concern: ACP,ADC,CPY,EP,FMP

238. ---. Insect Control of Flue-Cured Tobacco with Systemic Insecticides, 1997. POPSOIL,ENV,MIXTURE; 1998; 23, 296-297 (152F).   
Rec #: 2310  
Call Number: LITE EVAL CODED (ACP,ADC,EP,FMP,IMC), NO MIXTURE (CBF,CPY)  
Notes: EcoReference No.: 153403  
Chemical of Concern: ACP,ADC,CBF,CPY,EP,FMP,IMC

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Rec #: 2300  
Call Number: LITE EVAL CODED (ACP,ADC,CBF,EP,FMP,IMC), NO MIXTURE (CPY)  
Notes: EcoReference No.: 153402  
Chemical of Concern: ACP,ADC,CBF,CPY,EP,FMP,IMC

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Rec #: 2270  
Call Number: LITE EVAL CODED (ACP,ADC,IMC), NO MIXTURE (CPY)  
Notes: EcoReference No.: 153395  
Chemical of Concern: ACP,ADC,CPY,IMC

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Rec #: 3130  
Call Number: NO ENDPOINT (CPY,ES,MZB), TARGET2012 (MZB)  
Notes: EcoReference No.: 160432  
Chemical of Concern: CPY,ES,MZB

242. Sharma, M. S. R.; Roopavathi, C., and Raju, N. S. Effect of Some Pesticides on Fungal Biomass of Agricultural Soil. POP. Department of Studies in Environmental Science, University of Mysore, Manasagangotri, Mysore-570006, Karnataka//: ENV; 2011; 10, (2): 233-236.   
Rec #: 3180  
Call Number: NO ENDPOINT (CPY,DMT)  
Notes: EcoReference No.: 160461  
Chemical of Concern: CPY,DMT

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Rec #: 1900  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 68689  
Chemical of Concern: BPZ,CPY

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Rec #: 1550  
Call Number: NO CONTROL (CPY,CYH,DM,FNV,PMR,RSM,TLM,TMT), NO MIXTURE (PPB), TARGET (DM,FNV,PMR,TLM)  
Notes: EcoReference No.: 112346  
Chemical of Concern: CPY,CYH,DM,FNV,PMR,PPB,RSM,TLM,TMT

245. Siefert, R. E. Effects of Abate (Temephos) on Non-Target Aquatic Organisms in a Natural Pond Undergoing Mosquito Control Treatment. BCM,GRO,MORENV; 1986: 104 p.   
Rec #: 2210  
Call Number: NO EFFECT (CPY), OK (TMP)  
Notes: EcoReference No.: 156143  
Chemical of Concern: CPY,TMP

246. Silambarasan, S. and Abraham, J. Ecofriendly Method for Bioremediation of Chlorpyrifos from Agricultural Soil by Novel Fungus Aspergillus terreus JAS1. POPENV; 2013; 224, (1): 11 p.   
Rec #: 3210  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 160345  
Chemical of Concern: CPY

247. Simmon, V. F.; Mitchell, A. D., and Jorgenson, T. A. Evaluation of Selected Pesticides as Chemical Mutagens: In Vitro and In Vivo Studies. MOR,REPORAL; 1977: 238 p. (NTIS/PB-268647).   
Rec #: 1120  
Call Number: LITE EVAL CODED (AZ,BMC,Captan,Folpet,MLN,MP,PNB,PRT), NO ENDPOINT (SZ), NO IN VITRO (CPY,MOM,TFN)  
Notes: EcoReference No.: 71394  
Chemical of Concern: AZ,BMC,CCA,CPY,Captan,DSMA,EPRN,FNTH,Folpet,MLN,MOM,MP,MSMA,PNB,PRN,PRT,SZ,TFN

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Rec #: 890  
Call Number: NO ENDPOINT (CPY,TMP)  
Notes: EcoReference No.: 4750  
Chemical of Concern: CPY,FNTH,TMP

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Rec #: 3060  
Call Number: NO EXP TYPE (CPY,DZ)  
Notes: EcoReference No.: 160180  
Chemical of Concern: CPY,DZ

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Rec #: 3100  
Call Number: NO EXP TYPE (CPY,DZ)  
Notes: EcoReference No.: 160252  
Chemical of Concern: CPY,DZ

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Rec #: 340  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 153558  
Chemical of Concern: CPY

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Rec #: 1430  
Call Number: LITE EVAL CODED (LCYT,MLN,PPX), NO CONC (CPYO,MLO)  
Notes: EcoReference No.: 120182  
Chemical of Concern: CPYO,LCYT,MLN,MLO,PPX

253. Smith, J. N.; Campbell, J. A.; Busby-Hjerpe, A. L.; Lee, S.; Poet, T. S.; Barr, D. B., and Timchalk, C. Comparative Chlorpyrifos Pharmacokinetics via Multiple Routes of Exposure and Vehicles of Administration in the Adult Rat. ACCINJECT,ORAL; 2009; 261, (1-2): 47-58.   
Rec #: 700  
Call Number: NO CONTROL (CPY)  
Notes: EcoReference No.: 118346  
Chemical of Concern: CPY

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Rec #: 2810  
Call Number: NO CONTROL (CPY,TCP), NO ENDPOINT (CPY,TCP), NO EXP TYPE (CPY,TCP)  
Notes: EcoReference No.: 160370  
Chemical of Concern: CPY,TCP

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Rec #: 350  
Call Number: NO CONTROL (TCP), NO ENDPOINT (TCP), NO EXP TYPE (TCP)  
Notes: EcoReference No.: 160413  
Chemical of Concern: TCP

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Rec #: 1260  
Call Number: NO ENDPOINT (CPY,FPN)  
Notes: EcoReference No.: 69704  
Chemical of Concern: CPY,FPN

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Rec #: 990  
Call Number: NO MIXTURE (CPY,MCB), OK (PCZ,PPCP,PPCP2011), TARGET (OML)  
Notes: EcoReference No.: 116343  
Chemical of Concern: CPY,MCB,OML,PCZ,PPCP,PPCP2011

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Rec #: 2550  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160412  
Chemical of Concern: CPY

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Rec #: 2590  
Call Number: NO ENDPOINT (CPY,FA,PAHs)  
Notes: EcoReference No.: 160314  
Chemical of Concern: CPY,FA,PAHs

260. Stapleton, A. R. and Chan, V. T. Subtoxic Chlorpyrifos Treatment Resulted in Differential Expression of Genes Implicated in Neurological Functions and Development. CELORAL; 2009; 83, (4): 319, 333 (10.1007/s00204-008-0346-2).   
Rec #: 1820  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 118974  
Chemical of Concern: CPY

261. Stejskal, V.; Aulicky, R., and Pekar, S. Brief Exposure of Blattella germanica (Blattodea) to Insecticides Formulated in Various Microcapsule Sizes and Applied on Porous and Non-Porous Surfaces. MORENV; 2008; 65, (1): 93-98.   
Rec #: 610  
Call Number: NO CONTROL (CHT,CPY,DZ,FNT), NO ENDPOINT (CHT,CPY,DZ,FNT), TARGET (CHT,FNT)  
Notes: EcoReference No.: 112517  
Chemical of Concern: CHT,CPY,DZ,FNT

262. Stevenson, J. H.; Needham, P. H., and Walker, J. Poisoning of Honeybees by Pesticides: Investigations of the Changing Pattern in Britain Over 20 Years. MORORAL,TOP; 1978: 55-72.   
Rec #: 1630  
Call Number: NO CONTROL (ATN,AZ,BMY,BRSM,CBL,CPY,Captan,DCF,DCTP,DFZ,DM,DMB,DMS,DMT,DS,DZ,DZM,ES,FNT,MCPP1,MLN,MVP,OML,OMT,OXD,PIRE,PIRM,PMR,PQT,PRT,RSM,RTN,TDF,TFN)  
Notes: EcoReference No.: 35461  
Chemical of Concern: ATN,AZ,BMY,BRSM,CBL,CHD,CPY,Captan,DCF,DCTP,DDT,DFZ,DLD,DM,DMB,DMS,DMT,DS,DZ,DZM,EN,ES,FNF,FNT,HCCH,MCPA,MCPP1,MLN,MVP,OML,OMT,OTQ,OXD,PIM,PIRE,PIRM,PMR,PPCP,PQT,PRT,RSM,RTN,TDF,TFN,TYF

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Rec #: 360  
Call Number: LITE EVAL CODED (ACP,DZ), NO MIXTURE (AZ,CPY,EFV,FBOX,FPP,IMC,MOM,OML,PSM), PESTS (ACP,EFV,FPP,MOM), TARGET2012 (ACP,AZ,DZ,EFV,FBOX,FPP,IMC,MOM,OML,PSM)  
Notes: EcoReference No.: 150728  
Chemical of Concern: ACP,AZ,CPY,DZ,EFV,FBOX,FPP,IMC,MOM,OML,PSM

264. ---. Evaluation of Insecticides Against Fruit-Feeding Insects on Apple, 1997. PHY,POPSOIL,ENV,MIXTURE; 1998; 23, 34-35 (22A).   
Rec #: 370  
Call Number: LITE EVAL CODED (ACP,DZ), NO MIXTURE (AZ,CBL,CPY,EFV,FBOX,FPP,IMC,MOM,OML,PSM)  
Notes: EcoReference No.: 150727  
Chemical of Concern: ACP,AZ,CBL,CPY,DZ,EFV,FBOX,FPP,IMC,MOM,OML,PSM,SS

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Rec #: 2670  
Call Number: NO CONTROL (CPY)  
Notes: EcoReference No.: 157999  
Chemical of Concern: CPY

266. Takeuchi, S.; Matsuda, T.; Kobayashi, S.; Takahashi, T., and Kojima, H. In Vitro Screening of 200 Pesticides for Agonistic Activity via Mouse Peroxisome Proliferator-Activated Receptor (PPAR)alpha and PPARgamma and Quantitative Analysis of In Vivo Induction Pathway. BCM,CELINJECT; 2006; 217, (3): 235-244.   
Rec #: 1280  
Call Number: NO EXP TYPE (ACP,ACR,AMZ,BMY,BPH,CBD,CBF,CBL,CPP,CPY,CPYM,CTN,CYP,Captan,DCF,DDVP,DFZ,DM,DMT,DS,DU,DZM,EFX,ES,FMP,FNT,FNV,FNZ,FRM,FTL,FVL,Folpet,GYP,IMC,IPD,LNR,MCB,MDT,MLN,MLT,MLX,MOM,MP,MTM,OML,OXF,PAQT,PCP,PCZ,PDM,PFF,PHMD,PIRM,PMR,PMT,PPCP,PPCP2011,PPN,PRO,PRT,PSM,PZM,SXD,SZ,TBC,TBO,TCF,TDF,TFN,TFR,TFZ,THM,TLM,TVP,VCZ), NO IN VITRO (ACP,ACR,AMZ,BMY,BPH,CBD,CBF,CBL,CPP,CPY,CPYM,CTN,CYP,Captan,DCF,DDVP,DFZ,DM,DMT,DS,DU,DZM,EFX,ES,FMP,FNT,FNV,FNZ,FRM,FTL,FVL,Folpet,GYP,IMC,IPD,LNR,MCB,MDT,MLN,MLT,MLX,MOM,MP,MTM,OML,OXF,PAQT,PCP,PCZ,PDM,PFF,PHMD,PIRM,PMR,PMT,PPCP,PPCP2011,PPN,PRO,PRT,PSM,PZM,SXD,SZ,TBC,TBO,TCF,TDF,TFN,TFR,TFZ,THM,TLM,TVP,VCZ)  
Notes: EcoReference No.: 89206  
Chemical of Concern: ACF,ACFM,ACP,ACR,AMZ,AND,ANL,ANZ,ASM,BDC,BMY,BPH,BSF,BTN,CBD,CBF,CBL,CHD,CPP,CPY,CPYM,CTN,CYP,Captan,DBN,DCF,DDVP,DFPM,DFZ,DLD,DM,DMT,DS,DU,DZM,EFX,EN,EPRN,ES,ETN,EXQ,FMP,FNT,FNTH,FNV,FNZ,FRM,FTL,FVL,FYT,FZFB,Folpet,GYP,HCCH,HPT,IFP,ILL,IMC,IPD,LNR,MBZ,MCB,MCPA,MDT,MLN,MLT,MLX,MOM,MP,MTM,MXC,OML,OXF,PAQT,PCP,PCZ,PDM,PFF,PHMD,PHSL,PIM,PIRM,PMR,PMT,PPCP,PPCP2011,PPN,PRN,PRO,PRT,PSM,PYN,PZM,SXD,SZ,TBC,TBO,TCF,TCM,TDF,TFN,TFR,TFT,TFZ,THM,TLM,TPM,TVMP,TVP,VCZ

267. Tamilselvan, C.; Sundararaj, R., and David, B. V. Influence of Certain Insecticides on the Chemical and Yield Parameters of Cotton. BCM,GRO,REP. Frederick Inst. Plant Protection Toxicol., Padappai-601 301, Tamil Nadu, India////: SOIL,ENV,MIXTURE; 1991; 9, (4): 267-271.   
Rec #: 380  
Call Number: LITE EVAL CODED (CYP,EFX,FNV), NO MIXTURE (CPY)  
Notes: EcoReference No.: 151292  
Chemical of Concern: CPY,CYP,EFX,FNV

268. Terry, A. V. Jr.; Beck, W. D.; Warner, S.; Vandenhuerk, L., and Callahan, P. M. Chronic Impairments in Spatial Learning and Memory in Rats Previously Exposed to Chlorpyrfos or Diisopropylfluorophosphate. BCM,BEHINJECT; 2012; 34, (1): 1-8.   
Rec #: 3000  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160369  
Chemical of Concern: CPY

269. Thackray, D. J.; Jones, R. A. C.; Bwye, A. M., and Coutts, B. A. Further Studies on the Effects of Insecticides on Aphid Vector Numbers and Spread of Cucumber Mosaic Virus in Narrow-Leafed Lupins (Lupinus angustifolius). GRO,POP. D.J. Thackray, Agriculture Western Australia, Locked Bag 4, Bentley Delivery Centre, WA 6983, Australia// : SOIL,ENV,MIXTURE; 2000; 19, (2): 121-139.   
Rec #: 1200  
Call Number: NO TOX DATA (CLT,CPY,EFV,GYP,OMT,SXD,SZ), TARGET (EFV,IMC,MTM,OMT)  
Notes: EcoReference No.: 66668  
Chemical of Concern: CLT,CPY,EFV,FZFP,GYP,IMC,MTM,OMT,SXD,SZ

270. Thengodkar, R. R. M. and Sivakami, S. Degradation of Chlorpyrifos by an Alkaline Phosphatase from the Cyanobacterium Spirulina platensis. ACCAQUA; 2010; 21, (4): 637-644.   
Rec #: 2170  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 159792  
Chemical of Concern: CPY

271. Thompson, A. R. Persistence of Biological Activity of Seven Insecticides in Soil Assayed with Folsomia candida. MORSOIL,ENV,Unspecified; 1973; 66, (4): 855-857 (OECDG Data File).   
Rec #: 1580  
Call Number: NO CONTROL (CBF,DZ,PRT), NO ENDPOINT (CPY)  
Notes: EcoReference No.: 56391  
Chemical of Concern: CBF,CPY,DLD,DZ,PRT

272. Timchalk, C.; Busby, A.; Campbell, J. A.; Needham, L. L., and Barr, D. B. Comparative Pharmacokinetics of the Organophosphorus Insecticide Chlorpyrifos and Its Major Metabolites Diethylphosphate, Diethylthiophosphate and 3,5,6-Trichloro-2-Pyridinol in the Rat. ACCORAL; 2007; 237, 145-157.   
Rec #: 710  
Call Number: NO CONTROL (CPY,DZ,TCF,TCP)  
Notes: EcoReference No.: 93298  
Chemical of Concern: CPY,DZ,TCF,TCP

273. Tomberlin, J. K.; Richman, D., and Myers, H. M. Susceptibility of Alphitobius diaperinus (Coleoptera: Tenebrionidae) from Broiler Facilities in Texas to Four Insecticides. MOR . jktomberlin@ag.tamu.edu//Department of Entomology, Texas A&M University, TAMU 2475, College Station, TX 77843-2475////: ENV; 2008; 101, (2): 480-483.   
Rec #: 1830  
Call Number: LITE EVAL CODED (BFT,CYF,PMR), NO EFFECT (CPY),TARGET2012 (BFT,CYF)  
Notes: EcoReference No.: 117717  
Chemical of Concern: BFT,CPY,CYF,PMR

274. Traas, T. P.; Janse, J. H.; Van den Brink, P. J.; Brock, T. C. M., and Aldenberg, T. A Freshwater Food Web Model for the Combined Effects of Nutrients and Insecticide Stress and Subsequent Recovery. MOR,POP. tp.traas@rivm.nl//: AQUA; 2004; 23, (2): 521-529.   
Rec #: 460  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 108711  
Chemical of Concern: CPY

275. Tripathi, S. and Srivastav, A. K. Liver Profile of Rats After Long-Term Ingestion of Different Doses of Chlorpyrifos. CELORAL; 2010; 97, (1): 60-65.   
Rec #: 390  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 160405  
Chemical of Concern: CPY

276. Tripp, J. M.; Suiter, D. R.; Bennett, G. W.; Klotz, J. H., and Reid, B. L. Evaluation of Control Measures for Black Carpenter Ant (Hymenoptera: Formicidae). BEH,MORENV; 2000; 93, (5): 1493-1497.   
Rec #: 1090  
Call Number: NO CONTROL (BRA,CPY,CYF,PPX)  
Notes: EcoReference No.: 110914  
Chemical of Concern: BRA,CPY,CYF,PPX

277. Tuna, B. G.; Ozturk, N.; Comelekoglu, U., and Yilmaz, B. C. Effects of Organophosphate Insecticides on Mechanical Properties of Rat Aorta. PHY. [Comelekoglu, U] Mersin Univ, Fac Med, Dept Biophys, TR-33169 Mersin, Turkey//: INJECT; 2011; 60, (1): 39-46.   
Rec #: 2820  
Call Number: NO EXP TYPE (CPY,DDVP)  
Notes: EcoReference No.: 160368  
Chemical of Concern: CPY,DDVP

278. Turgeman, G.; Pinkas, A.; Slotkin, T. A.; Tfilin, M.; Langford, R., and Yanai, J. Reversal of Chlorpyrifos Neurobehavioral Teratogenicity in Mice by Allographic Transplantation of Adult Subventricular Zone-Derived Neural Stem Cells. BEH,CEL. Department of Molecular Biology, Ariel University Center of Samaria, Ariel, Israel.//: INJECT; 2011; 89, (8): 1185-1193.   
Rec #: 2900  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 159939  
Chemical of Concern: CPY

279. Uggini, G. K.; Patel, P. V., and Balakrishnan, S. Embryotoxic and Teratogenic Effects of Pesticides in Chick Embryos: A Comparative Study Using Two Commercial Formulations. GRO,MOR,REP. [Uggini, GK; Patel, PV; Balakrishnan, S] Maharaja Sayajirao Univ Baroda, Fac Sci, Dept Zool, Baroda 390002, Gujarat, India//: ENV; 2012; 27, (3): 166-174.   
Rec #: 2580  
Call Number: NO MIXTURE (CPY,CYP)  
Notes: EcoReference No.: 160411  
Chemical of Concern: CPY,CYP,SS

280. Van Steenwyk, R. A.; Hendricks, L. C.; Barclay, L. W., and Younce, E. L. Borer Control in Young Almond Trees. POPENV,MIXTURE; 1986; 40, (3/4): 10-11.   
Rec #: 400  
Call Number: NO MIXTURE (CPY,DZ,ES,MDT,PMR), TARGET (CBL,ES,MDT,PMR)  
Notes: EcoReference No.: 121454  
Chemical of Concern: CBL,CPY,DZ,ES,MDT,PMR

281. Van Steenwyk, R. A. and Nomoto, R. M. Insect and Mite Control on Walnuts, 1996. POPENV,MIXTURE; 1997; 22, 80-81 (24D).   
Rec #: 2570  
Call Number: LITE EVAL CODED (BFT), NO MIXTURE (AZ,CPY,PSM,TUZ)  
Notes: EcoReference No.: 156756  
Chemical of Concern: AZ,BFT,CPY,PSM,PYX,TUZ

282. Van Steenwyk, R. A.; Nomoto, R. M., and Coates, W. W. Codling Moth Control in Walnuts, 1998. PHY,POPSOIL,ENV,MIXTURE; 1999; 24, 95-96 (D17).   
Rec #: 680  
Call Number: LITE EVAL CODED (BFT), NO MIXTURE (CPY,DFZ,FYC,PSM,TUZ)  
Notes: EcoReference No.: 110769  
Chemical of Concern: BFT,CPY,DFZ,FYC,PSM,PYX,SS,TUZ

283. Vatandoost, H.; Oshaghi, M. A.; Abaie, M. R.; Shahi, M.; Yaaghoobi, F.; Baghaii, M.; Hanafi-Bojd, A. A.; Zamani, G., and Townson, H. Bionomics of Anopheles stephensi Liston in the Malarious Area of Hormozgan Province, Southern Iran, 2002. MOR,POPAQUA,ENV; 2006; 97, (2): 196-203.   
Rec #: 580  
Call Number: NO ENDPOINT (CPY,CYF,DM,FNT,MLN,PMR,PPX,TMP)  
Notes: EcoReference No.: 111743  
Chemical of Concern: BDC,CPY,CYF,DDT,DLD,DM,FNT,MLN,PMR,PPX,TMP

284. Vekaria, M. V. and Vyas, H. N. Studies on Ovicidal Toxicity of Certain Insecticides Against the Eggs of Heliothis armigera Hubner. MORENV; 1985; 19, (10): 43-44.   
Rec #: 410  
Call Number: NO ENDPOINT (CPY,CYP,ES,FNV,PMR), PESTS (ES,FNV,PMR), TARGET2012 (CYP)  
Notes: EcoReference No.: 154423  
Chemical of Concern: CPY,CYP,ES,FNV,PHSL,PMR

285. Venerosi, A.; Cutuli, D.; Colonnello, V.; Cardona, D.; Ricceri, L., and Calamandrei, G. Neonatal Exposure to Chlorpyrifos Affects Maternal Responses and Maternal Aggression of Female Mice in Adulthood. BEH. Department of Cell Biology and Neuroscience, Istituto Superiore di Sanita, Viale Regina Elena 299, 00161, Roma, Italy, Elsevier Science, Box 882 New York NY 10159 USA, [mailto:usinfo-f@elsevier.com]//: INJECT; 2008; 30, (6): 468-474.   
Rec #: 2950  
Call Number: NO EXP TYPE (CPY)  
Notes: EcoReference No.: 160363  
Chemical of Concern: CPY

286. Vernon, J. D. R. and Gould, H. J. Further Trials on Alternatives to DDT for the Control of Pre-Blossom Pests on Apple and Pear. PHY,POPSOIL,ENV; 1972; 21, (1): 1-9.   
Rec #: 1210  
Call Number: NO ENDPOINT (AZ,CBL,DDVP,FNT,MDT,PIRM,PSM,TCF,TCP)  
Notes: EcoReference No.: 108652  
Chemical of Concern: AZ,CBL,DDT,DDVP,FNT,MDT,PHSL,PIRM,PSM,TCF,TCP

287. Vernon, R. S.; Van Herk, W.; Tolman, J.; Saavedra, H. O.; Clodius, M., and Gage, B. Transitional Sublethal and Lethal Effects of Insecticides After Dermal Exposures to Five Economic Species of Wireworms (Coleoptera: Elateridae). BEH,MOR. vernonbs@agr.gc.ca//: ENV; 2008; 101, (2): 365-374.   
Rec #: 2060  
Call Number: NO ENDPOINT (CPY,FPN,IMC), TARGET2012 (FPN,IMC)  
Notes: EcoReference No.: 108455  
Chemical of Concern: CPY,CTD,FPN,HCCH,IMC,PPCP,TFT

288. Vijayakumar, M.; Veeraiah, K.; Rao, D. K., and Rao, N. G. Effect of Chlorpyrifos on Oxygen Consumption and Histopathological Changes of Indian Major Carps. CEL,PHYAQUA; 2009; 19, (5): 423-432.   
Rec #: 2160  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 159870  
Chemical of Concern: CPY

289. Vinuela, A. ; Snoek, L. B.; Riksen, J. A. G., and Kammenga, J. E. Gene Expression Modifications by Temperature-Toxicants Interactions in Caenorhabditis elegans. CEL. Laboratory of Nematology, Wageningen University, Wageningen, The Netherlands.//: ENV,MIXTURE; 2011; 6, (9): 1-11.   
Rec #: 3220  
Call Number: NO CONTROL (CPY,DZ)  
Notes: EcoReference No.: 160323  
Chemical of Concern: CPY,DZ

290. Virag, D.; Naar, Z., and Kiss, A. Microbial Toxicity of Pesticide Derivatives Produced with UV-Photodegradation. POP. Department of Biochemistry and Molecular Biology, Eszterházy Károly College, Leanyka str. 6, Eger, 3300, Hungary. viragdia@ektf.hu//: ENV; 2007; 79, (3): 356-359.   
Rec #: 3160  
Call Number: NO CONTROL (CBD,CPY,EPTC,SZ), NO ENDPOINT (CBD,CPY,EPTC,SZ), TARGET2012 (CBD)  
Notes: EcoReference No.: 160346  
Chemical of Concern: ACO,CBD,CPY,EPTC,SZ

291. Walgenbach, J. F. and Palmer, C. R. Apple Insect Control, 1998. POPENV,MIXTURE; 1999; 24 , 30-34 (A30).   
Rec #: 560  
Call Number: NO MIXTURE (AZ,CPY,DMT,DZ,EFV,ES,IMC,MP,PSM,TUZ), PESTS (EFV,ES), TARGET2012 (AZ,DZ,EFV,ES,IMC,LCYT,MP,PSM,TUZ)  
Notes: EcoReference No.: 88276  
Chemical of Concern: AZ,CPY,DMT,DZ,EFV,ES,IMC,LCYT,MP,PSM,TUZ

292. Wang, C.; Lu, G.; Cui, J., and Wang, P. Sublethal Effects of Pesticide Mixtures on Selected Biomarkers of Carassius auratus. BCM,MOR. ghlu@hhu.edu.cn//: AQUA,MIXTURE; 2009; 28, (3): 414-419.   
Rec #: 420  
Call Number: LITE EVAL CODED (ETHN,PPX), NO CONTROL (CPY)  
Notes: EcoReference No.: 157814  
Chemical of Concern: CPY,ETHN,PPX

293. Wang, C.; Zhou, Q.; Zhang, L.; Zhang, Y.; Xiao, E., and Wu, Z. Variation Characteristics of Chlorpyrifos in Nonsterile Wetland Plant Hydroponic System. ACC. qhzhou@ihb.ac.cn//State Key Laboratory of Freshwater Ecology and Biotechnology, Institute of Hydrobiology, Chinese Academy of Sciences, Wuhan, 430072, China. EMAIL: qhzhou@ihb.ac.cn; wuzb@ihb.ac.cn//: SOIL,ENV; 2013; 15, (6): 550-560.   
Rec #: 2730  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 159991  
Chemical of Concern: CPY

294. Wang, D.; Qiu, X.; Ren, X.; Niu, F., and Wang, K. Resistance Selection and Biochemical Characterization of Spinosad Resistance in Helicoverpa armigera (Hubner) (Lepidoptera: Noctuidae). BCM,MORMIXTURE,TOP; 2009; 95, (2): 90-94.   
Rec #: 1720  
Call Number: NO CONTROL (CFP,CPY,FNV,MOM,PPB), NO MIXTURE (PPB), PESTS (FNV,MOM), TARGET2012 (CFP)  
Notes: EcoReference No.: 119764  
Chemical of Concern: AV,CFP,CPY,FNV,MOM,PPB,SS

295. Wang, L.; Lu, D.; Wang, J.; Du, D.; Zou, Z.; Wang, H.; Smith, J. N.; Timchalk, C.; Liu, F., and Lin, Y. A Novel Immunochromatographic Electrochemical Biosensor for Highly Sensitive and Selective Detection of Trichloropyridinol, a Biomarker of Exposure to Chlorpyrifos. BCM. Key Laboratory of Monitoring and Management of Crop Diseases and Pest Insects, Ministry of Agriculture, Department of Plant Pathology, College of Plant Protection, Nanjing Agricultural University, Nanjing 210095, China. Elsevier Advanced Technology, 660 White Plains Rd. Tarrytown NY 10591-5153 USA//: INJECT; 2011; 26, (6): 2835-2840.   
Rec #: 3030  
Call Number: NO ENDPOINT (CPYO), NO EXP TYPE (CPYO)  
Notes: EcoReference No.: 160167  
Chemical of Concern: CPYO

296. Watschke, T. L. and Duich, J. M. Control of Crabgrass in Kentucky Bluegrass and Red Fescue Turf Using Preemergence Herbicides. PHY,POP. Dep. Agron.,Pennsylvania State Univ.,University Park,PA////: SOIL,ENV,MIXTURE; 1978; 32, 303-307.   
Rec #: 430  
Call Number: NO CONTROL (BS,CPY,DCPA,PDM), NO ENDPOINT (BS,CPY,DCPA,PDM), NO MIXTURE (CPY)  
Notes: EcoReference No.: 154427  
Chemical of Concern: BFL,BS,BTL,CPY,DCPA,PDM

297. Webb, D. R. and Eckenrode, C. J. Pesticide Evaluations to Selected Insect Pest of Beans, 1990. POPENV,MIXTURE; 1991; 16, 54-55 (5E).   
Rec #: 1590  
Call Number: NO CONTROL (ACP,CPY,Captan,EFV), NO ENDPOINT (ACP,CPY,Captan,EFV), PESTS MANUAL (ACP,EFV), TARGET MANUAL (ACP,EFV)  
Notes: EcoReference No.: 91149  
Chemical of Concern: ACP,CPY,Captan,EFV

298. Webb, D. R.; Hessney, M. L., and Eckenrode, C. J. Onion, Maggot Control, 1991. POPSOIL,ENV; 1992; 17, 119-120 (60E).   
Rec #: 1510  
Call Number: NO ENDPOINT (CPY,CYR)  
Notes: EcoReference No.: 97489  
Chemical of Concern: CPY,CYR

299. Wedberg, J. and Jensen, B. Use of Unlabeled Insecticides for Control of Alfalfa Insects in Wisconsin, 1990. PHY,POPSOIL,ENV; 1991; 16, 140-141 (26F).   
Rec #: 2510  
Call Number: NO ENDPOINT (BFT,CPY,EFV,FVL,LCYT,PMR), TARGET MANUAL (FVL)  
Notes: EcoReference No.: 156751  
Chemical of Concern: BFT,CPY,EFV,FVL,LCYT,PMR

300. Werner, I.; Deanovic, L. A.; Connor, V.; De Vlaming, V.; Bailey, H. C., and Hinton, D. E. Insecticide-Caused Toxicity to Ceriodaphnia dubia (Cladocera) in the Sacramento-San Joaquin River Delta, California, USA. MORAQUA,MIXTURE; 2000; 19, (1): 215-227.   
Rec #: 1310  
Call Number: NO ENDPOINT (CPY), OK (CBF,DZ,MOL,PPB)  
Notes: EcoReference No.: 86597  
Chemical of Concern: CBF,CPY,DZ,MOL,PPB

301. Weston, D. P.; You, J.; Harwood, A. D., and Lydy, M. J. Whole Sediment Toxicity Identification Evaluation Tools for Pyrethroid Insecticides: III. Temperature Manipulation. ACC,MORAQUA; 2009; 28, (1): 173-180.   
Rec #: 2090  
Call Number: NO CONTROL (PMR), NO SEDIMENT CONC (BFT,CPY,EFV,LCYT)  
Notes: EcoReference No.: 115446  
Chemical of Concern: BFT,CPY,CdCl,DDT,EFV,LCYT,PMR

302. Wiktelius, S.; Chiverton, P. A.; Meguenni, H.; Bennaceur, M.; Ghezal, F.; Umeh, E. D. N.; Egwuatu, R. I.; Minja, E.; Makusi, R.; Tukahirwa, E.; Tinzaara, W., and Deedat, Y. Effects of Insecticides on Non-Target Organisms in African Agroecosystems: A Case for Establishing Regional Testing Programs. MOR,PHY,POPSOIL,ENV; 1999; 75, (1/2): 121-131.   
Rec #: 980  
Call Number: LITE EVAL CODED (DM), NO ENDPOINT (CPY), OK (ES)  
Notes: EcoReference No.: 72652  
Chemical of Concern: CPY,DM,ES,HCCH,PPCP

303. Wilson, D. O. Jr.; Mohan, S. K.; Knott, E. A., and Shafil, B. Evaluation of Fungicide Seed Treatments for Shrunken-2 ("Supersweet") Sweet Corn. POPSOIL,TOP; 1993; 77, (4): 348-351.   
Rec #: 1100  
Call Number: LITE EVAL CODED (MLX), NO MIXTURE (CBX,CPY,Captan,IPD,PNB,TCMTB,THM), OK (BMY)  
Notes: EcoReference No.: 111314  
Chemical of Concern: BMY,CBX,CPY,Captan,ILL,IPD,MLX,PNB,TCMTB,THM

304. Winterlin, W. L.; Moilanen, K., and Burgoyne, W. E. Residues of DURSBAN Insecticide Following Mosquito Control Applications. ACCSOIL,AQUA; 1968: 34-37.   
Rec #: 1710  
Call Number: NO ENDPOINT (CPY)  
Notes: EcoReference No.: 67469  
Chemical of Concern: CPY

305. Wolf, C.; Riffel, M.; Weyman, G.; Douglas, M., and Norman, S. Telemetry-Based Field Studies for Assessment of Acute and Short-Term Risk to Birds from Spray Applications of Chlorpyrifos. ACC,BCMENV; 2010; 29, (8): 1795-1803.   
Rec #: 2110  
Call Number: NO CONTROL (CPY), NO ENDPOINT (CPY)  
Notes: EcoReference No.: 159801  
Chemical of Concern: CPY

306. Womeldorf, D. J.; Atkins, E. L., and Gillies, P. A. Honey Bee Hazards Associated with Some Mosquito Abatement Aerial Spray Applications. MORENV; 1974; 21, (9): 51-55.   
Rec #: 1250  
Call Number: NO ENDPOINT (CPY,DDVP,MLN,MP,Naled,PPX,TMP)  
Notes: EcoReference No.: 64152  
Chemical of Concern: CPY,DDVP,EPRN,FNTH,MLN,MP,Naled,PPX,PRN,TMP

307. Wood, E. A. Jr. Insecticidal Control of the Greenbug . MOR,POPENV; 1971; 64, (3): 704-707.   
Rec #: 1290  
Call Number: NO ENDPOINT (ADC,AZ,CBF,CPY,DCTP,DDVP,DMT,DS,DZ,MLN,MP,MVP,Naled,PRT), TARGET (CBF,DCTP,DDVP,DMT,DS,MLN,MP,MVP,Naled,PRT)  
Notes: EcoReference No.: 114908  
Chemical of Concern: ADC,AZ,CBF,CPY,DCTP,DDVP,DEM,DMT,DS,DZ,FNF,FRN,MLN,MP,MVP,Naled,PPHD,PRT

308. Yan, S.; Nan, P.; Cui, F.; Wu, Z., and Qiao, C. Distribution and Dynamics of Esterase Alleles in Culex pipiens Complex in China. CEL,MORAQUA; 2013; 16, (1): 43-48.   
Rec #: 3080  
Call Number: NO CONTROL (DDVP,DM,PMR,PPX,TMT), NO ENDPOINT (DDVP,DM,PMR,PPX,TMT), NO TOX DATA (CPY)  
Notes: EcoReference No.: 159912  
Chemical of Concern: CPY,DDVP,DM,EPRN,PMR,PPX,PRN,TMT

309. Yan, S.; Wu, Z.; Cui, F.; Zhao, Q., and Qiao, C. Dynamics of Esterase Alleles in Culex pipiens Complex Mosquitoes in Beijing. BCM,MORUNK; 2008; 101, (6): 1897-1902.   
Rec #: 900  
Call Number: NO CONTROL (CPY,DDVP,PMR,PPX,TMT)  
Notes: EcoReference No.: 117758  
Chemical of Concern: CPY,DDVP,EPRN,PMR,PPX,PRN,TMT

310. Yang, X. B.; Ying, G. G.; Peng, P. A.; Wang, L.; Zhao, J. L.; Zhang, L. J.; Yuan, P., and He, H. P. Influence of Biochars on Plant Uptake and Dissipation of Two Pesticides in an Agricultural Soil. ACC,GRO. guangguo.ying@gmail.com//Chinese Acad Sci, Guangzhou Inst Geochem, State Key Lab Organ Geochem, Guangzhou 510640, Guangdong, Peoples R China//: SOIL,ENV; 2010; 58, (13): 7915-7921.   
Rec #: 2180  
Call Number: NO CONTROL (CPY,FPN), NO ENDPOINT (CPY,FPN)  
Notes: EcoReference No.: 157975  
Chemical of Concern: CPY,FPN

311. Yen, J. H. Organophosphorus Pesticide Exposure Effects on Neurobehavioral Development of Zebrafish and Characterization of Developmental Switch Between Two Cation-Chloride Cotransporters (Zfnkcc1 and Zfkcc2). BCM,BEH,CEL,MORAQUA; 2012: 166 p. (UMI# 3522122) (Publ in part as 159765).   
Rec #: 3010  
Call Number: NO ENDPOINT (CPY,NCTN), NO PUBL AS (DZ)  
Notes: EcoReference No.: 159872  
Chemical of Concern: CPY,DZ,EPRN,NCTN,PRN

312. Yoshida, K. and Nishiuchi, Y. Toxicity of Pesticides to Some Water Organisms. MOR. Bulletin of the Agricultural Chemicals Inspection Station (Japan) (Noyaku Kensasho Hokoku)////: AQUA; 1972; 12, 122-128(JPN) (ENG TRANSL).   
Rec #: 2010  
Call Number: NO CONTROL (As,BMC,BS,CBL,CPY,CTN,Captan,Cu,DCPA,DDVP,DMB,DMDP,DMT,DU,EPTC,ES,FNT,LNR,MCA,MCPB,MCPP1,MDT,MLN,MOM,MP,MTAS,NCTN,NaPCP,Naled,PCP,PCZ,PHMD,PMT,PNB,PPCP,PPCP2011,PPN,PPX,PPZ,PSM,PYZ,QOC,SFL,STRP,SZ,TBC,TFN,THM,Zn,Zn element)  
Notes: EcoReference No.: 10258  
Chemical of Concern: 24DXY,3CE,AMTL,AMTR,AND,Ac,As,BMC,BS,CBL,CPA,CPY,CTN,Captan,Cu,DBN,DCPA,DDVP,DLD,DMB,DMDP,DMT,DPA,DSMA,DU,EDB,EDC,EN,EPRN,EPTC,ES,ETN,FLAC,FML,FNT,FNTH,HCCH,HPT,LNR,MCA,MCPANa,MCPB,MCPP1,MDT,MLN,MOM,MP,MTAS,NCTN,NaPCP,Naled,OPHP,PCP,PCZ,PEB,PHMD,PHSL,PMT,PNB,PPCP,PPCP2011,PPN,PPX,PPZ,PRN,PSM,PYN,PYZ,QOC,SFL,STRP,SZ,TBC,TFN,THM,TPE,TPM,TRN,Zn,Zn element

313. Yoshioka, Y.; Mizuno, T.; Ose, Y., and Sato, T. The Estimation for Toxicity of Chemicals on Fish by Physico-Chemical Properties. MOR1986; 15, (2): 195-203 (OECDG).   
Rec #: 1890  
Call Number: NO PUBL AS (BZO,CBL,CPY,CPYM,DDVP,DZ,Folpet,LLA,MLN,PPZ)  
Notes: EcoReference No.: 6600  
Chemical of Concern: 3CE,4CE,4NP,ACY,AN,AND,BZD,BZO,CBL,CF,CHD,CPY,CPYM,CTC,DDT,DDVP,DLD,DZ,EN,EPRN,ETN,Folpet,HCCH,HPT,LLA,MLN,NBZ,NP,NYP,PPCP,PPZ,PRN

314. Young, J. R. Fall Armyworm (Lepidoptera: Noctuidae) Control Through Chemigation: An Update. POPENV,MIXTURE; 1985; 69, (3): 593-598.   
Rec #: 1150  
Call Number: NO CONTROL (CPY), NO DURATION (CBL,MOM), NO ENDPOINT (CPY), NO MIXTURE (CYP,FNV,PMR), TARGET (CBL,CYP,FNV,MOM,PMR)  
Notes: EcoReference No.: 121251  
Chemical of Concern: CBL,CPY,CYP,FNV,MOM,PMR

315. Yu, S. J. Detection and Biochemical Characterization of Insecticide Resistance in Fall Armyworm (Lepidoptera: Noctuidae). MORORAL; 1992; 85, (3): 675-682.   
Rec #: 2710  
Call Number: NO CONTROL (CBL,CPY,CYP,DZ,FNV,FVL,MLN,MOM,MP,PMR,TDC), PESTS (FNV,FVL,MOM,PMR), TARGET2012 (CBL,CYP,DZ,MLN,MP,TDC)  
Notes: EcoReference No.: 159448  
Chemical of Concern: CBL,CPY,CYP,DZ,FNV,FVL,MLN,MOM,MP,PMR,TDC

316. Yu, S. J. and Nguyen, S. N. Detection and Biochemical Characterization of Insecticide Resistance in the Diamondback Moth. MORTOP; 1992; 44, (1): 74-81.   
Rec #: 840  
Call Number: NO CONTROL (CBF,CPY,CYH,CYP,DZ,EFV,ES,FNV,FVL,MLN,MOM,MP,MTM,TPMR), PESTS (EFV,ES,FNV,FVL,MOM,MTM,TPMR), TARGET2012 (CBF,CYH,CYP,DZ,MLN,MP)  
Notes: EcoReference No.: 109566  
Chemical of Concern: CBF,CPY,CYH,CYP,DZ,EFV,ES,FNV,FVL,MLN,MOM,MP,MTM,TPMR

317. Yu, X. Y.; Ying, G. G., and Kookana, R. S. Reduced Plant Uptake of Pesticides with Biochar Additions to Soil. ACC,GROSOIL,ENV; 2009; 76, (5): 665-671.   
Rec #: 440  
Call Number: NO CONTROL (CBF,CPY), NO ENDPOINT (CBF,CPY)  
Notes: EcoReference No.: 150121  
Chemical of Concern: CBF,CPY

318. Yuan, J. and Chambers, H. W. Evaluation of the Role of Boll Weevil Aliesterases in Noncatalytic Detoxication of Four Organophosphorus Insecticides. BCM,MORENV,TOP; 1998; 61, (3): 135-143.   
Rec #: 1130  
Call Number: NO ENDPOINT (TBF), NO IN VITRO (CPYO,MPO), TARGET2012 (MP),LITE EVAL CODED (CPY,CPYM,MP,TBF),  
Notes: EcoReference No.: 64194  
Chemical of Concern: CPY,CPYM,CPYO,EPRN,MP,MPO,PRN,TBF

319. Zenner de Polania, I. Research and Management Strategies for Potato Insect Pests in Colombia. POP. ISBN 978-131-051-0, WORKSHOP ON THE GLOBAL STATUS OF AND PROSPECTS FOR INTEGRATED PEST MANAGEMENT OF ROOT AND TUBER CROPS IN THE TROPICS, IBADAN, NIGERIA, OCTOBER 25-30//: ENV,MIXTURE; 1990: 139-148.   
Rec #: 450  
Call Number: NO ENDPOINT (ACP,ADC,BFT,CBF,CBL,CPY,EP,PRT,TDC)  
Notes: EcoReference No.: 153361  
Chemical of Concern: ACP,ADC,BFT,CBF,CBL,CPY,EP,HCCH,PPCP,PRT,TDC

320. Zhu, K. Y.; Gao, J. R., and Starkey, S. R. Organophosphate Resistance Mediated by Alterations of Acetylcholinesterase in a Resistant Clone of the Greenbug, Schizaphis graminum (Homoptera: Aphididae). BCM,CEL,MORTOP; 2000; 68, (3): 138-147.   
Rec #: 1530  
Call Number: NO CONTROL (CPY,DMT,DS,MP,OMT), TARGET (DMT,DS,MP,OMT)  
Notes: EcoReference No.: 108386  
Chemical of Concern: CPY,DMT,DS,EPRN,MP,OMT,PRN

321. Zhu, K. Y.; Wilde, G. E.; Sloderbeck, P. E.; Buschman, L. L.; Higgins, R. A.; Whitworth, R. J.; Bowling, R. A.; Starkey, S. R., and He, F. Comparative Susceptibility of Western Corn Rootworm (Coleoptera: Chrysomelidae) Adults to Selected Insecticides in Kansas. MORENV; 2005; 98, (6): 2181-2187.   
Rec #: 720  
Call Number: NO CONTROL (BFT,CBL,CPY,CYP,FPN,MLN,MP), TARGET2012 (BFT,CBL,CYP,FPN,MLN,MP)  
Notes: EcoReference No.: 111670  
Chemical of Concern: BFT,CBL,CPY,CYP,FPN,MLN,MP