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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

15PP

OCT 28 1994

MEMORANDUM

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

SUBJECT: Fenamiphos: Revised Dietary Exposure Analysis in
Support of the Reregistration Eligibility Document.

FROM: Jennifer M. Wintersteen *Jennifer M. Wintersteen*
Dietary Risk Evaluation Section
Science Analysis Branch/HED (7509C)

TO: Jane S. Smith, Chemical Manager
Reregistration Section
Chemical Coordination Branch (7505C)

THROUGH: Elizabeth A. Doyle, Section Head *E. A. Doyle*
Dietary Risk Evaluation Section
SAB/Health Effects Division *W. J. Smith*

Action Requested

Provide a revised DRES analysis to estimate the chronic and acute dietary exposure and risk from fenamiphos food uses that are either published or being supported through reregistration. Originally CBRS recommended for new tolerances on poultry and eggs for reregistration. Metabolism data on poultry has been reviewed and there appears to be no need for tolerances on these commodities (C. Olinger personal communication, 10/20/94)

Discussion

Toxicological Endpoint

The chronic analysis used a Reference Dose (RfD) of 0.0001 mg/kg body weight/day, based on a no observed effect level (NOEL) of 0.01 mg/kg bwt/day and an uncertainty factor of 100. The NOEL is based on results of a two-year feeding study in beagle dogs which demonstrated plasma cholinesterase inhibition at the next highest dose.

The HED Carcinogenicity Peer Review Committee classified fenamiphos as a Group E carcinogen (G. Ghali memo, 11/23/93). The same memo notes that there was no evidence to suggest that the chemical was a developmental or reproductive toxicant.

A Toxicology memo indicates that acute cholinesterase inhibition was of concern for fenamiphos (M. Van Gemert memo, 1/14/94). In order to assess the acute dietary risk for fenamiphos a NOEL of 0.5 mg/kg bwt/day for maternal toxicity from the rat developmental study was supplied in the same memo as appropriate for acute dietary assessment.



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Residue Information

Food uses in this analysis include all published tolerances listed in the Tolerance Index System (TIS) and 40 CFR §180.349 and §180.2950. All published tolerances are being supported in reregistration except soybeans and cocoa beans. New values for anticipated residues (ARs) have been prepared by Chemistry Branch-Reregistration Support (CBRS). ARs are listed in Table 1 of a C. Olinger memo, Reregistration of Fenamiphos, 12/20/93. Tolerances exist for feed items such as apple pomace, pineapple bran and raisin waste which result in secondary residues in meat of cattle, goats, horse, poultry, hogs and sheep as well as milk and eggs.

In the Reregistration Eligibility Document (C. Olinger memo, 1/26/94) CBRS recommends for a tolerance reassessment for certain commodities. CBRS recommends for a crop group tolerance for the citrus fruits group at 0.5 ppm and the revocation of established tolerances for grapefruit, lemons, limes, oranges and tangerines of 0.6 ppm. In the analysis the raw agricultural commodities (RACs) kumquat, citron and tangelo were added at 0.5 ppm and the other citrus RAC tolerances were unchanged at 0.6 ppm. CBRS recommends for the revocation of established tolerances on cocoa beans and soybeans since there are no registered uses of fenamiphos on these crops. These RACs were left in the analysis since they are still published tolerances.

CBRS also recommended the tolerance for peanuts should be increased from 0.02 to 1.0 ppm for reregistration. The DRES analysis reflects the higher proposed value. Finally, a food additive tolerance was proposed by the Registrant on pineapple juice at 0.5 ppm. This tolerance has been included in the analysis. No pending tolerances have been included in the revised file.

Percent Crop Treated

Percent crop treated (PCT) information used in the chronic exposure analysis was supplied by the Biological and Economic Analysis Division (BEAD) in an E. Maurer memo dated 5/20/93. In the BEAD memo no known usage was indicated for some commodities and were assumed to be 100% crop treated in the analysis. Bananas and pineapple were included in the list of commodities with no known usage from BEAD. These commodities are often imported and in order to estimate the amount of crop imported the USDA Pesticide Data Program Report of January-June 1992 was used and estimated 100% crop imported for bananas and 36% for pineapple. The DRES analysis assumed that all imports were treated, and thus used 100% and 36% as the percent-crop-treated values for bananas and pineapples respectively.

The DRES chronic analysis represents an overestimation of exposure and risk in that it considers risk not only from the recommended uses through reregistration, but also from uses which have been recommended for by the Chemistry and Toxicology Branches of the Health Effects Division but have not been published in the Federal Register. However, to the extent that it uses Anticipated Residues and percent-crop-treated information, it is not "worst-case". A summary of the residue information used in this analysis is attached as Table 1.

Results

Chronic Exposure

The DRES chronic analysis used tolerance level residues to calculate the Theoretical Maximum Residue Contribution (TMRC) for the overall U.S. population and 22 population subgroups.

Refinements in residue and percent crop treated information were considered in calculating the Anticipated Residue Contribution (ARC) for those same population groups. The ARC is considered the more accurate estimate of dietary exposure. These exposure estimates were then compared to the RfD for fenamiphos to get estimates of chronic dietary risk. Summaries of the TMRCs, ARCs, and their representations as percentages of the RfD are attached as Tables 2, 3a and 3b.

The ARC for the U.S. population from the published uses of fenamiphos being recommended through reregistration is 1.0×10^{-5} mg/kg bwt/day, which represents 10% of the RfD. The proposed tolerances being recommended through reregistration contribute 1.0×10^{-6} mg/kg bwt/day, or 1% of the RfD. If all new commodities proposed in reregistration were published the resulting ARC would be 1.1×10^{-5} mg/kg bwt/day, representing 11% of the RfD for the general U.S. population.

The ARC from published uses for the most highly exposed DRES subgroup, non-nursing infants less than one, is 4.0×10^{-5} mg/kg bwt/day (40% of the RfD). The ARC for new tolerances recommended in reregistration contributes less than 1.0×10^{-6} mg/kg bwt/day (0.02% of the RfD). If all new tolerances were published for fenamiphos, the resulting ARC for non-nursing infants less than one would be 4.0×10^{-5} mg/kg bwt/day, representing 40% of the RfD.

The U.S. population and all the DRES subgroups have ARCs for chronic dietary risk below the RfD when all published and new commodities are considered. No pending commodities were considered in this revised analysis. It appears that chronic dietary risk is minimal for this chemical for published and recommended new tolerances.

Acute Exposure

The DRES detailed acute exposure analysis evaluates individual food consumption as reported by respondents in the USDA 77-78 Nationwide Food Consumption Survey (NFCS) and estimates the distribution of single day exposures through the diet for the U.S. population and certain subgroups. The analysis assumes uniform distribution of fenamiphos in the commodity supply. Since the toxicological effect to which high end exposure is being compared in this analysis is cholinesterase inhibition, all standard DRES subgroups are of concern. The analysis includes the U.S. population-48 states and four subgroups: Infants (<1 year), children (1-6 years), females (13+ years) and males (13+ years).

The Margin of Exposure (MOE) is a measure of how closely the high end exposure comes to the NOEL (the highest dose at which no effects were observed in the laboratory test), and is calculated as the ratio of the NOEL to the exposure ($\text{NOEL/exposure} = \text{MOE}$). For

cholinesterase inhibition, the Agency is not generally concerned unless the MOE is below 100.

Two revised analyses were conducted. One analysis used published tolerances, including soybeans and cocoa beans, with tolerance level residues. Another analysis included only published tolerances being recommended through reregistration, that is, soybeans and cocoa beans were not included in the analysis. The analyses calculated the exposure of the highest exposed individual for the U.S. population in the distribution and compared the exposure to the NOEL of 0.5 mg/kg bwt/day from the rabbit developmental study (M. Van Gemert memo, 1/14/94). The table below provides the calculated MOEs for all five subgroups.

ACUTE ANALYSIS USING ALL PUBLISHED TOLERANCES AT TOLERANCE LEVEL

DRES Subgroup	95-96%ile MOE NOEL/Exposure	99%ile MOE NOEL/Exposure
U.S. pop. -48 states	56	20
Infants (< 1 year)	20	7
Children (1-6 years)	25	10
Females (13+ years)	83	33
Males (13+ years)	100	33

No difference in the calculated MOEs was seen when soybeans and cocoa beans were removed from the acute analysis; therefore, these commodities appear not to be driving the acute analysis.

A table of distribution of exposures used in this analysis is attached as Table 4; this table includes on it the calculation of the MOEs for all five subgroups. This is the first time that acute exposure has been calculated for fenamiphos using the DRES system. The estimates of 95th or 96th percentiles are rough calculations and should be considered estimates only. The calculated high end MOEs are of concern for all five subgroups used in the DRES acute program.

Attachments

cc: DRES, CBRS, Tox II, RD Team 22 (Jim Stone), Caswell #453A

Table 1.

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 453A

DATE: 10/26/94

PAGE: 1

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Fenamidphos (Nemacur) Caswell #453A CAS No. 22224-92-6 A.I. CODE: 100601 CFR No. 180.349 185.2950	1yr feeding - dog NOEL= 0.0100 mg/kg 0.50 ppm LEL= 0.0300 mg/kg 1.00 ppm ONCO: E (RfD/PR Committee)	Plasma ChE inhibition No evidence of oncogenic- ity in rats or mice.	PADI UF -->100 OPP RfD= 0.000100 EPA RfD= 0.000250	Chronic feeding-dog (current study may be up- graded)	HEd complete 03/21/86 EPA verified 12/09/86 WHO last reviewed 1987 HEd complete 07/01/88 RfD/PR reviewed 05/20/93 On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
01006AA	RASPBERRIES	10 RAW-FRESH OR NFS	2E2605	P 0.100000	0.009000	FIELD TRIAL	9.00	0.000810
01006AA	RASPBERRIES	15 RAW-FRESH OR CANNED	2E2605	P 0.100000	0.009000	FIELD TRIAL	9.00	0.000810
01006AA	RASPBERRIES	31 COOKED-FRESH OR CANNED	2E2605	P 0.100000	0.009000	FIELD TRIAL	9.00	0.000810
01006AA	RASPBERRIES	62 COOKED-FRESH OR FROZEN-BAKED	2E2605	P 0.100000	0.009000	FIELD TRIAL	9.00	0.000810
01006AA	RASPBERRIES	70 RAW-FROZEN	2E2605	P 0.100000	0.009000	FIELD TRIAL	9.00	0.000810
01014AA	GRAPES-FRESH	10 RAW-FRESH OR NFS	2E2623	P 0.100000	0.005000	FIELD TRIAL	14.00	0.000700
01014AA	GRAPES-FRESH	21 COOKED-FRESH OR CANNED	2E2623	P 0.100000	0.005000	FIELD TRIAL	14.00	0.000700
01014AA	GRAPES-FRESH	31 COOKED-FRESH OR CANNED	2E2623	P 0.100000	0.005000	FIELD TRIAL	14.00	0.000700
01014AA	GRAPES-RAISINS	10 RAW-FRESH OR NFS	2H5361	P 0.300000	0.005500C	FT/PROCESSING	14.00	0.000770
01014AA	GRAPES-RAISINS	21 COOKED-FRESH OR CANNED	2H5361	P 0.300000	0.005500C	FT/PROCESSING	14.00	0.000770
01014AA	GRAPES-RAISINS	22 COOKED-FRESH-BAKED	2H5361	P 0.300000	0.005500C	FT/PROCESSING	14.00	0.000770
01014AA	GRAPES-JUICE	10 RAW-FRESH OR NFS	2E2623	P 0.100000	0.005000C	FT/PROCESSING	14.00	0.000700
01014AA	GRAPES-JUICE	15 RAW-FRESH OR CANNED	2E2623	P 0.100000	0.005000C	FT/PROCESSING	14.00	0.000700
01014AA	GRAPES-JUICE	21 COOKED-FRESH OR CANNED	2E2623	P 0.100000	0.005000C	FT/PROCESSING	14.00	0.000700
01016AA	STRAWBERRIES	10 RAW-FRESH OR NFS	6E3403	P 0.600000	0.015000	MONITORING DATA	100.00	0.015000
01016AA	STRAWBERRIES	21 COOKED-FRESH OR NFS	6E3403	P 0.600000	0.015000	MONITORING DATA	100.00	0.015000
01016AA	STRAWBERRIES	70 RAW-FROZEN	6E3403	P 0.600000	0.015000	MONITORING DATA	100.00	0.015000
02001AA	CITRUS CITRON	22 COOKED-FRESH-BAKED	REREGIS	N 0.500000	0.500000	FIELD TRIAL	100.00	0.500000
02002AA	GRAPEFRUIT-UNSP	00 NOT SPECIFIED (NO CONSUMPTION)	6F1865	P 0.600000	0.011000	FIELD TRIAL	20.00	0.002200
02002AA	GRAPEFRUIT-UNSP	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.011000	FIELD TRIAL	20.00	0.002200
02002AA	GRAPEFRUIT-PULP	21 COOKED-FRESH OR NFS	6F1865	P 0.600000	0.002000C	FT/PROCESSING	20.00	0.000400
02002AA	GRAPEFRUIT-PULP	15 RAW-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FT/PROCESSING	20.00	0.000400
02002AA	GRAPEFRUIT-JUICE	31 COOKED-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FT/PROCESSING	20.00	0.000400
02003AA	KUMQUATS	10 RAW-FRESH OR NFS	REREGIS	N 0.500000	0.500000	FIELD TRIAL	100.00	0.500000
02004AA	LEMONS-UNSPEC	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.011000	FIELD TRIAL	32.00	0.003520
02004AA	LEMONS-UNSPEC	22 COOKED-FRESH-BAKED	6F1865	P 0.600000	0.011000	FIELD TRIAL	32.00	0.003520
02004AA	LEMONS-PULP	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.011000	FIELD TRIAL	32.00	0.003520
02004AA	LEMONS-PULP	31 COOKED-FRESH OR CANNED	6F1865	P 0.600000	0.011000	FIELD TRIAL	32.00	0.003520
02004AA	LEMONS-PULP	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.109000	FIELD TRIAL	32.00	0.034880
02004AA	LEMONS-PEEL	21 COOKED-FRESH OR NFS	6F1865	P 0.600000	0.109000	FIELD TRIAL	32.00	0.034880
02004AA	LEMONS-PEEL	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.002000C	FIELD TRIAL	32.00	0.000640
02004AA	LEMONS-JUICE	15 RAW-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FIELD TRIAL	32.00	0.000640
02004AA	LEMONS-JUICE	21 COOKED-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FIELD TRIAL	32.00	0.000640
02005AA	LEMONS-UNSPEC	00 NOT SPECIFIED (NO CONSUMPTION)	6F1865	P 0.600000	0.011000	FIELD TRIAL	100.00	0.011000
02005AA	LEMONS-UNSPEC	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.011000	FIELD TRIAL	100.00	0.011000
02005AA	LEMONS-UNSPEC	21 COOKED-FRESH OR NFS	6F1865	P 0.600000	0.109000	FIELD TRIAL	100.00	0.109000
02005AA	LEMONS-UNSPEC	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.002000C	FT/PROCESSING	100.00	0.002000
02005AA	LEMONS-UNSPEC	15 RAW-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FT/PROCESSING	100.00	0.002000
02005AA	LEMONS-UNSPEC	31 COOKED-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FT/PROCESSING	100.00	0.002000

(5)

Table 1.

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 453A

DATE: 10/26/94

PAGE: 2

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Fenamiphos (Nemacur) Caswell #453A CAS No. 22224-92-6 A.I. CODE: 100601 CFR No. 180.349 185.2950	1yr feeding - dog NOEL= 0.0100 mg/kg 0.50 ppm LEL= 0.0300 mg/kg 1.00 ppm ONCO: E (RfD/PR Committee)	Plasma Che inhibition No evidence of oncogenic- ity in rats or mice.	PADI UF -->100 OPP RfD= 0.000100 EPA RfD= 0.000250	Chronic feeding-dog (current study may be up- graded)	HED complete 03/21/86 EPA verified 12/09/86 WHO last reviewed 1987 HED complete 07/01/88 RfD/PR reviewed 05/20/93 On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
02006AA	ORANGES-UNSPEC	00 NOT SPECIFIED (NO CONSUMPTION)	6F1865	P 0.600000	0.011000	FIELD TRIAL	15.00	0.001650
02006AB	ORANGES-PULP	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.011000	FIELD TRIAL	15.00	0.001650
02006AB	ORANGES-PULP	21 COOKED-NFS	6F1865	P 0.600000	0.011000	FIELD TRIAL	15.00	0.001650
02006HA	ORANGES-PEEL	21 COOKED-NFS	6F1865	P 0.600000	0.109000	FIELD TRIAL	15.00	0.016350
02006HA	ORANGES-PEEL	22 COOKED-FRESH-BAKED	6F1865	P 0.600000	0.109000	FIELD TRIAL	15.00	0.016350
02006HA	ORANGES-PEEL	31 COOKED-FRESH OR CANNED	6F1865	P 0.600000	0.109000	FIELD TRIAL	15.00	0.016350
02006JA	ORANGES-JUICE	15 RAW-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FT/PROCESSING	15.00	0.000300
02006JA	ORANGES-JUICE	31 COOKED-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FT/PROCESSING	15.00	0.000300
02007AA	TANGELLOS	10 RAW-FRESH OR NFS	REREGIS	N 0.500000	0.500000	FIELD TRIAL	100.00	0.500000
02008AA	TANGERINES	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.011000	FIELD TRIAL	100.00	0.011000
02008JA	TANGERINE-JUICE	15 RAW-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FT/PROCESSING	100.00	0.002000
04001AA	APPLES-FRESH	10 RAW-FRESH OR NFS	9F2252	P 0.250000	0.005000	FIELD TRIAL	2.00	0.000100
04001AA	APPLES-FRESH	21 COOKED-NFS	9F2252	P 0.250000	0.005000	FIELD TRIAL	2.00	0.000100
04001AA	APPLES-FRESH	31 COOKED-FRESH OR CANNED	9F2252	P 0.250000	0.005000	FIELD TRIAL	2.00	0.000100
04001AA	APPLES-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	9F2252	P 0.250000	0.005000	FIELD TRIAL	2.00	0.000100
04001DA	APPLES-DRIED	10 RAW-FRESH OR NFS	9F2252	P 0.250000	0.005000	FIELD TRIAL	2.00	0.000100
04001DA	APPLES-DRIED	22 COOKED-FRESH-BAKED	9F2252	P 0.250000	0.005000	FIELD TRIAL	2.00	0.000100
04001DA	APPLES-DRIED	62 COOKED-FRESH OR FROZEN-BAKED	9F2252	P 0.250000	0.005000	FIELD TRIAL	2.00	0.000100
04001DA	APPLES-DRIED	15 RAW-FRESH OR CANNED	9F2252	P 0.250000	0.004000C	FT/PROCESSING	2.00	0.000080
04001JA	APPLES-JUICE	31 COOKED-FRESH OR CANNED	9F2252	P 0.250000	0.004000C	FT/PROCESSING	2.00	0.000080
04001JA	APPLES-JUICE	10 RAW-FRESH OR NFS	9F2252	P 0.250000	0.016000	FIELD TRIAL	3.00	0.000480
05002AA	CHERRIES-FRESH	21 COOKED-NFS	9F2252	P 0.250000	0.016000	FIELD TRIAL	3.00	0.000480
05002AA	CHERRIES-FRESH	31 COOKED-FRESH OR CANNED	9F2252	P 0.250000	0.016000	FIELD TRIAL	3.00	0.000480
05002AA	CHERRIES-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	9F2252	P 0.250000	0.016000	FIELD TRIAL	3.00	0.000480
05002DA	CHERRIES-DRIED	00 NOT SPECIFIED (NO CONSUMPTION)	9F2252	P 0.250000	0.016000	FIELD TRIAL	3.00	0.000480
05002JA	CHERRIES-JUICE	15 RAW-FRESH OR CANNED	9F2252	P 0.250000	0.016000	FIELD TRIAL	3.00	0.000480
05002JA	CHERRIES-JUICE	21 COOKED-NFS	9F2252	P 0.250000	0.016000	FIELD TRIAL	3.00	0.000480
05002JA	CHERRIES-JUICE	10 RAW-FRESH OR NFS	9F2252	P 0.250000	0.018000	FIELD TRIAL	1.00	0.000180
05004AA	PEACHES-FRESH	21 COOKED-NFS	9F2252	P 0.250000	0.018000	FIELD TRIAL	1.00	0.000180
05004AA	PEACHES-FRESH	31 COOKED-FRESH OR CANNED	9F2252	P 0.250000	0.018000	FIELD TRIAL	1.00	0.000180
05004AA	PEACHES-FRESH	51 COOKED-FRESH OR CANNED	9F2252	P 0.250000	0.018000	FIELD TRIAL	1.00	0.000180
05004AA	PEACHES-FRESH	10 RAW-FRESH OR NFS	9F2252	P 0.250000	0.018000	FIELD TRIAL	1.00	0.000180
05004DA	PEACHES-DRIED	21 COOKED-NFS	9F2252	P 0.250000	0.018000	FIELD TRIAL	1.00	0.000180
05004DA	PEACHES-DRIED	22 COOKED-FRESH-BAKED	9F2252	P 0.250000	0.007000	FIELD TRIAL	100.00	0.007000
060002AA	BANANAS-UNSPEC	10 RAW-FRESH OR NFS	3F1399	P 0.100000	0.007000	FIELD TRIAL	100.00	0.007000
060002AB	BANANAS-FRESH	21 COOKED-NFS	3F1399	P 0.100000	0.007000	FIELD TRIAL	100.00	0.007000
060002AB	BANANAS-FRESH	31 COOKED-FRESH OR CANNED	3F1399	P 0.100000	0.007000	FIELD TRIAL	100.00	0.007000
060002AB	BANANAS-FRESH	10 RAW-FRESH OR NFS	3F1399	P 0.100000	0.007000	FIELD TRIAL	100.00	0.007000
060002DA	BANANAS-DRIED	21 COOKED-NFS	3F1399	P 0.100000	0.007000	FIELD TRIAL	100.00	0.007000
06013AA	PINEAPPLE-PULP	10 RAW-FRESH OR NFS	6F1864	P 0.300000	0.024000	FIELD TRIAL	36.00	0.008640

6

Table 1.

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 453A

DATE: 10/26/94

PAGE: 3

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Fenamiphos (Nemacur) Caswell #453A CAS No. 22224-92-6 A.I. CODE: 100601 CFR No. 180.349 185.2950	1yr feeding - dog NOEL = 0.0100 mg/kg 0.50 ppm LEL = 0.0300 mg/kg 1.00 ppm ONCO: E (RfD/PR Committee)	Plasma ChE inhibition No evidence of oncogenic- ity in rats or mice.	PADI UF -->100 OPP RfD = 0.000100 EPA RfD = 0.000250	Chronic feeding-dog (current study may be up- graded)	HED complete 03/21/86 EPA verified 12/09/86 WHO last reviewed 1987 HED complete 07/01/88 RfD/PR reviewed 05/20/93 ON IRIS.

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
06013AA	PINEAPPLE-PULP	21 COOKED-NFS	6F1864	P 0.300000	0.024000	FIELD TRIAL	36.00	0.008640
06013AA	PINEAPPLE-PULP	31 COOKED-FRESH OR CANNED	6F1864	P 0.300000	0.024000	FIELD TRIAL	36.00	0.008640
06013DA	PINEAPPLE-DRIED	10 RAW-FRESH OR NFS	6F1864	P 0.300000	0.024000	FIELD TRIAL	36.00	0.008640
06013JA	PINEAPPLE-JUICE	10 RAW-FRESH OR NFS	6F1864	P 0.500000	0.029000C FT/PROCESSING		36.00	0.010440
06013JA	PINEAPPLE-JUICE	15 RAW-FRESH OR CANNED	6F1864	P 0.500000	0.029000C FT/PROCESSING		36.00	0.010440
06013JA	PINEAPPLE-JUICE	21 COOKED-NFS	6F1864	P 0.500000	0.029000C FT/PROCESSING		36.00	0.010440
06013JA	PINEAPPLE-JUICE	31 COOKED-FRESH OR CANNED	6F1864	P 0.500000	0.029000C FT/PROCESSING		36.00	0.010440
06016AA	PLANTAINS	21 COOKED-NFS	3F1399	P 0.100000	0.007000	FIELD TRIAL	100.00	0.007000
06016AA	PLANTAINS	23 COOKED-FRESH-BOILED	3F1399	P 0.100000	0.007000	FIELD TRIAL	100.00	0.007000
06016AA	PLANTAINS	25 COOKED-FRESH-FRIED	3F1399	P 0.100000	0.007000	FIELD TRIAL	100.00	0.007000
06018AA	KIWI	10 RAW-FRESH OR NFS	8E3585	P 0.100000	0.035000	FIELD TRIAL	14.00	0.004620
07001FA	COCOA BUTTER	21 COOKED-NFS	2E2691	P 0.020000	0.020000		100.00	0.020000
07001SA	CHOCOLATE	10 RAW-FRESH OR NFS	2E2691	P 0.020000	0.020000		100.00	0.020000
07001SA	CHOCOLATE	21 COOKED-NFS	2E2691	P 0.020000	0.020000		100.00	0.020000
07001SA	CHOCOLATE	22 COOKED-FRESH-BAKED	2E2691	P 0.020000	0.020000		100.00	0.020000
11001AA	EGGPLANT	10 RAW-FRESH OR NFS	8E3650	P 0.100000	0.008000	FIELD TRIAL	100.00	0.008000
11001AA	EGGPLANT	21 COOKED-NFS	8E3650	P 0.100000	0.008000	FIELD TRIAL	100.00	0.008000
11001AA	EGGPLANT	25 COOKED-FRESH-FRIED	8E3650	P 0.100000	0.008000	FIELD TRIAL	100.00	0.008000
11003AB	CHILI PEPPERS	00 NOT SPECIFIED (NO CONSUMPTION)	7E3559	P 0.600000	0.034000	FIELD TRIAL	100.00	0.034000
11003AD	PEPPERS-OTHER	10 RAW-FRESH OR NFS	7E3559	P 0.600000	0.034000	FIELD TRIAL	100.00	0.034000
11003AD	PEPPERS-OTHER	21 COOKED-NFS	7E3559	P 0.600000	0.034000	FIELD TRIAL	100.00	0.034000
11003AD	PEPPERS-OTHER	51 COOKED-CANNED	7E3559	P 0.600000	0.034000	FIELD TRIAL	100.00	0.034000
11004AA	PIMIENTOS	10 RAW-FRESH OR NFS	7E3559	P 0.600000	0.034000	FIELD TRIAL	100.00	0.034000
11004AA	PIMIENTOS	21 COOKED-NFS	7E3559	P 0.600000	0.034000	FIELD TRIAL	100.00	0.034000
13001AA	BEETS-TOPS	31 COOKED-FRESH OR CANNED	8E3651	P 1.000000	0.180000	FIELD TRIAL	100.00	0.180000
13001AA	BEETS-TOPS	31 COOKED-FRESH OR CANNED	8E3651	P 1.000000	0.180000	FIELD TRIAL	100.00	0.180000
13001AA	BEETS-TOPS	63 COOKED-FRESH OR FROZEN-BOILED	8E3651	P 1.000000	0.180000	FIELD TRIAL	100.00	0.180000
13006AA	BRUSSEL SPROUTS	21 COOKED-NFS	3F1399	P 0.100000	0.017000	FIELD TRIAL	1.00	0.000170
13006AA	BRUSSEL SPROUTS	23 COOKED-FRESH-BOILED	3F1399	P 0.100000	0.017000	FIELD TRIAL	1.00	0.000170
13007AA	CABBAGE	10 RAW-FRESH OR NFS	3F1399	P 0.100000	0.014000	FIELD TRIAL	1.00	0.000140
13007AA	CABBAGE	11 RAW-FRESH-PICKLED, CORNED, OR CURED	3F1399	P 0.100000	0.014000	FIELD TRIAL	1.00	0.000140
13007AA	CABBAGE	21 COOKED-NFS	3F1399	P 0.100000	0.014000	FIELD TRIAL	1.00	0.000140
13010AA	CABBAGE-CHINESE	10 RAW-FRESH OR NFS	3F1399	P 0.100000	0.023000	FIELD TRIAL	11.00	0.025300
13010AA	CABBAGE-CHINESE	10 RAW-FRESH OR NFS	3F1399	P 0.100000	0.023000	FIELD TRIAL	11.00	0.025300
13010AA	CABBAGE-CHINESE	21 COOKED-NFS	3F1399	P 0.100000	0.023000	FIELD TRIAL	11.00	0.025300
13010AA	CABBAGE-CHINESE	21 COOKED-NFS	3F1399	P 0.100000	0.023000	FIELD TRIAL	11.00	0.025300
14001AA	BEETS-ROOTS	10 RAW-FRESH OR NFS	8E3651	P 1.500000	0.130000	FIELD TRIAL	100.00	0.130000
14001AA	BEETS-ROOTS	21 COOKED-NFS	8E3651	P 1.500000	0.130000	FIELD TRIAL	100.00	0.130000
14001AA	BEETS-ROOTS	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	8E3651	P 1.500000	0.130000	FIELD TRIAL	100.00	0.130000
14001AA	BEETS-ROOTS	31 COOKED-FRESH OR CANNED	8E3651	P 1.500000	0.130000	FIELD TRIAL	100.00	0.130000

7

Table 1.

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 453A

DATE: 10/26/94

PAGE: 4

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			PADI	UF -->100		
Fenamiphos (Nemacur) Caswell #453A CAS No. 22224-92-6 A.I. CODE: 100601 CFR No. 18U.49 185.2950	1yr feeding - dog NOEL= 0.0100 mg/kg 0.50 ppm LEL= 0.0300 mg/kg 1.00 ppm	Plasma Che inhibition No evidence of oncogenic- ity in rats or mice.	OPR RfD = 0.000100 EPA RfD = 0.000250		Chronic feeding-dog (current study may be up- graded)	HED complete 03/21/86 EPA verified 12/09/86 WHO last reviewed 1987 HED complete 07/01/88 RfD/PR reviewed 05/20/93 On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
14007AA	GARLIC	10 RAW-FRESH OR NFS	2E2691	P 0.500000	0.028000	FIELD TRIAL	100.00	0.028000
14007AA	GARLIC	21 COOKED-NFS	2E2691	P 0.500000	0.028000	FIELD TRIAL	100.00	0.028000
14007AA	GARLIC	32 COOKED-FRESH OR CANNED-BAKED	2E2691	P 0.500000	0.028000	FIELD TRIAL	100.00	0.028000
15006AA	PEANUTS-WHOLE	10 RAW-FRESH OR NFS	3F1399	P 0.020000	0.042000	FIELD TRIAL	2.00	0.000840
15006AA	PEANUTS-WHOLE	21 COOKED-NFS	3F1399	P 0.020000	0.042000	FIELD TRIAL	2.00	0.000840
15006AA	PEANUTS-WHOLE	21 COOKED-NFS	3F1399	P 0.020000	0.042000	FIELD TRIAL	2.00	0.000840
15006AA	PEANUTS-WHOLE	22 COOKED-FRESH-BAKED	3F1399	P 0.020000	0.042000	FIELD TRIAL	2.00	0.000840
15006AA	PEANUTS-WHOLE	22 COOKED-FRESH-BAKED	3F1399	P 0.020000	0.042000	FIELD TRIAL	2.00	0.000840
15015AA	OKRA	21 COOKED-NFS	2E2724	P 0.300000	0.047000	FIELD TRIAL	100.00	0.047000
15015AA	OKRA	25 COOKED-FRESH-FRIED	2E2724	P 0.300000	0.047000	FIELD TRIAL	100.00	0.047000
15029AA	SOYBEAN-SPROUTED	00 NOT SPECIFIED (NO CONSUMPTION)	3F1399	P 0.050000	0.050000	FIELD TRIAL	100.00	0.000500
16002AA	ASPARAGUS	21 COOKED-NFS	3E2913	P 0.020000	0.005000	FIELD TRIAL	100.00	0.005000
16002AA	ASPARAGUS	23 COOKED-FRESH-BOILED	3E2913	P 0.020000	0.005000	FIELD TRIAL	100.00	0.005000
27003AA	COTTONSEED-OIL	18 PROCESSED OIL	3F1399	P 0.050000	0.009000C	FT/PROCESSING	1.00	0.000090
27003AA	COTTONSEED-OIL	18 PROCESSED OIL	3F1399	P 0.050000	0.005000	FT/PROCESSING	1.00	0.000420
27007AA	PEANUTS-OIL	18 PROCESSED OIL	3F1399	P 0.020000	0.021000	FT/PROCESSING	2.00	0.000420
27010AA	PEANUTS-OIL	18 PROCESSED OIL	3F1399	P 0.050000	0.050000	FT/PROCESSING	1.00	0.000500
28023AA	SOYBEANS-UNSPEC	21 COOKED-NFS	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOYBEANS-UNSPEC	10 RAW-FRESH OR NFS	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOYBEANS-UNSPEC	21 COOKED-NFS	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOYBEANS-UNSPEC	23 COOKED-FRESH-BOILED	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOYBEANS-UNSPEC	25 COOKED-FRESH-FRIED	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOYBEANS-UNSPEC	31 COOKED-FRESH OR CANNED	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOY-FL, FULL FAT	21 COOKED-NFS	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOY-FL, FULL FAT	22 COOKED-FRESH-BAKED	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOY-FL, FULL FAT	31 COOKED-FRESH OR CANNED	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOY-FL, LOW FAT	21 COOKED-NFS	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOY-FL, LOW FAT	22 COOKED-FRESH-BAKED	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOY-FL, LOW FAT	31 COOKED-FRESH OR CANNED	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOY-FL, DEFAT	10 RAW-FRESH OR NFS	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOY-FL, DEFAT	21 COOKED-NFS	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOY-FL, DEFAT	22 COOKED-FRESH-BAKED	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOY-FL, DEFAT	31 COOKED-FRESH OR CANNED	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
28023AA	SOY-FL, DEFAT	53 COOKED-CANNED-BOILED	3F1399	P 0.050000	0.050000	FIELD TRIAL	1.00	0.000500
43058AA	WINE AND SHERRY	10 RAW-FRESH OR NFS	9F2252	P 0.100000	0.005000C	FT/PROCESSING	14.00	0.000700
43058AA	WINE AND SHERRY	21 COOKED-NFS	9F2252	P 0.100000	0.000012	FEEDING STUDY	100.00	0.000012
500000B	MILK-NON-FAT SOL	10 RAW-FRESH OR NFS	9F2252	P 0.010000	0.000012	FEEDING STUDY	100.00	0.000012
500000B	MILK-NON-FAT SOL	21 COOKED-NFS	9F2252	P 0.010000	0.000012	FEEDING STUDY	100.00	0.000012
500000B	MILK-NON-FAT SOL	51 COOKED-CANNED	9F2252	P 0.010000	0.000012	FEEDING STUDY	100.00	0.000012
50000FA	MILK-FAT SOLIDS	10 RAW-FRESH OR NFS	9F2252	P 0.010000	0.000012	FEEDING STUDY	100.00	0.000012

8

Table 1.

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 453A

DATE: 10/26/94

PAGE: 5

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Fenamiphos (Nemacur) Caswell #453A CAS No. 22224-92-6 A.I. CODE: 100601 CFR No. 180.349 185.2950	1yr feeding - dog NOEL = 0.0100 mg/kg 0.50 ppm LEL = 0.0300 mg/kg 1.00 ppm ONCO: E (RfD/PR Committee)	Plasma ChE inhibition No evidence of oncogenic- ity in rats or mice.	PADI UF -->100 OPP RfD = 0.000100 EPA RfD = 0.000250	Chronic feeding-dog (current study may be up- graded)	HED complete 03/21/86 EPA verified 12/09/86 WHO last reviewed 1987 HED complete 07/01/88 RfD/PR reviewed 05/20/93 On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
50000FA	MILK-FAT SOLIDS	21 COOKED-NFS	9F2252	P 0.010000	0.000012	FEEDING STUDY	100.00	0.000012
50000FA	MILK-FAT SOLIDS	51 COOKED-CANNED	9F2252	P 0.010000	0.000012	FEEDING STUDY	100.00	0.000012
50000SA	MILK SUG (LACT)	21 COOKED-NFS	9F2252	P 0.010000	0.000012	FEEDING STUDY	100.00	0.000012
50000SA	MILK SUG (LACT)	51 COOKED-CANNED	9F2252	P 0.010000	0.000012	FEEDING STUDY	100.00	0.000012
53001BA	BEEF-MEAT BYP	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001BA	BEEF-MEAT BYP	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001BA	BEEF-OTH ORGAN	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001BA	BEEF-OTH ORGAN	51 COOKED-CANNED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001BA	BEEF-DRIED	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001FA	BEEF-FAT	10 RAW-FRESH OR NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001FA	BEEF-FAT	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001FA	BEEF-FAT	22 COOKED-FRESH-BAKED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001FA	BEEF-FAT	23 COOKED-FRESH-BOILED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001FA	BEEF-FAT	24 COOKED-FRESH-BROILED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001FA	BEEF-FAT	25 COOKED-FRESH-FRIED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001FA	BEEF-FAT	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001KA	BEEF-KIDNEY	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001LA	BEEF-LIVER	25 COOKED-FRESH-FRIED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001LA	BEEF-LIVER	31 COOKED-FRESH OR CANNED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001LA	BEEF-LIVER	10 RAW-FRESH OR NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001MA	BEEF-LEAN	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001MA	BEEF-LEAN	22 COOKED-FRESH-BAKED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001MA	BEEF-LEAN	23 COOKED-FRESH-BOILED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001MA	BEEF-LEAN	24 COOKED-FRESH-BROILED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001MA	BEEF-LEAN	00 NOT SPECIFIED (NO CONSUMPTION)	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53002BA	GOAT-OTH ORGAN	25 COOKED-FRESH-BOILED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53002FA	GOAT-FAT	25 COOKED-FRESH-FRIED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53002FA	GOAT-FAT	00 NOT SPECIFIED (NO CONSUMPTION)	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53002LA	GOAT-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53002LA	GOAT-LIVER	23 COOKED-FRESH-BOILED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53002MA	GOAT-LEAN	25 COOKED-FRESH-BOILED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53002MA	GOAT-LEAN	00 NOT SPECIFIED (NO CONSUMPTION)	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53003AA	HORSE	00 NOT SPECIFIED (NO CONSUMPTION)	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53003BA	SHEEP-MEAT BYP	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53003BA	SHEEP-OTH ORGAN	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53003FA	SHEEP-FAT	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53003LA	SHEEP-KIDNEY	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53003MA	SHEEP-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53003MA	SHEEP-LEAN	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53003MA	SHEEP-LEAN	31 COOKED-FRESH OR CANNED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53006BA	PORK-MEAT BYP	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53006BA	PORK-OTH ORGAN	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120

9

Table 1.

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 453A

DATE: 10/26/94

PAGE: 6

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS		
			PADI	UF				
Fenamiphos (Nemacur) Caswell #453A CAS No. 22224-92-6 A.I. CODE: 100601 CFR No. 180.349 185.2950	1yr feeding - dog NOEL= 0.0100 mg/kg 0.50 ppm LEL= 0.0300 mg/kg 1.00 ppm ONCO: E (RfD/PR Committee)	Plasma ChE inhibition No evidence of oncogenic- ity in rats or mice.	OPR RfD= 0.000100 EPA RfD= 0.000250	-->100	Chronic feeding-dog (current study may be up- graded)	HED complete 03/21/86 EPA verified 12/09/86 WHO last reviewed 1987 HED complete 07/01/88 RfD/PR reviewed 05/20/93 On IRIS.		
FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
530068B	PORK-OTH ORGAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53006FA	PORK-FAT	10 RAW-FRESH OR NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53006FA	PORK-FAT	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53006FA	PORK-FAT	23 COOKED-FRESH-BOILED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53006FA	PORK-FAT	25 COOKED-FRESH-FRIED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53006FA	PORK-FAT	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53006KA	PORK-KIDNEY	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53006LA	PORK-LIVER	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53006LA	PORK-LIVER	25 COOKED-FRESH-FRIED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53006MA	PORK-LEAN	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53006MA	PORK-LEAN	25 COOKED-FRESH-FRIED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53006MA	PORK-LEAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120

10

Table 2.

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 10/26/94

PAGE: 1

CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			PADI	UF		
Fenamiphos (Nemacur) Caswell #453A CAS No. 22224-92-6 A.I. CODE: 100601 CFR No. 180.349 185.2950	1yr feeding - dog NOEL= 0.0100 mg/kg 0.50 ppm LEL= 0.0300 mg/kg 1.00 ppm ONCO: E (RfD/PR Committee)	Plasma Che inhibition No evidence of oncogenic- ity in rats or mice.	OP RfD= 0.000100 EPA RfD= 0.000250	-->100	Chronic feeding-dog (current study may be up- graded)	HED complete 03/21/86 EPA verified 12/09/86 WHO last reviewed 1987 HED complete 07/01/88 RfD/PR reviewed 05/20/93 On IRIS.
POPULATION SUBGROUP	TOTAL TMRC (MG/KG BODY WEIGHT/DAY)	CURRENT TMRC*	NEW TMRC**	NEW TMRC		EFFECT OF ANTICIPATED RESIDUES
				AS PERCENT OF RFD	DIFFERENCE AS PERCENT OF RFD	
U.S. POPULATION - 48 STATES	0.002114	0.002116	2115.731000	1.397000	0.000011	11.26700
U.S. POPULATION - SPRING SEASON	0.002094	0.002095	2094.765000	0.288000	0.000011	10.69900
U.S. POPULATION - SUMMER SEASON	0.002001	0.002002	2002.063000	0.634000	0.000011	11.21000
U.S. POPULATION - FALL SEASON	0.002136	0.002138	2137.786000	1.662000	0.000011	10.66800
U.S. POPULATION - WINTER SEASON	0.002215	0.002218	2218.277000	2.986000	0.000012	11.91500
NORTHEAST REGION	0.002607	0.002609	2609.091000	1.722000	0.000012	12.22400
NORTH CENTRAL REGION	0.002079	0.002080	2079.809000	1.080000	0.000010	10.44100
SOUTHERN REGION	0.001696	0.001697	1696.676000	0.874000	0.000010	9.66300
WESTERN REGION	0.002214	0.002216	2215.955000	2.327000	0.000013	13.18800
HISPANICS	0.002697	0.002698	2697.600000	0.825000	0.000010	9.83800
NON-HISPANIC WHITES	0.002063	0.002065	2064.636000	1.467000	0.000011	11.30600
NON-HISPANIC BLACKS	0.002048	0.002049	2048.997000	0.738000	0.000009	8.80200
NON-HISPANIC OTHERS	0.003011	0.003016	3016.128000	5.565000	0.000027	27.01800
NURSING INFANTS (< 1 YEAR OLD)	0.003645	0.003645	3644.908000	0.000000	0.000014	14.21400
NON-NURSING INFANTS (< 1 YEAR OLD)	0.007087	0.007087	7086.536000	0.000000	0.000040	40.14300
FEMALES (13+ YEARS, PREGNANT)	0.001670	0.001673	1673.442000	3.128000	0.000010	9.52100
FEMALES 13+ YEARS, NURSING	0.001632	0.001632	1631.621000	0.000000	0.000007	6.92500
CHILDREN (1-6 YEARS OLD)	0.005706	0.005709	5709.493000	3.678000	0.000023	23.10200
CHILDREN (7-12 YEARS OLD)	0.003068	0.003070	3070.107000	2.239000	0.000016	15.88000
MALES (13-19 YEARS OLD)	0.001706	0.001707	1706.816000	0.797000	0.000008	7.58400
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)	0.001618	0.001621	1620.990000	2.541000	0.000010	9.67600
MALES (20 YEARS AND OLDER)	0.001275	0.001276	1275.609000	0.593000	0.000008	7.87600
FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)	0.001544	0.001545	1545.216000	1.076000	0.000009	9.11800

*Current TMRC does not include new or pending tolerances.
 **New TMRC includes new, pending, and published tolerances.

Table 3.

TOLERANCE ASSESSMENT SUMMARY FOR Fenamiphos (Nemacur)
 USING ANTICIPATED RESIDUES
 CASWELL #453A

DATE: 10/26/94

ANALYSIS FOR POPULATION SUB-GROUP: U.S. POPULATION - 48 STATES

EXISTING ANTICIPATED RESIDUES (PUBLISHED ONLY)		
RESULT IN AN ARC OF:	0.000010	MG/KG/DAY
THE EXISTING ARC IS EQUIVALENT TO:	9.809	% OF THE ADI.
PROPOSED NEW ANTICIPATED RESIDUES (CURRENT PETITION ONLY)		
RESULT IN AN ARC OF:	0.000001	MG/KG/DAY
THESE NEW ANTICIPATED RESIDUES WILL OCCUPY:	1.458	% OF THE ADI.
IF THE NEW ANTICIPATED RESIDUES (CURRENT PETITION ONLY)		
ARE APPROVED THE RESULTANT ARC WILL BE:	0.000011	MG/KG/DAY
THE NEW ARC WILL OCCUPY	11.267	% OF THE ADI.

NO OTHER PENDING ANTICIPATED RESIDUES ARE IN THE FILE

ANALYSIS FOR POPULATION SUB-GROUP: NON-NURSING INFANTS (< 1 YEAR OLD)

EXISTING ANTICIPATED RESIDUES (PUBLISHED ONLY)		
RESULT IN AN ARC OF:	0.000040	MG/KG/DAY
THE EXISTING ARC IS EQUIVALENT TO:	40.118	% OF THE ADI.
PROPOSED NEW ANTICIPATED RESIDUES (CURRENT PETITION ONLY)		
RESULT IN AN ARC OF:	<0.000001	MG/KG/DAY
THESE NEW ANTICIPATED RESIDUES WILL OCCUPY:	0.025	% OF THE ADI.
IF THE NEW ANTICIPATED RESIDUES (CURRENT PETITION ONLY)		
ARE APPROVED THE RESULTANT ARC WILL BE:	0.000040	MG/KG/DAY
THE NEW ARC WILL OCCUPY	40.143	% OF THE ADI.

NO OTHER PENDING ANTICIPATED RESIDUES ARE IN THE FILE

A 5x5 grid of stars. The stars are arranged in a pattern that resembles a stylized letter 'A' or a similar shape. The top row has 5 stars, the second row has 4 stars, the third row has 3 stars, the fourth row has 2 stars, and the fifth row has 1 star. The stars are arranged in a way that they form a solid shape on the left and a diagonal line on the right.

DETAILED ACUTE ANALYSIS INCLUDING AR'S: ALL STATISTICS BASED ON USERS' DAILY CONSUMPTION

15:57 Tuesday, October 25, 1994 43

NAME: FENAMIPHOS (NEMACUR) STUDY: RDV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE . DOC. NO.*
CASSELL NO: 453A CFR NO: CFR180.349 A 00000.0003 000001.000 000100 Chronic Dog 0000001314
CAS NO: 22224-92-6 SHAUGHNESSY NO: 100601 B 00000.0150 000003.000 000010 Chronic Rat 0000001314
STATUS CODES: C 00000.0150 000030.000 000100 Reproductn Rat Systemic Minimum 0000001314
RDV INFO: The LD value used in this analysis is 0.005 MG/KG of BODY WEIGHT/DAY
*FILE INFO: No Tolerance Data Are Used--Without User Modifications.
***** AR DATA: No User Modifications *****

U.S. POP.--48 STATES

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY
ESTIMATES BASED ON TOLERANCES: PERSON DAYS THAT ARE USER-DAYS MG/KG BODY WEIGHT/DAY AS PERCENT OF RDV
ANTICIPATED RESIDUES: 0.00 0.000000 0.00
99.78 0.002200 43.99
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X= 43.99
0 .2 .4 .6 .8 1 1.2 1.4 1.6 1.8 2 3 4 5 10 15 20
TOLERANCES: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ANTICIPATED RESIDUES: 100 43 32 23 17 12 9 7 6 5 4 2 1 0 0 0 0

INFANTS(<1 YEAR)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY
ESTIMATES BASED ON TOLERANCES: PERSON DAYS THAT ARE USER-DAYS MG/KG BODY WEIGHT/DAY AS PERCENT OF RDV
ANTICIPATED RESIDUES: 0.00 0.000000 0.00
93.94 0.006805 136.10
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X= 136.10
0 .2 .4 .6 .8 1 1.2 1.4 1.6 1.8 2 3 4 5 10 15 20
TOLERANCES: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ANTICIPATED RESIDUES: 100 76 57 48 42 38 34 31 28 25 23 14 9 5 1 0 0

CHILDREN(1-6 YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY
ESTIMATES BASED ON TOLERANCES: PERSON DAYS THAT ARE USER-DAYS MG/KG BODY WEIGHT/DAY AS PERCENT OF RDV
ANTICIPATED RESIDUES: 0.00 0.000000 0.00
99.92 0.005909 118.18
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X= 118.18
0 .2 .4 .6 .8 1 1.2 1.4 1.6 1.8 2 3 4 5 10 15 20
TOLERANCES: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ANTICIPATED RESIDUES: 100 67 51 44 40 36 33 31 28 25 23 11 6 3 0 0 0

(41)

71.5, 81
95%

MOE

20

52

7

20

10

25

Acute Analysis for all Published RACS for RED

DETAILED ACUTE ANALYSIS INCLUDING ARIS: ALL STATISTICS BASED ON USERS' DAILY CONSUMPTION 15:57 Tuesday, October 25, 1994 43

NAME: FENANIPHOS (NENACUR) STUDY RDV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO.*

CASHELL NO: 453A CFR NO: CFR180.349 A 00000.0003 000001.000 000100 Chronic Dog Enzymatic Minimum 0000001314

CAS NO: 22224-92-6 SHAUGHNESSY NO: 100601 B 00000.0150 000003.000 000010 Chronic Rat Enzymatic Minimum 0000001314

STATUS CODES: C 00000.0150 000030.000 000100 Reproductn Rat Systemic Minimum 0000001314

RDV INFO: The LD value used in this analysis is 0.005 MG/KG of BODY WEIGHT/DAY AR DATA: No User Modifications

*FILE INFO: No Tolerance Data Are Used--Without User Modifications.*****

FEMALES(13+ YRS)

ESTIMATED % OF POTENTIAL		MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY															
ESTIMATES BASED ON		PERSON DAYS THAT ARE USER-DAYS		MG/KG BODY WEIGHT/DAY		AS PERCENT OF RDV											
TOLERANCES:		0.00		0.000000		0.00											
ANTICIPATED RESIDUES:		99.80		0.001605		32.09											
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=		0		.2		.4		.6		.8		1		1.2		1.4	
TOLERANCES:		0		0		0		0		0		0		0		0	
ANTICIPATED RESIDUES:		100		39		29		20		13		8		4		3	

33

83.

MALES(13+ YRS)

ESTIMATED % OF POTENTIAL		MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY															
ESTIMATES BASED ON		PERSON DAYS THAT ARE USER-DAYS		MG/KG BODY WEIGHT/DAY		AS PERCENT OF RDV											
TOLERANCES:		0.00		0.000000		0.00											
ANTICIPATED RESIDUES:		99.91		0.001417		28.33											
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=		0		.2		.4		.6		.8		1		1.2		1.4	
TOLERANCES:		0		0		0		0		0		0		0		0	
ANTICIPATED RESIDUES:		100		37		25		16		10		5		3		2	

33

100

MOE

99%

95%

96%

15