



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

Caswell

#160

Double Sided

OFFICE OF
PREVENTION, PESTICIDES, AND
TOXIC SUBSTANCES

JUL 27 1995

MEMORANDUM

SUBJECT: Endosulfan: Acute Dietary Exposure and Risk Estimates.

FROM: Jennifer M. Wintersteen
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(7509C)

TO: Sepehr Haddad, Chemical Manager
Special Review Branch
Special Review and Reregistration Division
and
Christina Scheltema, Chemical Manager
Special Review Section
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THROUGH: Elizabeth A. Doyle, Ph.D., Section Head
Dietary Risk Evaluation Section
Science Analysis Branch/Health Effects Division

E. A. Doyle
W. B. Bunn

Action Requested

Special Review Branch of SRRD has requested an acute DRES analysis for endosulfan which does *not* include commodities not supported in the reregistration of endosulfan. Also, SRB has requested help in the identification of commodities driving the acute dietary risk.

Discussion

I. Toxicological Endpoints

Acute Endpoint: In an HED document, Endosulfan Toxicology Endpoint Selection Document by L. Taylor and M. Van Gemert dated 12/13/94, it was concluded that based on the weight of evidence, endosulfan was to be considered an acute toxicant by the Agency. A NOEL of 0.7 mg/kg bwt/day from a developmental study in rabbits was identified as the endpoint for use in acute dietary risk assessment. The effect noted in the study was convulsions.

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II. Residue Information

Food uses evaluated in this analysis were the published tolerances listed in the Tolerance Index System (TIS) and 40 CFR §180.182 and 185.2600 except those commodities identified as not being supported in the reregistration of endosulfan. The following published tolerances were not included in the acute dietary analysis: alfalfa, artichokes, barley, oats, succulent peas, rye, safflower, sugar beets, sunflower, watercress, and wheat. Other commodities identified as not being supported, field corn, dried peas and soybeans currently do not have published tolerances in the 40 CFR. Unpublished tolerances exist in the endosulfan DRES file for poultry and eggs (0.001 ppm). Poultry and eggs have been included in the risk assessment since Chemistry Branch in HED considers these tolerances to be necessary (see discussion below).

Acute Residues: Tolerance level residues were used for all endosulfan commodities. Poultry and egg tolerances were included in the acute analysis. Residues for poultry and eggs were provided by J. Abbotts and were not 'tolerances' but were considered the best estimates available from studies reviewed by CBRS. These residues could be revised when further data become available and are reviewed. A list of all the residues and foods used in Analysis A for all published uses is provided in the Table "Residues for Endosulfan Acute DRES Analysis".

III. Results

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 endosulfan in the commodity supply. The toxicological effect seen in animal studies was neurotoxicity. All standard DRES subgroups, therefore, 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 ($\text{NOEL/exposure} = \text{MOE}$). The Agency is not generally concerned unless the MOE is below 100 when based upon data generated in animal studies, as in this case.

In the analysis, tolerance level residues were used to calculate the high end, mean and percentile consumer estimates of exposure for all subgroups. Exposures were compared to the NOEL of 0.7 mg/kg bwt/day from the rabbit developmental study to calculate Margins of Exposure (MOE).

A. Acute Analysis Results for all Published Uses of Endosulfan.

DRES Subgroup	Percentile Consumer at which MOE is 100	Mean MOE NOEL/Mean Exposure	MOE NOEL/High Exposure
U.S. pop. -48 states	41st %ile	57	7
Infants (< 1 year)	14th %ile	17	<5
Children (1-6 years)	14th %ile	27	5
Females (13+ years)	48th %ile	75	10
Males (13+ years)	48th. %ile	76	10

B. Acute Analysis Results excluding Uses not being supported in Reregistration of Endosulfan.

DRES Subgroup	Percentile Consumer at which MOE is 100	Mean MOE NOEL/Mean Exposure	MOE NOEL/High Exposure
U.S. pop. -48 states	44th %ile	60	7
Infants (< 1 year)	15th %ile	18	<5
Children (1-6 years)	17th %ile	28	5
Females (13+ years)	51st %ile	78	10
Males (13+ years)	51st %ile	80	10

C. Acute Analysis Results for Endosulfan on Apples

Subgroup	Mean MOE	Percentile MOE	% Consumers
U.S. Population	133	50 (92nd %ile)	30
Infants < 1	20	7 (95th %ile)	43
Children 1-6	53	13 (96th %ile)	41
Females 13+	227	50 (97th %ile)	27
Males 13+	264	50 (98th %ile)	29

D. Acute Analysis Results for Endosulfan on Tomatoes

Subgroup	Mean MOE	Percentile MOE	% Consumers
U.S. Population	127	100 (75th %ile)	50
Infants < 1	122	100 (83rd %ile)	29
Children 1-6	59	100 (50th %ile)	43
Females 13+	161	100 (80th %ile)	51
Males 13+	154	100 (78th %ile)	51

E. Acute Analysis Results for Endosulfan on Grapes/Raisins

<u>Subgroup</u>	<u>Mean MOE</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	303	63 (95th %ile)	27
Infants <1	69	20 (91st %ile)	5
Children 1-6	136	20 (95th %ile)	35
Females 13+	352	71 (95th %ile)	25
Males 13+	442	83 (94th %ile)	27

F. Acute Analysis Results for Endosulfan on Peaches

<u>Subgroup</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	71 (95th %ile)	20
Infants <1	10 (82nd %ile)	17
Children 1-6	33 (95th %ile)	24
Females 13+	100 (96th %ile)	18
Males 13+	125 (95th %ile)	19

G. Acute Analysis Results for Endosulfan on Potatoes

<u>Subgroup</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	250 (99th %ile)	56
Infants <1	100 (99th %ile)	38
Children 1-6	125 (99th %ile)	60
Females 13+	250 (99th %ile)	52
Males 13+	250 (99th %ile)	60

H. Acute Analysis Results for Endosulfan on Milk

<u>Subgroup</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	83 (95th %ile)	98
Infants <1	25 (96th %ile)	87
Children 1-6	50 (92nd %ile)	99
Females 13+	167 (96th %ile)	97
Males 13+	125 (97th %ile)	98

I. Acute Analysis Results for Endosulfan on Squash (summer & winter)

<u>Subgroup</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	50 (96th %ile)	3
Infants <1	25 (92nd %ile)	5
Children 1-6	25 (94th %ile)	1
Females 13+	63 (95th %ile)	3
Males 13+	83 (94th %ile)	3

J. Acute Analysis Results for Endosulfan on Strawberries

<u>Subgroup</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	250 (95th %ile)	15
Infants <1	25 (95th %ile)	1
Children 1-6	250 (95th %ile)	18
Females 13+	250 (94th %ile)	13
Males 13+	250 (95th %ile)	15

K. Acute Analysis Results for Endosulfan on Broccoli

<u>Subgroup</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	100 (90th %ile)	3
Infants <1	100 (54th %ile)	1
Children 1-6	100 (56th %ile)	2
Females 13+	100 (94th %ile)	3
Males 13+	100 (94th %ile)	3

L. Acute Analysis Results for Endosulfan on Pineapple

<u>Subgroup</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	100 (84th %ile)	5
Infants <1	100 (66th %ile)	8
Children 1-6	100 (59th %ile)	5
Females 13+	100 (89th %ile)	4
Males 13+	100 (92nd %ile)	4

M. Acute Analysis Results for Endosulfan on Spinach

<u>Subgroup</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	100 (93rd %ile)	4
Infants <1	100 (31st %ile)	2
Children 1-6	100 (77th %ile)	3
Females 13+	100 (95th %ile)	4
Males 13+	100 (97th %ile)	4

N. Acute Analysis Results for Endosulfan on Succulent Beans (green, wax, and lima)

<u>Subgroup</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	100 (91st %ile)	15
Infants <1	100 (23rd %ile)	10
Children 1-6	100 (66th %ile)	14
Females 13+	100 (96th %ile)	15
Males 13+	100 (96th %ile)	15

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O. Acute Analysis Results for Endosulfan on Sweet Potato

<u>Subgroup</u>	<u>Mean MOE</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	1505	--	2
Infants <1	588	--	5
Children 1-6	751	100 (98th %ile)	2
Females 13+	1897	--	2
Males 13+	1892	--	2

P. Acute Analysis Results for Endosulfan on Carrots

<u>Subgroup</u>	<u>High End MOE</u>	<u>% Consumers</u>
U.S. Population	-- ¹	32
Infants <1	167	45
Children 1-6	250	32
Females 13+	--	33
Males 13+	--	31

Q. Acute Analysis Results for Endosulfan on Beef (fat, lean and mbyprod)

<u>Subgroup</u>	<u>High End MOE</u>	<u>% Consumers</u>
U.S. Population	250	97
Infants <1	125	41
Children 1-6	167	99
Females 13+	250	97
Males 13+	250	99

R. Acute Analysis Results for Endosulfan on Pears

<u>Subgroup</u>	<u>Mean MOE</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	151	50 (94th %ile)	5
Infants <1	31	25 (65th %ile)	14
Children 1-6	73	50 (74th %ile)	5
Females 13+	221	50 (99th %ile)	5
Males 13+	247	--	5

S. Acute Analysis Results for Endosulfan on Sweet Corn

<u>Subgroup</u>	<u>High End MOE</u>	<u>% Consumers</u>
U.S. Population	250	13
Infants <1	167	18
Children 1-6	167	15
Females 13+	-- ²	12
Males 13+	--	13

¹ MOE is considerably above 100. Unable to calculate on distribution and further analysis not warranted.

² See Footnote 1.

T. Acute Analysis Results for Endosulfan on Cantaloupe

<u>Subgroup</u>	<u>Mean MOE</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	114	50 (95th %ile)	2
Infants <1	30	--	<1
Children 1-6	53	25 (95th %ile)	1
Females 13+	121	50 (98th %ile)	2
Males 13+	134	50 (99th %ile)	1

U. Acute Analysis Results for Endosulfan on Lettuce

<u>Subgroup</u>	<u>Mean MOE</u>	<u>Percentile MOE</u>	<u>% Consumers</u>
U.S. Population	528	167 (97th %ile)	34
Infants <1	526	250 (99th %ile)	<1
Children 1-6	366	125 (96th %ile)	19
Females 13+	509	167 (96th %ile)	37
Males 13+	633	250 (94th %ile)	37

(Blueberries + raspberries, pecans, pumpkin and lettuce were ok)

Tables of distribution of exposures are attached for each commodity. These tables include the calculation of the MOEs.

Discussion

When only uses of endosulfan being supported for reregistration are considered the acute dietary risk is still of concern, that is, MOEs are below 100 for all consumers even at the mean exposure level. Many commodities appear to be driving acute risk estimates, namely apples, tomatoes, grapes (including raisins and wine/sherry), peaches, milk, squash, pineapple, and pears. Strawberries, broccoli, spinach and succulent beans appear to be a problem for the infants and children (1-6) subgroups only.

The acute NOEL, 0.7 mg/kg/day, was taken from a developmental study in rabbits which showed maternal neurotoxic effects, namely convulsions, hyperactivity, and labored respiration at the LEL 1.8 mg/kg/day. Another developmental study in rats with a maternal NOEL of 2.0 mg/kg/day demonstrated similar convulsion and seizure effects and death at the LOEL of 6.0 mg/kg/day. The Agency has requested that another study specifically for neurotoxicity be conducted for endosulfan.

Attachments

cc: DRES, Caswell #160, CBRS (S. Hummel), Tox II (M. Ioannou), G. LaRocca, PM 13, Bill Sette (SAB)

Residues for Endosulfan Acute DRES Analysis

420	01006AA10	0.1000	RASPBERRIES
420	01006AA15	0.1000	RASPBERRIES
420	01006AA31	0.1000	RASPBERRIES
420	01006AA62	0.1000	RASPBERRIES
420	01006AA70	0.1000	RASPBERRIES
420	01009AA10	0.1000	BLUEBERRIES
420	01009AA21	0.1000	BLUEBERRIES
420	01009AA22	0.1000	BLUEBERRIES
420	01009AA62	0.1000	BLUEBERRIES
420	01014AA10	2.0000	GRAPES-FRESH
420	01014AA21	2.0000	GRAPES-FRESH
420	01014AA31	2.0000	GRAPES-FRESH
420	01014AA10	2.0000	GRAPES-FRESH
420	01014DA10	2.0000	GRAPES-RAISINS
420	01014DA21	2.0000	GRAPES-RAISINS
420	01014DA22	2.0000	GRAPES-RAISINS
420	01014JA10	2.0000	GRAPES-JUICE
420	01014JA15	2.0000	GRAPES-JUICE
420	01014JA21	2.0000	GRAPES-JUICE
420	01016AA10	2.0000	STRAWBERRIES
420	01016AA21	2.0000	STRAWBERRIES
420	01016AA70	2.0000	STRAWBERRIES
420	03001AA10	0.2000	ALMONDS
420	03001AA21	0.2000	ALMONDS
420	03001AA22	0.2000	ALMONDS
420	03005AA10	0.2000	FILBERTS
420	03005AA21	0.2000	FILBERTS
420	03005AA22	0.2000	FILBERTS
420	03007AA10	0.2000	MACADAMIA NUTS
420	03008AA10	0.2000	PECANS
420	03008AA21	0.2000	PECANS
420	03008AA22	0.2000	PECANS
420	03008AA23	0.2000	PECANS
420	03008AA62	0.2000	PECANS
420	03009AA10	0.2000	WALNUTS
420	03009AA21	0.2000	WALNUTS
420	03009AA22	0.2000	WALNUTS
420	04001AA10	2.0000	APPLES-FRESH
420	04001AA21	2.0000	APPLES-FRESH
420	04001AA31	2.0000	APPLES-FRESH
420	04001AA62	2.0000	APPLES-FRESH
420	04001DA10	2.0000	APPLES-DRIED
420	04001DA22	2.0000	APPLES-DRIED
420	04001DA62	2.0000	APPLES-DRIED
420	04001JA15	2.0000	APPLES-JUICE
420	04001JA31	2.0000	APPLES-JUICE
420	04003AA10	2.0000	PEARS-FRESH
420	04003AA31	2.0000	PEARS-FRESH
420	04003AA51	2.0000	PEARS-FRESH
420	04003AA62	2.0000	PEARS-FRESH
420	04003DA10	2.0000	PEARS-DRIED
420	04003DA21	2.0000	PEARS-DRIED
420	05001AA10	2.0000	APRICOTS-FRESH
420	05001AA21	2.0000	APRICOTS-FRESH
420	05001AA31	2.0000	APRICOTS-FRESH
420	05001DA10	2.0000	APRICOTS-DRIED
420	05001DA22	2.0000	APRICOTS-FRESH
420	05002AA10	2.0000	CHERRIES-FRESH
420	05002AA21	2.0000	CHERRIES-FRESH
420	05002AA31	2.0000	CHERRIES-FRESH
420	05002AA62	2.0000	CHERRIES-FRESH
420	05002DA10	2.0000	CHERRIES-FRESH
420	05002DA21	2.0000	CHERRIES-FRESH
420	05002DA22	2.0000	CHERRIES-FRESH
420	05002DA62	2.0000	CHERRIES-FRESH
420	05003AA10	2.0000	PEACHES-FRESH
420	05003AA21	2.0000	PEACHES-FRESH
420	05003AA31	2.0000	PEACHES-FRESH
420	05003AA62	2.0000	PEACHES-FRESH
420	05003DA10	2.0000	PEACHES-DRIED
420	05003DA21	2.0000	PEACHES-DRIED
420	05005AA10	2.0000	PLUMS-FRESH
420	05005AA31	2.0000	PLUMS-FRESH
420	05005DA10	2.0000	PLUMS-PRUNES
420	05005DA21	2.0000	PLUMS-PRUNES
420	05005DA31	2.0000	PLUMS-PRUNES
420	05005JA10	2.0000	PRUNE-JUICE
420	05005JA62	2.0000	PRUNE-JUICE
420	06013AA10	2.0000	PINEAPPLE-PULP
420	06013AA21	2.0000	PINEAPPLE-PULP
420	06013AA31	2.0000	PINEAPPLE-PULP
420	06013AA10	2.0000	PINEAPPLE-DRIED
420	06013JA10	2.0000	PINEAPPLE-JUICE
420	06013JA15	2.0000	PINEAPPLE-JUICE
420	06013JA21	2.0000	PINEAPPLE-JUICE
420	06013JA31	2.0000	PINEAPPLE-JUICE
420	07003AA21	24.0000	TEA
420	10002AA00	2.0000	CANTALOUPE-UMSP
420	10002AB10	2.0000	CANTALOUPE-PULP
420	10002AB21	2.0000	CANTALOUPE-PULP
420	10003AA10	2.0000	CASABAS
420	10004AA00	2.0000	CRENSHAW
420	10005AA10	2.0000	HONEYDEW MELONS
420	10007AA00	2.0000	PERSEM MELONS
420	10008AA10	2.0000	WATERMELON
420	10008AA21	2.0000	WATERMELON
420	10010AA10	2.0000	CUCUMBERS
420	10010AA11	2.0000	CUCUMBERS
420	10010AA21	2.0000	CUCUMBERS
420	10011AA21	2.0000	PUMPKIN
420	10011AA22	2.0000	PUMPKIN
420	10011AA62	2.0000	PUMPKIN
420	10013AA10	2.0000	SQUASH-SUMMER
420	10013AA21	2.0000	SQUASH-SUMMER
420	10014AA10	2.0000	SQUASH-WINTER
420	10014AA21	2.0000	SQUASH-WINTER
420	10014AA31	2.0000	SQUASH-WINTER
420	10017AA21	2.0000	BITTER MELON
420	10020AA00	2.0000	TOMEGOURD
420	11001AA10	2.0000	EGGPLANT
420	11001AA21	2.0000	EGGPLANT
420	11001AA25	2.0000	EGGPLANT
420	11003AA10	2.0000	PEPPERS-SWEET
420	11003AA21	2.0000	PEPPERS-SWEET
420	11003AB00	2.0000	CHILI PEPPERS
420	11003AD10	2.0000	PEPPERS-OTHER
420	11003AD21	2.0000	PEPPERS-OTHER
420	11003AD51	2.0000	PEPPERS-OTHER
420	11005AA10	2.0000	TOMATOES-WHOLE
420	11005AA21	2.0000	TOMATOES-WHOLE
420	11005AA31	2.0000	TOMATOES-WHOLE

Residues for Endosulfan Acute DRES Analysis

420	25003SA21	0.5000	CANE SUGAR
420	25003SA22	0.5000	CANE SUGAR
420	25003SA31	0.5000	CANE SUGAR
420	25003SB10	0.5000	SUGAR-MOLASSES
420	25003SB21	0.5000	SUGAR-MOLASSES
420	25003SB22	0.5000	SUGAR-MOLASSES
420	25003SB31	0.5000	SUGAR-MOLASSES
420	27003AA18	1.0000	COTTONSEED-OIL
420	27003AA19	1.0000	COTTONSEED-OIL
420	27008AA00	0.2000	SAFFLOWER-SEED
420	27008AA18	0.2000	SAFFLOWER-OIL
420	27011AA18	2.0000	SUNFLOWER-OIL
420	27017AA00	0.2000	RAPE SEED
420	50000DB10	0.1000	MILK-NON-FAT SOL
420	50000DB21	0.1000	MILK-NON-FAT SOL
420	50000DB51	0.1000	MILK-NON-FAT SOL
420	50000FA10	0.5000	CHILK-FAT SOLIDS
420	50000FA21	0.5000	CHILK-FAT SOLIDS
420	50000FA51	0.5000	CHILK-FAT SOLIDS
420	50000SA21	0.1000	MILK SUG (LACT)
420	50000SA51	0.1000	MILK SUG (LACT)
420	53001BA21	0.2000	BEEF-MEAT BYP
420	53001BA26	0.2000	BEEF-MEAT BYP
420	53001BB21	0.2000	BEEF-OTH ORGAN
420	53001BB51	0.2000	BEEF-OTH ORGAN
420	53001DA21	0.2000	BEEF-DRIED
420	53001FA10	0.2000	BEEF-FAT
420	53001FA21	0.2000	BEEF-FAT
420	53001FA22	0.2000	BEEF-FAT
420	53001FA23	0.2000	BEEF-FAT
420	53001FA24	0.2000	BEEF-FAT
420	53001FA25	0.2000	BEEF-FAT
420	53001KA21	0.2000	BEEF-KIDNEY
420	53001LA25	0.2000	BEEF-LIVER
420	53001LA31	0.2000	BEEF-LIVER
420	53001MA10	0.2000	BEEF-LEAN
420	53001MA21	0.2000	BEEF-LEAN
420	53001MA22	0.2000	BEEF-LEAN
420	53001MA23	0.2000	BEEF-LEAN
420	53001MA24	0.2000	BEEF-LEAN
420	53002BA00	0.2000	GOAT-MEAT BYP
420	53002BB00	0.2000	GOAT-OTH ORGAN
420	53002FA23	0.2000	GOAT-FAT
420	53002FA25	0.2000	GOAT-FAT
420	53002KA00	0.2000	GOAT-KIDNEY
420	53002LA00	0.2000	GOAT-LIVER
420	53002MA23	0.2000	GOAT-LEAN
420	53002MA25	0.2000	GOAT-LEAN
420	53003AA00	0.2000	HORSE
420	53005BA21	0.2000	SHEEP-MEAT BYP
420	53005BB21	0.2000	SHEEP-OTH ORGAN
420	53005FA21	0.2000	SHEEP-FAT
420	53005KA21	0.2000	SHEEP-KIDNEY
420	53005LA00	0.2000	SHEEP-LIVER
420	53005MA21	0.2000	SHEEP-LEAN
420	53005MA51	0.2000	SHEEP-LEAN
420	53006BA21	0.2000	PORK-MEAT BYP
420	53006BB21	0.2000	PORK-OTH ORGAN
420	53006BB26	0.2000	PORK-OTH ORGAN
420	53006FA10	0.2000	PORK-FAT
420	53006FA21	0.2000	PORK-FAT
420	53006FA25	0.2000	PORK-FAT
420	53006FA26	0.2000	PORK-FAT
420	53006KA21	0.2000	PORK-KIDNEY
420	53006LA21	0.2000	PORK-LIVER
420	53006LA25	0.2000	PORK-LEAN
420	53006MA21	0.2000	PORK-LEAN
420	53006MA25	0.2000	PORK-LEAN
420	55008BA21	0.0010	TURKEY-BYP
420	55008BA26	0.0010	TURKEY-BYP
420	55008LA21	0.0010	TURKEY ORGAN
420	55008LA25	0.0010	TURKEY W/O SKIN
420	55008MA21	0.0010	TURKEY W/O SKIN
420	55008MA31	0.0010	TURKEY W/O SKIN
420	55008MA62	0.0010	TURKEY W/O SKIN
420	55008MB21	0.0010	TURKEY+SKIN
420	55008MB25	0.0010	TURKEY+SKIN
420	55008MC21	0.0010	TURKEY-UNSPEC
420	55013BA00	0.0010	POULTRY,OTH-BYP
420	55013LA25	0.0010	POULTRY,ORGAN
420	55013MA21	0.0010	POULTRY,OTHER
420	55014AA10	0.0010	EGGS-WHOLE
420	55014AA21	0.0010	EGGS-WHOLE
420	55014AA22	0.0010	EGGS-WHOLE
420	55014AA23	0.0010	EGGS-WHOLE
420	55014AA25	0.0010	EGGS-WHOLE
420	55014AB10	0.0010	EGGS-WHITE ONLY
420	55014AB21	0.0010	EGGS-WHITE ONLY
420	55014AB22	0.0010	EGGS-WHITE ONLY
420	55014AB25	0.0010	EGGS-WHITE ONLY
420	55014AB62	0.0010	EGGS-WHITE ONLY
420	55014AB81	0.0010	EGGS-WHITE ONLY
420	55014AC10	0.0010	EGGS-YOLK ONLY
420	55014AC21	0.0010	EGGS-YOLK ONLY
420	55014AC25	0.0010	EGGS-YOLK ONLY
420	55014AC31	0.0010	EGGS-YOLK ONLY
420	55015LA21	0.0010	CHICKEN-BYP
420	55015BA00	0.0010	CHICKEN-ORGAN
420	55015LA26	0.0010	CHICKEN-ORGAN
420	55015MA21	0.0010	CHICKEN-W/O SKIN
420	55015MA22	0.0010	CHICKEN-W/O SKIN
420	55015MA25	0.0010	CHICKEN-W/O SKIN
420	55015MA31	0.0010	CHICKEN-W/O SKIN
420	55015MA53	0.0010	CHICKEN-W/O SKIN
420	55015MB21	0.0010	CHICKEN+SKIN
420	55015MB25	0.0010	CHICKEN+SKIN

6

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

 NAME: ENDOSULFAM STUDY RDV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO.
 CASSELL NO: 420 CFR NO: CFR180.182 A 00000.0001 000030.000 007000 Chronic Dog Systemic Minimum 0000000416
 CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Rat Systemic Minimum 0000001488
 *STATUS CODES: C 00000.0180 000035.000 000100 Terata Rabbit Systemic Minimum
 *RDV INFO: The LD value used in this analysis is 0.007 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	HG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV
0	0	0.00	0.00
100	94	0.011643	166.33
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=			
0	.2	.4	.6
0	0	0	0
100	94	85	74
TOLERANCES:			
0	0	0	0
100	94	85	74
ANTICIPATED RESIDUES:			
0	0	0	0
100	94	85	74

INFANTS(<1 YEAR)
 ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

ESTIMATES BASED ON TOLERANCES:	PERSON DAYS THAT ARE USER-DAYS	HG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV
0	0	0.00	0.00
100	99	0.039275	561.08
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=			
0	.2	.4	.6
0	0	0	0
100	99	96	95
TOLERANCES:			
0	0	0	0
100	99	96	95
ANTICIPATED RESIDUES:			
0	0	0	0
100	99	96	95

CHILDREN(1-6 YRS)
 ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

ESTIMATES BASED ON TOLERANCES:	PERSON DAYS THAT ARE USER-DAYS	HG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV
0	0	0.00	0.00
100	99	0.025106	358.65
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=			
0	.2	.4	.6
0	0	0	0
100	99	98	93
TOLERANCES:			
0	0	0	0
100	99	98	93
ANTICIPATED RESIDUES:			
0	0	0	0
100	99	98	93

P

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

***** STUDY *****

*NAME: ENDOSULFAN CFR NO: CFR180.182 STUDY RDV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO. *

CASSELL NO: 420 A 00000.0001 000030.000 001000 Chronic Dog Systemic Minimum 0000000416

CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Rat Systemic Minimum 0000001488

STATUS CODES: C 00000.0180 000036.000 000100 Terata Rabbit Systemic Minimum 0000001488

*RDV INFO: The LD value used in this analysis is 0.007 MG/KG of BODY WEIGHT/DAY PUBLISHED:Data NOT Used

*FILE INFO: NEW ACTION: User Modifications APPROVED:Data NOT Used PUBLISHED:Data NOT Used

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

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 50.30 0.004355 62.21

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	1.6	1.8	2	3	4	5	10	15	20
---	----	----	----	----	---	-----	-----	-----	-----	---	---	---	---	----	----	----

PRIOR TOLERANCES: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

NEW TOLERANCES: 100 64 46 34 26 20 16 12 10 8 6 2 1 0 0 0

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

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 51.33 0.004553 65.04

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	1.6	1.8	2	3	4	5	10	15	20
---	----	----	----	----	---	-----	-----	-----	-----	---	---	---	---	----	----	----

PRIOR TOLERANCES: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

NEW TOLERANCES: 100 65 47 36 28 22 17 13 10 8 6 2 1 0 0 0

16

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

***** STUDY *****

NAME: ENDOSULFAN CFR NO: CFR180.182 A 00000.0001 000030.000 001000 Chronic DOG EFF. LEV. CORE GRADE DOC. NO. *

CASWELL NO: 420 B 00000.4000 000040.000 000100 Terata RAT Systemic Minimum 0000000416*

CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 C 00000.0180 000035.000 000100 Terata RABBIT Systemic Minimum 0000001488*

STATUS CODES: *RDV INFO: The LD value used in this analysis is 0.007 MG/KG of BODY WEIGHT/DAY

*FILE INFO: NEW ACTION: User Modifications APPROVED:Data NOT Used PUBLISHED:Data NOT Used *****

POPULATION = U.S. POP.--48 STATES

FOOD DESCRIPTION : NUMBER OF CONSUMER : TOLERANCE VALUE (PPM) & TYPE : (UG/KG BODY WT PER DAY)

CODE : DAYS AS PERCENT OF : POTENTIAL PERSON DAYS : PUBLISHED APPROVED NEW : PRIORITY. NEW TOL.

MENU CATEGORY 10: FRUITS

01014AA GRAPES-FRESH	7.93	:	:	:	:	2.0000	:	:	:	1.110928
01014DA GRAPES-RAISINS	6.78	:	:	:	:	2.0000	:	:	:	2.168552
01014JA GRAPES-JUICE	13.10	:	:	:	:	2.0000	:	:	:	1.678316

MENU CATEGORY 13: MISCELLANEOUS FOODS

43058AA WINE AND SHERRY	2.76	:	:	:	:	2.0000	:	:	:	5.943728
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U.S. POP.--48 STATES

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV
0.00	0.000000	0.00
26.76	0.002312	33.04
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 1.6 1.8 2 3 4 5 10 15 20		

95th %ile MOE = 63

INFANTS(<1 YEAR)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV
0.00	0.000000	0.00
4.93	0.010092	144.17
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 1.6 1.8 2 3 4 5 10 15 20		

91st %ile MOE = 20

CHILDREN(1-6 YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV
0.00	0.000000	0.00
34.73	0.005135	73.36
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 1.6 1.8 2 3 4 5 10 15 20		

95th %ile MOE = 25

DETAILED ACUTE TOXICITY ALL STATISTICS BASED ON USER'S DATA CONCENTRATION

 NAME: ENDOSULFAN STUDY RDV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO.
 CASSELL NO: 420 CFR NO: CFR180.182 A 00000.0001 000030.000 001000 Chronic Dog Systemic Minimum 0000000416
 CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Rat Systemic Minimum 0000001489
 STATUS CODES: C 00000.0180 000035.000 000100 Terata Rabbit Systemic Minimum 0000001489
 *RDV INFO: The LD value used in this analysis is 0.007 Mg/Kg of BODY WEIGHT/DAY
 *FILE INFO: NEW ACTION: User Modifications APPROVED: Data NOT Used PUBLISHED: Data NOT Used

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
PRIOR TOLERANCES:	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00	0.00
NEW TOLERANCES:	24.55	0.001986	28.37
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 1.6 1.8 2 3 4 5 10 15 20		
PRIOR TOLERANCES:	100 26 21 16 12 9 7 5 4 3 2 2 2 2 2 2 2		
NEW TOLERANCES:	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		

95th Xile MOE = 71

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
PRIOR TOLERANCES:	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00	0.00
NEW TOLERANCES:	26.65	0.001584	22.62
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 1.6 1.8 2 3 4 5 10 15 20		
PRIOR TOLERANCES:	100 22 16 12 8 6 4 3 2 2 2 2 2 2 2 2 2		
NEW TOLERANCES:	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		

94th Xile MOE = 83

 NAME: ENDOSULFAN STUDY NO: 00000.0001 RDV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO.
 CASJELL NO: 420 CFR NO: CFR180.182 A 00000.4000 000030.000 001000 Chronic Dog Systemic Minimum 0000000416
 CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Rat Systemic Minimum 0000001488
 *STATUS CODES: C 00000.0180 000035.000 000100 Terata Rabbit Systemic Minimum
 *RDV INFO: The LD value used in this analysis is 0.007 MG/KG of BODY WEIGHT/DAY
 *FILE INFO: NEW ACTION: User Modifications APPROVED:Data NOT Used PUBLISHED:Data NOT Used

OFEMALES(13+ YRS)

ESTIMATES BASED ON		PERSON DAYS THAT ARE USER-DAYS		MG/KG BODY WEIGHT/DAY		AS PERCENT OF RDV													
0	0	0	0	0	0	0	0												
100	34	23	15	8	4	3	2												
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	1.6	1.8	2	3	4	5	10	15	20	
PRIORITY TOLERANCES:		0		0		0		0		0		0		0		0		0	
NEW TOLERANCES:		0		0		0		0		0		0		0		0		0	
PRIORITY TOLERANCES:		0		0		0		0		0		0		0		0		0	
NEW TOLERANCES:		0		0		0		0		0		0		0		0		0	

96th percentile MOE = 100

MALES(13+ YRS)

ESTIMATED % OF POTENTIAL		PERSON DAYS THAT ARE USER-DAYS		MG/KG BODY WEIGHT/DAY		AS PERCENT OF RDV													
0	0	0	0	0	0	0	0												
100	29	19	10	5	3	2	1												
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	1.6	1.8	2	3	4	5	10	15	20	
PRIORITY TOLERANCES:		0		0		0		0		0		0		0		0		0	
NEW TOLERANCES:		0		0		0		0		0		0		0		0		0	
PRIORITY TOLERANCES:		0		0		0		0		0		0		0		0		0	
NEW TOLERANCES:		0		0		0		0		0		0		0		0		0	

95th percentile MOE = 125

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

NAME: ENDOSULFAN STUDY RCV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO. *

CASWELL NO: 420 CFR NO: CFR180.182 A 00000.0001 000030.000 001000 Chronic Dog Systemic 0000000416

CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Rat Systemic 00000001488

STATUS CODES: C 00000.0180 000036.000 000100 Terata Rabbit Systemic Minimum 00000001488

*RDV INFO: The LD value used in this analysis is 0.007 MG/KG of BODY WEIGHT/DAY

*FILE INFO: NEW ACTION: User Modifications APPROVED:Date NOT Used PUBLISHED:Date NOT Used

POPULATION = MALES(13+ YRS)

FOOD DESCRIPTION

NUMBER OF CONSUMER : TOLERANCE VALUE(PPM) & TYPE : (UG/KG BODY WT PER DAY)

DAYS AS PERCENT OF : PUBLISHED APPROVED NEW : PRIORITY TOL. NEW TOL.

POTENTIAL PERSON DAYS

MENU CATEGORY 7: STARCHY VEG., INCL. RICE, SHEETPOTATO

FOOD DESCRIPTION	ESTIMATED % OF POTENTIAL	MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY	AS PERCENT OF RDV	ESTIMATED % OF POPULATION WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=
14013AA POTATOES(WHITE)-WHOLE	15.88	0.2000	0.002278	0
14013AB POTATOES(WHITE)-UNSPECIFIED	0.58	0.2000	0.002278	0
14013AC POTATOES(WHITE)-PEELED	47.52	0.2000	0.298131	0
14013DA POTATOES(WHITE)-DRY	0.04	0.2000	1.025497	0
14013HA POTATOES(WHITE)-PEEL ONLY	0.01	0.2000	0.078645	0

U.S. POP.--48 STATES

ESTIMATES BASED ON	ESTIMATED % OF POTENTIAL	MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY	AS PERCENT OF RDV	ESTIMATED % OF POPULATION WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=
PRIOR TOLERANCES:	0.00	0.000000	0.00	0
NEW TOLERANCES:	56.22	0.000404	5.77	20
PRIOR TOLERANCES:	0	0	0	0
NEW TOLERANCES:	0.2	0.6	1.2	10
PRIOR TOLERANCES:	0	0	0	0
NEW TOLERANCES:	0	0	0	0

INFANTS(<1 YEAR)

ESTIMATES BASED ON	ESTIMATED % OF POTENTIAL	MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY	AS PERCENT OF RDV	ESTIMATED % OF POPULATION WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=
PRIOR TOLERANCES:	0.00	0.000000	0.00	0
NEW TOLERANCES:	38.34	0.000623	8.90	20
PRIOR TOLERANCES:	0	0	0	0
NEW TOLERANCES:	0	0.4	1.2	10
PRIOR TOLERANCES:	0	0	0	0
NEW TOLERANCES:	0	0	0	0

CHILDREN(1-6 YRS)

ESTIMATES BASED ON	ESTIMATED % OF POTENTIAL	MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY	AS PERCENT OF RDV	ESTIMATED % OF POPULATION WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=
PRIOR TOLERANCES:	0.00	0.000000	0.00	0
NEW TOLERANCES:	59.99	0.000751	10.73	20
PRIOR TOLERANCES:	0	0	0	0
NEW TOLERANCES:	0	0.4	1.4	10
PRIOR TOLERANCES:	0	0	0	0
NEW TOLERANCES:	0	0	0	0

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

 NAME: ENDOSULFAN A 00000.0001 000030.000 001000 Chronic Dog Systemic Minimum 0000000416
 CASSELL NO: 420 CFR NO: CFR180.182 B 00000.4000 000040.000 000100 Terata Rat Systemic Minimum 0000001488
 CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.0180 000035.000 000100 Terata Rabbit Systemic Minimum 0000001488
 STATUS CODES: C 00000.0180 000035.000 000100 Terata Rabbit Systemic Minimum 0000001488
 *RDV INFO: The LD value used in this analysis is 0.007 APPROVED:Data NOT Used PUBLISHED:Data NOT Used
 *FILE INFO: NEW ACTION: User Modifications APPROVED:Data NOT Used PUBLISHED:Data NOT Used

OFEMALES(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	ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCE	EDING X TIMES THE RDV, FOR X=	0	1	2	3	4	5	10	15	20
PRIOR TOLERANCES:	0.00	0.000000	0.00	0	0	0	0	0	0	0	0	0	0	0
NEW TOLERANCES:	52.38	0.000321	4.58	0	0	0	0	0	0	0	0	0	0	0
PRIOR TOLERANCES:	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW TOLERANCES:	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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	ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCE	EDING X TIMES THE RDV, FOR X=	0	1	2	3	4	5	10	15	20
PRIOR TOLERANCES:	0.00	0.000000	0.00	0	0	0	0	0	0	0	0	0	0	0
NEW TOLERANCES:	59.52	0.000346	4.94	0	0	0	0	0	0	0	0	0	0	0
PRIOR TOLERANCES:	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW TOLERANCES:	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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

***** STUDY *****

RDV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO. *

NAME: ENDOSULFAN A 00000.0001 000030.000 001000 Chronic Dog Systemic 0000000416

CASSELL NO: 420 CFR NO: CFR180.182 A 00000.4000 000040.000 000100 Terate Rat Systemic Minimum 00000001488

CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B C 00000.0180 000036.000 000100 Terate Rabbit Systemic Minimum 00000001488

*STATUS CODES: RDV INFO: The LD value used in this analysis is 0.007 MG/KG of BODY WEIGHT/DAY PUBLISHED:Data NOT Used *****

*FILE INFO: NEW ACTION: User Modifications APPROVED:Data NOT Used PUBLISHED:Data NOT Used *****

***** TO EXPOSURE *****

POPULATION = MALES(13+ YRS)

FOOD DESCRIPTION : NUMBER OF CONSUMER : TOLERANCE VALUE (PPM) & TYPE : (UG/KG BODY WT PER DAY)

: DAYS AS PERCENT OF : PUBLISHED APPROVED NEW : PRIORITY TOL. NEW TOL.

MENU CATEGORY 4: MILK: NON-FAT SOLIDS

50000DB MILK-NON-FAT SOLIDS 97.83 : : : 0.1000 : :

50000SA MILK SUGAR (LACTOSE) 0.01 : : : 0.1000 : :

MENU CATEGORY 5: MILK: FAT SOLIDS 98.01 : : : 0.5000 : : 1.243832

U.S. POP...48 STATES

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS HG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

ESTIMATES BASED ON 0.00 0.00 35.60

PRIOR TOLERANCES: 97.57 0.002492

NEW TOLERANCES: 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	1.6	1.8	2	3	4	5	10	15	20
100	53	28	17	11	7	5	3	2	2	1	0	0	0	0	0	0

INFANTS(<1 YEAR)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS MG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

ESTIMATES BASED ON 0.00 0.010691 152.73

PRIOR TOLERANCES: 86.75 0.010691

NEW TOLERANCES: 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	1.6	1.8	2	3	4	5	10	15	20
100	94	88	78	66	55	47	41	36	33	29	11	4	2	0	0	0

CHILDREN(1-6 YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS HG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

ESTIMATES BASED ON 0.00 0.006961 99.45

PRIOR TOLERANCES: 99.22 0.006961

NEW TOLERANCES: 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	1.6	1.8	2	3	4	5	10	15	20
100	93	82	68	54	41	31	22	16	12	8	1	0	0	0	0	0

 *NAME: ENHOUTIAN
 *CASSELL NO: 479
 *CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B
 *STATUS CODES: C 00000,0180 000036,000 000100 Terata
 *RDV INFO: The LD value used in this analysis is 0.007
 *FILE INFO: NEW ACTION: User Modifications APPROVED:Data NOT Used PUBLISHED:Data NOT Used

 FEMALES(13+ YRS)

ESTIMATED % OF POTENTIAL	PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY	ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCE EDING X TIMES THE RDV, FOR X=
0	0	0	0	0	0
100	39	13	4	2	1
0	.2	.4	.6	.8	1
					1.2
					1.4
					1.6
					1.8
					2
					3
					4
					5
					10
					15
					20

 MALES(13+ YRS)

ESTIMATED % OF POTENTIAL	PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY	ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCE EDING X TIMES THE RDV, FOR X=
0	0	0	0	0	0
100	46	18	7	3	1
0	.2	.4	.6	.8	1
					1.2
					1.4
					1.6
					1.8
					2
					3
					4
					5
					10
					15
					20

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

 NAME: ENDOSULFAN STUDY RDV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO.
 *CASWELL NO: 420 CFR NO: CFR180.182 A 00000.0001 000030.000 001000 Chronic Dog Systemic Minimum 0000000416**
 *CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Rat Systemic Minimum 0000001488**
 *STATUS CODES: C 00000.0180 000036.000 000100 Terata Rabbit Systemic Minimum
 *RDV INFO: The LD value used in this analysis is 0.007 Hg/Kg of BODY WEIGHT/DAY
 *FILE INFO: NEW ACTION: User Modifications APPROVED:Data NOT Used PUBLISHED:Data NOT Used

FEMALES(13+ YRS)

ESTIMATED % OF POTENTIAL		MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY																			
ESTIMATES BASED ON	PERSON DAYS THAT ARE USER-DAYS	HG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV																	AS PERCENT OF RDV	
PRIOR TOLERANCES:	0	0.00	0.000000																	0.00	
NEW TOLERANCES:	100	13.09	0.000472																	6.74	
	0	.2	.4	.6	.8	1	1.2	1.4	1.6	1.8	2	3	4	5	10	15	20				
PRIOR TOLERANCES:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
NEW TOLERANCES:	100	10	6	3	1	1	1	0	0	0	0	0	0	0	0	0	0				

MALES(13+ YRS)

ESTIMATED % OF POTENTIAL		MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY																			
ESTIMATES BASED ON	PERSON DAYS THAT ARE USER-DAYS	HG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV																	AS PERCENT OF RDV	
PRIOR TOLERANCES:	0	0.00	0.000000																	0.00	
NEW TOLERANCES:	100	15.32	0.000403																	5.76	
	0	.2	.4	.6	.8	1	1.2	1.4	1.6	1.8	2	3	4	5	10	15	20				
PRIOR TOLERANCES:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
NEW TOLERANCES:	100	8	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0				

Handwritten initials or signature.

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

NAME: ENOSULFAM STUDY NO: CFR180.182 A 00000.0001 000030.000 001000 Chronic DOG SPECIES EFF. LEV. CORE GRADE DOC. NO. *

CASWELL NO: 420 CFR NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Dog Systemic Minimum 0000000416*

CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 C 00000.0180 000036.000 000100 Terata Rat Systemic Minimum 0000001489*

STATUS CODES: C 00000.0180 000036.000 000100 Terata Rabbit Systemic Minimum 0000001489*

*RDV INFO: The LD value used in this analysis is 0.007 MG/KG of BODY WEIGHT/DAY PUBLISHED: data NOT Used

*FILE INFO: NEW ACTION: User Modifications APPROVED: date NOT Used PUBLISHED: data NOT Used

POPULATION = MALES(13+ YRS)

FOOD DESCRIPTION

NUMBER OF CONSUMER : TOLERANCE VALUE(PPM) & TYPE : (UG/KG BODY WT PER DAY)

DAYS AS PERCENT OF : PUBLISHED APPROVED NEW : PRIORITY TOL. NEW TOL.

POTENTIAL PERSON DAYS

MENU CATEGORY 10: FRUITS

06013AA PINEAPPLE-FRESH, PULP	3.28	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	1.171501
06013DA PINEAPPLE-DRIED	0.01	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	3.854625
06013JA PINEAPPLE-FRESH, JUICE	1.04	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	6.006528

U.S. POP. -48 STATES

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
PRIOR TOLERANCES:	0.00	0.000000	0.00
NEW TOLERANCES:	4.71	0.004042	57.74
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=	0	.2	.4
	0	.6	.8
	1	1.2	1.4
	1	1.6	1.8
	2	2	3
	3	4	5
	4	5	10
	5	10	15
	10	15	20

INFANTS (<1 YEAR)

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
PRIOR TOLERANCES:	0.00	0.000000	0.00
NEW TOLERANCES:	7.95	0.010487	149.81
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=	0	.2	.4
	0	.6	.8
	1	1.2	1.4
	1	1.6	1.8
	2	2	3
	3	4	5
	4	5	10
	5	10	15
	10	15	20

CHILDREN(1-6 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
PRIOR TOLERANCES:	0.00	0.000000	0.00
NEW TOLERANCES:	5.36	0.011130	159.00
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=	0	.2	.4
	0	.6	.8
	1	1.2	1.4
	1	1.6	1.8
	2	2	3
	3	4	5
	4	5	10
	5	10	15
	10	15	20

PRIOR TOLERANCES:

NEW TOLERANCES:

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	67	52	47	44	41	38	35	30	27	25	16	11	8	2	1	0	0	0	0

M

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

NAME: ENDOSULFAN STUDY NO: 00000.0001 000030.000 001000 Chronic SPECIES Dog EFF. LEV. Systemic Minimum 0000000416*

CASSELL NO: 420 CFR NO: CFR180.182 A 00000.4000 000040.000 000100 Terate Rat Systemic Minimum 0000001488*

CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.0180 000036.000 000100 Terate Rabbit Systemic Minimum 0000001488*

STATUS CODES: C

RDV INFO: The LD value used in this analysis is 0.007

RDV ACTION: User Modifications APPROVED: Data NOT Used PUBLISHED: Data NOT Used

POPULATION = MALES(13+ YRS)

FOOD DESCRIPTION

MENU CATEGORY 9: OTHER VEGETABLES, INCL. BRASSICA

13024AA SPINACH

U.S. POP. - 48 STATES

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS MG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 3.84 0.002238 31.97

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	1.6	1.8	2	3	4	5	10	15	20
100	44	32	19	12	7	5	3	2	2	1	0	0	0	0	0	0

INFANTS(<1 YEAR)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS MG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 1.64 0.015652 223.59

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	1.6	1.8	2	3	4	5	10	15	20
100	94	91	88	82	69	69	64	54	52	52	31	18	7	0	0	0

CHILDREN(1-6 YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS MG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 2.86 0.003704 52.91

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	1.6	1.8	2	3	4	5	10	15	20
100	43	40	33	29	23	19	15	11	9	5	1	0	0	0	0	0

U.S. POP. - 48 STATES

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS MG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 3.84 0.002238 31.97

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	1.6	1.8	2	3	4	5	10	15	20
100	44	32	19	12	7	5	3	2	2	1	0	0	0	0	0	0

CHILDREN(1-6 YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS MG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 2.86 0.003704 52.91

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	1.6	1.8	2	3	4	5	10	15	20
100	43	40	33	29	23	19	15	11	9	5	1	0	0	0	0	0

U.S. POP. - 48 STATES

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS MG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 3.84 0.002238 31.97

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	1.6	1.8	2	3	4	5	10	15	20
100	44	32	19	12	7	5	3	2	2	1	0	0	0	0	0	0

CHILDREN(1-6 YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS MG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 2.86 0.003704 52.91

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	1.6	1.8	2	3	4	5	10	15	20
100	43	40	33	29	23	19	15	11	9	5	1	0	0	0	0	0

U.S. POP. - 48 STATES

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS MG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 3.84 0.002238 31.97

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	1.6	1.8	2	3	4	5	10	15	20
100	44	32	19	12	7	5	3	2	2	1	0	0	0	0	0	0

CHILDREN(1-6 YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS MG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 2.86 0.003704 52.91

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	1.6	1.8	2	3	4	5	10	15	20
100	43	40	33	29	23	19	15	11	9	5	1	0	0	0	0	0

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 *NAME: ENDOSULFAN
 *CASWELL NO: 420 CFR NO: CFR180.182 STUDY A 00000.0001 000030.000 001000 Chronic SF STUDY TYPE Dog Systemic Eff. Lev. CORE GRADE DOC. NO. *
 CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000060.000 000100 Terata Rat Systemic Minimum 0000000416
 STATUS CODES: C 00000.0180 000036.000 000100 Terata Rabbit Systemic Minimum 0000001488
 *RDV INFO: The LD value used in this analysis is 0.007 mg/kg of body weight/day
 *FILE INFO: NEW ACTION: User Modifications APPROVED: Data NOT Used PUBLISHED: Data NOT Used

FEMALES(13+ YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=
0	0.00	0.00	20
48	3.62	30.11	10
35	0.002108	0.00	5
17	0.2	1.6	4
11	0.4	1.8	3
5	0.6	2	2
2	0.8	2	1
1	1.2	2	1
0	1.4	3	1
0	1.6	4	1
0	1.8	5	1
0	2	10	1
0	3	15	1
0	4	20	1

PRIOR TOLERANCES: 100
 NEW TOLERANCES: 0

MALES(13+ YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=
0	0.00	0.00	20
45	3.95	27.12	10
28	0.001899	0.00	5
17	0.2	1.6	4
8	0.4	1.8	3
3	0.6	2	2
2	0.8	2	1
1	1.2	2	1
0	1.4	3	1
0	1.6	4	1
0	1.8	5	1
0	2	10	1
0	3	15	1
0	4	20	1

PRIOR TOLERANCES: 100
 NEW TOLERANCES: 0

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

 NAME: ENDOSULFAN STUDY RDV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO.
 CASWELL NO: 420 CFR NO: CFR180.182 A 00000.0001 000030.000 001000 Chronic Dog Systemic Minimum 0000000416
 CASWELL NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Rat Systemic Minimum 0000001489
 *STATUS CODES: C 00000.0180 000036.000 000100 Terata Rabbit Systemic Minimum
 *RDV INFO: The LD value used in this analysis is 0.007 Mg/Kg of BODY WEIGHT/DAY
 *FILE INFO: NEW ACTION: User Modifications APPROVED:Data NOT Used PUBLISHED:Data NOT Used

FEMALES(13+ YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCE EDING X TIMES THE RDV, FOR X=
0	0.00	0.000000	0
100	1.81	0.000369	20

ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCE EDING X TIMES THE RDV, FOR X=

0	.2	.4	.6	.8	1	1.2	1.4	1.6	1.8	2	3	4	5	10	15	20
---	----	----	----	----	---	-----	-----	-----	-----	---	---	---	---	----	----	----

PRIOR TOLERANCES: 0
 NEW TOLERANCES: 0

MALES(13+ YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCE EDING X TIMES THE RDV, FOR X=
0	0.00	0.000000	0
100	1.61	0.000370	20

ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCE EDING X TIMES THE RDV, FOR X=

0	.2	.4	.6	.8	1	1.2	1.4	1.6	1.8	2	3	4	5	10	15	20
---	----	----	----	----	---	-----	-----	-----	-----	---	---	---	---	----	----	----

PRIOR TOLERANCES: 0
 NEW TOLERANCES: 0

 *NAME: ENDOSULFAN STUDY NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO. *
 CASWELL NO: 420 CFR NO: CFR180.182 A 00000.0001 000030.000 001000 Chronic Dog Systemic Minimum 0000000416
 CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Rat Systemic Minimum 0000001488
 *STATUS CODES: C 00000.0180 000036.000 000100 Terata Rabbit Systemic Minimum
 *RDV INFO: The LD value used in this analysis is 0.007 Ng/Kg of BODY WEIGHT/DAY
 *FILE INFO: NEW ACTION: User Modifications APPROVED:Data NOT Used PUBLISHED:Data NOT Used

 FEMALES(13+ YRS)

ESTIMATED % OF POTENTIAL		MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY																	
ESTIMATES BASED ON		PERSON DAYS THAT ARE USER-DAYS		HG/KG BODY WEIGHT/DAY		AS PERCENT OF RDV		EXCE EDING X TIMES THE RDV, FOR X=		FOR X=									
PRIOR TOLERANCES:	NEW TOLERANCES:	0	100	0	100	0	100	0	100	0	100								
0	0	0	0	0	0	0	0	0	0	0	0								
		0.00	32.96	0.000000	0.000080	0.00	1.15	0	0	0	0								
		ESTIMATED % OF POPULATION	ESTIMATED % OF POPULATION	WITH RESIDUE CONTRIBUTION	WITH RESIDUE CONTRIBUTION	EXCE EDING X TIMES THE RDV,	EXCE EDING X TIMES THE RDV,	FOR X=	FOR X=	FOR X=	FOR X=								
		0	0	.2	.4	.6	.8	1	1.2	1.4	1.6	1.8	2	3	4	5	10	15	20

 MALES(13+ YRS)

ESTIMATED % OF POTENTIAL		MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY																	
ESTIMATES BASED ON		PERSON DAYS THAT ARE USER-DAYS		HG/KG BODY WEIGHT/DAY		AS PERCENT OF RDV		EXCE EDING X TIMES THE RDV, FOR X=		FOR X=									
PRIOR TOLERANCES:	NEW TOLERANCES:	0	100	0	100	0	100	0	100	0	100								
0	0	0	0	0	0	0	0	0	0	0	0								
		0.00	31.58	0.000000	0.000076	0.00	1.09	0	0	0	0								
		ESTIMATED % OF POPULATION	ESTIMATED % OF POPULATION	WITH RESIDUE CONTRIBUTION	WITH RESIDUE CONTRIBUTION	EXCE EDING X TIMES THE RDV,	EXCE EDING X TIMES THE RDV,	FOR X=	FOR X=	FOR X=	FOR X=								
		0	0	.2	.4	.6	.8	1	1.2	1.4	1.6	1.8	2	3	4	5	10	15	20

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 NAME: ENDOSULFAN STUDY RDV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO.
 CASWELL NO: 420 CFR NO: CFR180.182 A 00000.0001 000030.000 001000 Chronic Dog Systemic 0000000416
 CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Rat Systemic Minimum 000000148B
 *STATUS CODES: C 00000.0180 000036.000 000100 Terata Rabbit Systemic Minimum
 *RDV INFO: The LD value used in this analysis is 0.007 MG/KG OF BODY WEIGHT/DAY
 *FILE INFO: NEW ACTION: User Modifications APPROVED: data NOT used PUBLISHED: data NOT used

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		EXC EDING X TIMES THE RDV, FOR X=		EXC EDING X TIMES THE RDV, FOR X=		EXC EDING X TIMES THE RDV, FOR X=		EXC EDING X TIMES THE RDV, FOR X=		EXC EDING X TIMES THE RDV, FOR X=			
PRIOR TOLERANCES:	NEW TOLERANCES:	0	1	2	3	4	5	10	15	20	0	1	2	3	4	5	10	15	20
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	100	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXC EDING X TIMES THE RDV, FOR X=		0	.2	.4	.6	.8	1	1.2	1.4	1.6	1.8	2	3	4	5	10	15	20	
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXC EDING X TIMES THE RDV, FOR X=		0	98.79	97.30	96.80	96.20	95.60	95.00	94.40	93.80	93.20	92.60	92.00	91.40	90.80	90.20	89.60	89.00	
PRIOR TOLERANCES:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NEW TOLERANCES:		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	

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		EXC EDING X TIMES THE RDV, FOR X=		EXC EDING X TIMES THE RDV, FOR X=		EXC EDING X TIMES THE RDV, FOR X=		EXC EDING X TIMES THE RDV, FOR X=		EXC EDING X TIMES THE RDV, FOR X=			
PRIOR TOLERANCES:	NEW TOLERANCES:	0	1	2	3	4	5	10	15	20	0	1	2	3	4	5	10	15	20
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	100	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXC EDING X TIMES THE RDV, FOR X=		0	.2	.4	.6	.8	1	1.2	1.4	1.6	1.8	2	3	4	5	10	15	20	
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXC EDING X TIMES THE RDV, FOR X=		0	98.79	97.30	96.80	96.20	95.60	95.00	94.40	93.80	93.20	92.60	92.00	91.40	90.80	90.20	89.60	89.00	
PRIOR TOLERANCES:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NEW TOLERANCES:		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	

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 *NAME: ENDOSULFAN
 *CASWELL NO: 420 CFR NO: CFR180.182 STUDY RDV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO.
 CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Dog Systemic 0000000416
 STATUS CODES: C 00000.0180 000036.000 000100 Terata Rabbit Systemic Minimum 0000001489
 *RDV INFO: The LD value used in this analysis is 0.07 Hg/Kg of BODY WEIGHT/DAY
 *FILE INFO: NEW ACTION: User Modifications APPROVED-data NOT Used PUBLISHED-data NOT Used

 FEMALES(13+ YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS	HG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	AS PERCENT OF RDV	EDGING X TIMES THE RDV, FOR X=
0	0.00	0.00	0.00	0
100	4.66	4.53	4.53	10
0	.2	.4	.8	20

PRIOR TOLERANCES: 0
 NEW TOLERANCES: 0

MOE = 25
 Mean MOE = 221

MALES(13+ YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

PERSON DAYS THAT ARE USER-DAYS	HG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	AS PERCENT OF RDV	EDGING X TIMES THE RDV, FOR X=
0	0.00	0.00	0.00	0
100	5.09	4.05	4.05	10
0	.2	.4	.8	20

PRIOR TOLERANCES: 0
 NEW TOLERANCES: 0

MOE = 7
 Mean MOE = 247

 NAME: ENDOSULFAM STUDY RDB NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO.
 CASSELL NO: 420 CFR NO: CFR180.182 A 00000.0001 000030.000 001000 Chronic Dog Systemic Minimum 0000000416
 CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Rat Systemic Minimum 0000001488
 *STATUS CODES: C 00000.0180 000036.000 000100 Terata Rabbit Systemic Minimum
 *RDV INFO: The LD value used in this analysis is 0.007 Mg/Kg of Body Weight/Day
 *FILE INFO: NEW ACTION: User Modifications APPROVED:Data NOT Used PUBLISHED:Data NOT Used

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																
PRIOR TOLERANCES:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW TOLERANCES:		11.56	11.56	0.000277	0.000000	3.96	3.96	0.000277	0.000000	1.6	1.8	2	3	4	5	10	15	20	0	0	0
0	0	.2	.4	.6	.8	1	1.2	1.4	1.6	1.8	2	3	4	5	10	15	20	0	0	0	0
PRIOR TOLERANCES:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW TOLERANCES:		100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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																
PRIOR TOLERANCES:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW TOLERANCES:		13.15	13.15	0.000290	0.000000	4.14	4.14	0.000290	0.000000	1.6	1.8	2	3	4	5	10	15	20	0	0	0
0	0	.2	.4	.6	.8	1	1.2	1.4	1.6	1.8	2	3	4	5	10	15	20	0	0	0	0
PRIOR TOLERANCES:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW TOLERANCES:		100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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

NAME: ENDOSULFAN STUDY RDV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO. *

CASSELL NO: 420 CFR NO: CFR180.182 A 00000.0001 000030.000 001000 Chronic Dog Systemic 0000000416*

CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Rat Systemic Minimum 0000001488

STATUS CODES: C 00000.0180 000035.000 000100 Terata Rabbit Systemic Minimum 0000001488

*RDV INFO: The LD value used in this analysis is 0.07

*FILE INFO: NEW ACTION: User Modifications APPROVED:Data Not Used PUBLISHED:Data Not Used

LISTING OF RELEVANT FOODS, ORDERED BY MENU CATEGORY. MENU PATTERN = 1

CHEMICAL IS ASSUMED TO BE UNIFORMLY DISTRIBUTED (WATER:OIL)

POPULATION = U.S. POP.---48 STATES

FOOD CONTRIBUTION TO EXPOSURE

FOOD CODE DESCRIPTION : NUMBER OF CONSUMER : DAYS AS PERCENT OF : POTENTIAL PERSON DAYS : PUBLISHED APPROVED NEW : PRIORITY TOL. NEW TOL.

MENU CATEGORY 10: FRUITS

10002AA CANTALOUPE-UNSPECIFIED 0.00 2.0000 0.000000

10002AB CANTALOUPE-PULP 1.46 2.0000 6.158599

U.S. POP.---48 STATES

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

ESTIMATES BASED ON PERSON DAYS THAT ARE USER-DAYS HG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 1.46 0.006159 8.80

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	1.6	1.8	2	3	4	5	10	15	20
---	----	----	----	----	---	-----	-----	-----	-----	---	---	---	---	----	----	----

PRIOR TOLERANCES: 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

NEW TOLERANCES: 100 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Mean MOE = 114

MOE = 25

INFANTS(<1 YEAR)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

ESTIMATES BASED ON PERSON DAYS THAT ARE USER-DAYS HG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 0.05 0.023043 32.92

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	1.6	1.8	2	3	4	5	10	15	20
---	----	----	----	----	---	-----	-----	-----	-----	---	---	---	---	----	----	----

PRIOR TOLERANCES: 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

NEW TOLERANCES: 100 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Mean MOE = 30

MOE = 25

CHILDREN(1-6 YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

ESTIMATES BASED ON PERSON DAYS THAT ARE USER-DAYS HG/KG BODY WEIGHT/DAY AS PERCENT OF RDV

PRIOR TOLERANCES: 0.00 0.000000 0.00

NEW TOLERANCES: 0.60 0.013103 18.72

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	1.6	1.8	2	3	4	5	10	15	20
---	----	----	----	----	---	-----	-----	-----	-----	---	---	---	---	----	----	----

PRIOR TOLERANCES: 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

NEW TOLERANCES: 100 37 5 0 0 0 0 0 0 0 0 0 0 0 0 0

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 *NAME: ENDOSULFAN
 *CASWELL NO: 420 CFR NO: CFR180.182 STUDY RDV NOEL SF STUDY TYPE SPECIES EFF. LEV. CORE GRADE DOC. NO.
 CAS NO: 00115-29-7 SHAUGHNESSY NO: 079401 B 00000.4000 000040.000 000100 Terata Dog Systemic 0000000416
 STATUS CODES: C 00000.0180 000036.000 000100 Terata Rabbit Systemic Minimum 0000001489
 *RDV INFO: The LD value used in this analysis is 0.07 APPROVED:Data NOT Used PUBLISHED:Data NOT Used
 *FILE INFO: NEW ACTION: User Modifications

 OFEMALES(13+ YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

ESTIMATES BASED ON	PERSON DAYS THAT ARE USER-DAYS	HG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV
PRIOR TOLERANCES:	0.00	0.000000	0.00
NEW TOLERANCES:	1.87	0.005801	8.29
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=	0	.2	.4
	.2	.4	.6
	.4	.6	.8
	.6	.8	1
	.8	1	1.2
	1	1.2	1.4
	1.2	1.4	1.6
	1.4	1.6	1.8
	1.6	1.8	2
	1.8	2	3
	2	3	4
	3	4	5
	4	5	10
	5	10	15
	10	15	20

HOE = 25
 Mean HOE = 121

MALES(13+ YRS)

ESTIMATED % OF POTENTIAL MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY

ESTIMATES BASED ON	PERSON DAYS THAT ARE USER-DAYS	HG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV
PRIOR TOLERANCES:	0.00	0.000000	0.00
NEW TOLERANCES:	1.40	0.005240	7.49
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=	0	.2	.4
	.2	.4	.6
	.4	.6	.8
	.6	.8	1
	.8	1	1.2
	1	1.2	1.4
	1.2	1.4	1.6
	1.4	1.6	1.8
	1.6	1.8	2
	1.8	2	3
	2	3	4
	3	4	5
	4	5	10
	5	10	15
	10	15	20

HOE = 25
 Mean HOE = 134

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