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

OCT 28 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

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

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.

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 x 10^{-5} mg/kg bwt/day, which represents 10% of the RfD. The proposed tolerances being recommended through reregistration contribute 1.0 x 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 x 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 x 10^{-5} mg/kg bwt/day (40% of the RfD). The ARC for new tolerances recommended in reregistration contributes less than 1.0 x 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 x 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 (NOEL/exposure = 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.

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ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 453A | DATE: 10/26/94 | PAGE: 1

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 Commitee)	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	2F2623	P 0.100000	0.005000	FIELD TRIAL	14.00	0.000700
01014AA	GRAPES-FRESH	21 COOKED-NFS	2F2623	P 0.100000	0.005000	FIELD TRIAL	14.00	0.000700
01014AA	GRAPES-FRESH	31 COOKED-FRESH OR CANNED	2F2623	P 0.100000	0.005000	FIELD TRIAL	14.00	0.000700
01014DA	GRAPES-RAISINS	10 RAW-FRESH OR NFS	2H5361	P 0.300000	0.005500C	FT/PROCESSING	14.00	0.000770
01014DA	GRAPES-RAISINS	21 COOKED-NFS	2H5361	P 0.300000	0.005500C	FT/PROCESSING	14.00	0.000770
01014DA	GRAPES-RAISINS	22 COOKED-FRESH-BAKED	2H5361	P 0.300000	0.005500C	FT/PROCESSING	14.00	0.000770
01014JA	GRAPES-JUICE	10 RAW-FRESH OR NFS	2F2623	P 0.100000	0.005000C	FT/PROCESSING	14.00	0.000700
01014JA	GRAPES-JUICE	15 RAW-FRESH OR CANNED	2F2623	P 0.100000	0.005000C	FT/PROCESSING	14.00	0.000700
01014JA	GRAPES-JUICE	21 COOKED-NFS	2F2623	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-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		100.00	0.500000
02002AA	GRAPEFRUIT-UNSP	00 NOT SPECIFIED (NO CONSUMPTION)	6F1865	P 0.600000	0.011000	FIELD TRIAL	20.00	0.002200
02002AB	GRAPEFRUIT-PULP	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.011000	FIELD TRIAL	20.00	0.002200
02002AB	GRAPEFRUIT-PULP	21 COOKED-NFS	6F1865	P 0.600000	0.011000	FIELD TRIAL	20.00	0.002200
02002JA	GRAPEFRUIT-JUICE	15 RAW-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FT/PROCESSING	20.00	0.000400
02002JA	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		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
02004AB	LEMONS-PULP	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.011000	FIELD TRIAL	32.00	0.003520
02004AB	LEMONS-PULP	31 COOKED-FRESH OR CANNED	6F1865	P 0.600000	0.011000	FIELD TRIAL	32.00	0.003520
02004HA	LEMONS-PEEL	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.109000	FIELD TRIAL	32.00	0.034880
02004HA	LEMONS-PEEL	21 COOKED-NFS	6F1865	P 0.600000	0.109000	FIELD TRIAL	32.00	0.034880
02004JA	LEMONS-JUICE	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.002000C	FIELD TRIAL	32.00	0.000640
02004JA	LEMONS-JUICE	15 RAW-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FIELD TRIAL	32.00	0.000640
02004JA	LEMONS-JUICE	21 COOKED-NFS	6F1865	P 0.600000	0.002000C	FIELD TRIAL	32.00	0.000640
02004JA	LEMONS-JUICE	31 COOKED-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FIELD TRIAL	32.00	0.000640
02005AA	LIMES-UNSPEC	00 NOT SPECIFIED (NO CONSUMPTION)	6F1865	P 0.600000	0.011000	FIELD TRIAL	100.00	0.011000
02005AB	LIMES-PULP	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.011000	FIELD TRIAL	100.00	0.011000
02005HA	LIMES-PEEL	21 COOKED-NFS	6F1865	P 0.600000	0.109000	FIELD TRIAL	100.00	0.109000
02005JA	LIMES-JUICE	10 RAW-FRESH OR NFS	6F1865	P 0.600000	0.002000C	FT/PROCESSING	100.00	0.002000
02005JA	LIMES-JUICE	15 RAW-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FT/PROCESSING	100.00	0.002000
02005JA	LIMES-JUICE	31 COOKED-FRESH OR CANNED	6F1865	P 0.600000	0.002000C	FT/PROCESSING	100.00	0.002000

Table 1.

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ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 453A   DATE: 10/26/94

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 Commitee)	Plasma ChE inhibition No evidence of oncogenicity in rats or mice.	PADI UF -->100 OPP RfD= 0.000100 EPA RfD= 0.000250	Chronic feeding-dog (current study may be upgraded)	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	TANGELOS	10 RAW-FRESH OR NFS	REREGIS	N 0.500000	0.500000		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
04001JA	APPLES-JUICE	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
05002AA	CHERRIES-FRESH	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		3.00	0.000480
05002JA	CHERRIES-JUICE	21 COOKED-NFS	9F2252	P 0.250000	0.016000		3.00	0.000480
05004AA	PEACHES-FRESH	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-CANNED	9F2252	P 0.250000	0.018000	FIELD TRIAL	1.00	0.000180
05004DA	PEACHES-DRIED	10 RAW-FRESH OR NFS	9F2252	P 0.250000	0.018000		1.00	0.000180
05004DA	PEACHES-DRIED	21 COOKED-NFS	9F2252	P 0.250000	0.018000		1.00	0.000180
06002AA	BANANAS-UNSPEC	22 COOKED-FRESH-BAKED	3F1399	P 0.100000	0.007000	FIELD TRIAL	100.00	0.007000
06002AB	BANANAS-FRESH	10 RAW-FRESH OR NFS	3F1399	P 0.100000	0.007000	FIELD TRIAL	100.00	0.007000
06002AB	BANANAS-FRESH	21 COOKED-NFS	3F1399	P 0.100000	0.007000	FIELD TRIAL	100.00	0.007000
06002AB	BANANAS-FRESH	31 COOKED-FRESH OR CANNED	3F1399	P 0.100000	0.007000	FIELD TRIAL	100.00	0.007000
06002DA	BANANAS-DRIED	10 RAW-FRESH OR NFS	3F1399	P 0.100000	0.007000		100.00	0.007000
06002DA	BANANAS-DRIED	21 COOKED-NFS	3F1399	P 0.100000	0.007000		100.00	0.007000
06013AA	PINEAPPLE-PULP	10 RAW-FRESH OR NFS	6F1864	P 0.300000	0.024000	FIELD TRIAL	36.00	0.008640

Table 1.

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ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 453A DATE: 10/26/94

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 Commitee)	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		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	0.033000	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
11004AA	PIMIENTOS	31 COOKED-FRESH OR CANNED	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	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	0.230000	FIELD TRIAL	11.00	0.025300
13010AA	CABBAGE-CHINESE	10 RAW-FRESH OR NFS	0E3845	P 0.400000	0.230000	FIELD TRIAL	11.00	0.025300
13010AA	CABBAGE-CHINESE	21 COOKED-NFS	3F1399	P 0.100000	0.230000	FIELD TRIAL	11.00	0.025300
13010AA	CABBAGE-CHINESE	21 COOKED-NFS	0E3845	P 0.400000	0.230000	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

Table 1.

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ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 453A DATE: 10/26/94 PAGE: 4

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 Commitee)	Plasma ChE inhibition No evidence of oncogenicity in rats or mice.	PADI UF -->100 OPP RfD= 0.000100 EPA RfD= 0.000250	Chronic feeding-dog (current study may be upgraded)	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	10 RAW-FRESH OR NFS	REREG	N 0.980000	0.042000		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	REREG	N 0.980000	0.042000		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	REREG	N 0.980000	0.042000		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		1.00	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
27003OA	COTTONSEED-OIL	18 PROCESSED OIL	3F1399	P 0.050000	0.009000C	FT/PROCESSING	1.00	0.000090
27003WA	COTTONSEED-MEAL	18 PROCESSED OIL	3F1399	P 0.050000	0.005000	FT/PROCESSING	1.00	0.000050
27007OA	PEANUTS-OIL	18 PROCESSED OIL	3F1399	P 0.020000	0.021000	FT/PROCESSING	2.00	0.000420
27007OA	PEANUTS-OIL	18 PROCESSED OIL	REREG	N 0.980000	0.021000		2.00	0.000420
27010OA	SOYBEANS-OIL	18 PROCESSED OIL	3F1399	P 0.050000	0.050000		1.00	0.000500
28023AA	SOYBEANS-UNSPEC	21 COOKED-NFS	3F1399	P 0.050000	0.050000		1.00	0.000500
28023AB	SOYBEANS-DRY	10 RAW-FRESH OR NFS	3F1399	P 0.050000	0.050000		1.00	0.000500
28023AB	SOYBEANS-DRY	21 COOKED-NFS	3F1399	P 0.050000	0.050000		1.00	0.000500
28023AB	SOYBEANS-DRY	23 COOKED-FRESH-BOILED	3F1399	P 0.050000	0.050000		1.00	0.000500
28023AB	SOYBEANS-DRY	25 COOKED-FRESH-FRIED	3F1399	P 0.050000	0.050000		1.00	0.000500
28023AB	SOYBEANS-DRY	31 COOKED-FRESH OR CANNED	3F1399	P 0.050000	0.050000		1.00	0.000500
28023WA	SOY-FL, FULL FAT	21 COOKED-NFS	3F1399	P 0.050000	0.050000		1.00	0.000500
28023WA	SOY-FL, FULL FAT	22 COOKED-FRESH-BAKED	3F1399	P 0.050000	0.050000		1.00	0.000500
28023WA	SOY-FL, FULL FAT	31 COOKED-FRESH OR CANNED	3F1399	P 0.050000	0.050000		1.00	0.000500
28023WB	SOY-FL, LOW FAT	21 COOKED-NFS	3F1399	P 0.050000	0.050000		1.00	0.000500
28023WC	SOY-FL,DEFAT	10 RAW-FRESH OR NFS	3F1399	P 0.050000	0.050000		1.00	0.000500
28023WC	SOY-FL,DEFAT	21 COOKED-NFS	3F1399	P 0.050000	0.050000		1.00	0.000500
28023WC	SOY-FL,DEFAT	22 COOKED-FRESH-BAKED	3F1399	P 0.050000	0.050000		1.00	0.000500
28023WC	SOY-FL,DEFAT	51 COOKED-CANNED	3F1399	P 0.050000	0.050000		1.00	0.000500
28023WC	SOY-FL,DEFAT	53 COOKED-CANNED-BOILED	3F1399	P 0.050000	0.050000		1.00	0.000500
43058AA	WINE AND SHERRY	10 RAW-FRESH OR NFS		P 0.100000	0.005000C	FT/PROCESSING	14.00	0.000700
43058AA	WINE AND SHERRY	21 COOKED-NFS		P 0.100000	0.005000C	FT/PROCESSING	14.00	0.000700
50000DB	MILK-NON-FAT SOL	10 RAW-FRESH OR NFS	9F2252	P 0.010000	0.000012	FEEDING STUDY	100.00	0.000012
50000DB	MILK-NON-FAT SOL	21 COOKED-NFS	9F2252	P 0.010000	0.000012	FEEDING STUDY	100.00	0.000012
50000DB	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

Table 1.

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 453A

DATE: 10/26/94

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 Commitee)	Plasma ChE inhibition No evidence of oncogenicity in rats or mice.	PADI UF -->100 OPP RfD= 0.000100 EPA RfD= 0.000250	Chronic feeding-dog (current study may be upgraded)	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
53001BB	BEEF-OTH ORGAN	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001BB	BEEF-OTH ORGAN	51 COOKED-CANNED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53001DA	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
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
53001MA	BEEF-LEAN	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
53002BB	GOAT-OTH ORGAN	00 NOT SPECIFIED (NO CONSUMPTION)	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53002FA	GOAT-FAT	23 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
53002KA	GOAT-KIDNEY	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
53002MA	GOAT-LEAN	23 COOKED-FRESH-BOILED	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53002MA	GOAT-LEAN	25 COOKED-FRESH-FRIED	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
53005BA	SHEEP-MEAT BYP	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53005BB	SHEEP-OTH ORGAN	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53005FA	SHEEP-FAT	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53005KA	SHEEP-KIDNEY	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53005LA	SHEEP-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53005MA	SHEEP-LEAN	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120
53005MA	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
53006BB	PORK-OTH ORGAN	21 COOKED-NFS	9F2252	P 0.050000	0.000120	FEEDING STUDY	100.00	0.000120

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Table 1.

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ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 453A — DATE: 10/26/94 —

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 Commitee)	Plasma ChE inhibition No evidence of oncogenicity in rats or mice.	PADI UF -->100 OPP RfD= 0.000100 EPA RfD= 0.000250	Chronic feeding-dog (current study may be upgraded)	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)
53006BB	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

Table 2.

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CHEMICAL INFORMATION	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 Commitee)	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.

POPULATION SUBGROUP	TOTAL TMRC (MG/KG BODY WEIGHT/DAY) CURRENT TMRC*	NEW TMRC**	NEW TMRC AS PERCENT OF RFD	DIFFERENCE AS PERCENT OF RFD	EFFECT OF ANTICIPATED RESIDUES ARC	%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	1.682000	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)   DATE: 10/26/94
USING ANTICIPATED RESIDUES
CASWELL #453A

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

Acute Analysis for all Published RACs for RED

The SAS System 15:57 Tuesday, October 25, 1994 1

(13)

HGQ DAR 453A

10/25/94 15:57:02

Acute Analysis for all Published RACs for RED


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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.*
*CASWELL 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 Reprodctn     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*
*********************************************************************************************************************************
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U.S. POP.--48 STATES

ESTIMATES BASED ON	ESTIMATED % OF POTENTIAL PERSON DAYS THAT ARE USER-DAYS	MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY: MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV
TOLERANCES:	0.00	0.000000	0.00
ANTICIPATED RESIDUES:	99.78	0.002200	43.99

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
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

99%

95%

MOE

20

56

INFANTS(<1 YEAR)

ESTIMATES BASED ON	ESTIMATED % OF POTENTIAL PERSON DAYS THAT ARE USER-DAYS	MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY: MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV
TOLERANCES:	0.00	0.000000	0.00
ANTICIPATED RESIDUES:	93.94	0.006805	136.10

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
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

7

20

CHILDREN(1-6 YRS)

ESTIMATES BASED ON	ESTIMATED % OF POTENTIAL PERSON DAYS THAT ARE USER-DAYS	MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY: MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV
TOLERANCES:	0.00	0.000000	0.00
ANTICIPATED RESIDUES:	99.92	0.005909	118.18

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
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

10

25

Acute Analysis for all Published RACs for RED

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

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*****************************************************************************************************
*NAME: FENAMIPHOS (NEMACUR)          STUDY    RDV        NOEL       SF     STUDY TYPE  SPECIES  EFF. LEV.  CORE GRADE  DOC. NO.*
*CASWELL 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 Reprodctn    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*
*****************************************************************************************************
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MOE

99%

96%

95%

FEMALES(13+ YRS)

ESTIMATES BASED ON	ESTIMATED % OF POTENTIAL PERSON DAYS THAT ARE USER-DAYS	MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY: 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	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	39	29	20	13	8	4	3	2	1	1	0	0	0	0	0	0

33

83.

MALES(13+ YRS)

ESTIMATES BASED ON	ESTIMATED % OF POTENTIAL PERSON DAYS THAT ARE USER-DAYS	MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY: 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	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	37	25	16	10	5	3	2	1	1	1	0	0	0	0	0	0

33

100