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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

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OFFICE OF PREVENTION, PESTICIDES, AND TOXIC SUBSTANCES

MEMORANDUM

OPP PUBLIC DOCKET

SUBJECT: Dietary Exposure Analysis for Phorate in Support of the Reregistration Eligibility Decision.

FROM: Brian Steinwand (B) Dietary Risk Evaluation Section Science Analysis Branch/HED (7509C)

Through: Elizabeth Doyle, Section Head Dietary Risk Evaluation Section SAB/Health Effects Division

E. A. Doyle  
W. Metzger

TO: Mike Metzger, Chief Risk Characterization Analysis Branch Health Effects Division (7509C)

Action Requested

Provide a dietary exposure analysis to estimate the chronic dietary exposure and risk from phorate for uses which are being supported through reregistration.

Discussion

Toxicological Endpoint:

The Reference Dose (RfD) used in the analysis is 0.0005 mg/kg bwt/day, based on a NOEL of 0.05 mg/kg bwt/day from a one year dog feeding study that demonstrated brain cholinesterase inhibition, slight tremors in both sexes and marginal inhibition of body weight gain in males as an endpoint (See IRIS). An uncertainty factor of 100 was applied. The RfD value has been approved by the HED (5/5/88) and EPA (9/23/93) RfD committees. Phorate is classified as a Group E carcinogen by the Carcinogenicity Peer Review Committee.

No endpoint was identified that indicated any acute dietary concern (See LTL meeting minutes, 1/31/96).

## Residue Information

Tolerances for phorate residues in/on raw agricultural and animal commodities are expressed in terms of phorate and its cholinesterase-inhibiting metabolites and are published in 40 CFR §180.206 and in feed at 186.4750. The available data support the established tolerances on coffee, cottonseed, peanuts, sugar beets, and wheat. For the purposes of this analysis, the tolerances for beans (succulent and dried) was reassessed from 0.1 ppm to 0.05 ppm, corn grain and sweet corn from 0.1 ppm to 0.05 ppm, hops from 0.5 ppm to 2.0 ppm, potatoes from 0.5 ppm to 0.2 ppm, sorghum from 0.1 ppm to 0.05 ppm, soybeans from 0.01 ppm to 0.05 ppm, and sugarcane from 0.1 ppm to 0.05 ppm.

The established tolerances for milk, eggs, and the fat, meat, and meat byproducts of cattle, goats, hogs, horses, poultry should be revoked as CBRS has determined that these represent a 180.6(a)(3) situation and the tolerances need not be established. CBRS also recommends to revoke the established tolerances on barley, lettuce, rice and tomatoes as there are currently no registered uses of phorate on these commodities (See memo, D. Miller, 1/17/96).

## Results

A summary of the residue information considered in this analysis is attached as Table 1. A DRES chronic exposure analysis was performed using tolerance level residues and 100 percent crop treated information to estimate the Theoretical Maximum Residue Contribution (TMRC) for the general population and 22 subgroups. Percent crop treated and anticipated residue data were used to calculate the Anticipated Residue Concentration (ARC) for those same population subgroups for certain commodities. Summaries of the TMRCs, ARCs and their representations as percentages of the Reference Dose (RfD) are included as Table 2 and 3. A summary of the residue information and the associated ARCs using the recommended tolerance increases and or decreases and RAC revocations are attached as Table 4, 5 and 6.

Existing tolerances (See table 3) result in an ARC which represents 115% of the RfD for the U.S. general population. The highest subgroup, non-nursing infants (<1 year old) occupies 349% of the RfD. Incorporating the recommendations of CBRS (See memo, D. Miller, 1/17/96) results in an ARC of 15.5% for the U.S. general population, while the highest subgroup non-nursing infants changes to children (1-6 years old) and occupies 31.3% of the RfD.

The chronic analysis for phorate is not a worst case estimate of dietary exposure with all residues at tolerance level and 100 percent of the commodities assumed to be treated with phorate. This analysis has been refined, using percent crop treated and anticipated residue information for some commodities, to give a more accurate estimate of the dietary risk from phorate. Based on the risk estimates calculated in this analysis, it appears that chronic dietary risk from the uses recommended through reregistration, is not of serious concern.

**Attachments**

cc: DRES; Caswell 660; RCAB; CBRS II (D. Miller)

Label  
1

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 660

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Phorate (Thimet) Caswell #660 CAS No. 298-02-2 A.I. CODE: 057201 CFR No. 180.206	1yr feeding- dog NOEL= 0.0500 mg/kg 0.00 ppm LEL= 0.2500 mg/kg 0.00 ppm ONCO: E (RfD/PR Committee)	Brain CHE inhibition; slight tremors in M&F, marginal inhibition of body weight gain in M. No evidence of carcinog- enicity in rats or mice.	ADI UF -->100 OPP RfD= 0.000500 EPA RfD= 0.000000	No data gaps.  RfD Pending RAC approval of RAF CHE report.	WHO reviewed 1985 HED reviewed 06/13/86 EPA deferred 08/05/86 HED reviewed 05/05/88 EPA deferred 07/20/88 RfD/PR reviewed 09/23/93

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
07002AA	COFFEE	21 COOKED-NFS	0E2391	P 0.020000	0.020000		100.00	0.020000
08020AA	HOPS	21 COOKED-NFS	9F0809	P 0.500000	0.500000		2.00	0.010000
11005AA	TOMATOES-WHOLE	10 RAW-FRESH OR NFS	8F0723	P 0.100000	0.100000		10.00	0.010000
11005AA	TOMATOES-WHOLE	21 COOKED-NFS	8F0723	P 0.100000	0.100000		10.00	0.010000
11005AA	TOMATOES-WHOLE	31 COOKED-FRESH OR CANNED	8F0723	P 0.100000	0.100000		10.00	0.010000
11005JA	TOMATOES-JUICE	10 RAW-FRESH OR NFS	8F0723	P 0.100000	0.100000		10.00	0.010000
11005JA	TOMATOES-JUICE	21 COOKED-NFS	8F0723	P 0.100000	0.100000		10.00	0.010000
11005RA	TOMATOES-PUREE	10 RAW-FRESH OR NFS	8F0723	P 0.100000	0.100000		10.00	0.010000
11005RA	TOMATOES-PUREE	21 COOKED-NFS	8F0723	P 0.100000	0.100000		10.00	0.010000
11005RA	TOMATOES-PUREE	31 COOKED-FRESH OR CANNED	8F0723	P 0.100000	0.100000		10.00	0.010000
11005RA	TOMATOES-PUREE	32 COOKED-FRESH OR CANNED-BAKED	8F0723	P 0.100000	0.100000		10.00	0.010000
11005TA	TOMATOES-PASTE	51 COOKED-CANNED	8F0723	P 0.100000	0.100000		10.00	0.010000
11005TA	TOMATOES-PASTE	22 COOKED-FRESH-BAKED	8F0723	P 0.100000	0.100000		10.00	0.010000
11005TA	TOMATOES-PASTE	31 COOKED-FRESH OR CANNED	8F0723	P 0.100000	0.100000		10.00	0.010000
11005UA	TOMATOES-CATSUP	21 COOKED-NFS	8F0723	P 0.100000	0.100000		10.00	0.010000
13013AA	LETTUCE-LEAFY	10 RAW-FRESH OR NFS	7F0521	P 0.100000	0.100000		10.00	0.010000
13020AA	LETTUCE-UNSPEC	10 RAW-FRESH OR NFS	7F0521	P 0.100000	0.100000		10.00	0.010000
13045AA	LETTUCE-HEAD	10 RAW-FRESH OR NFS	7F0521	P 0.100000	0.100000		10.00	0.010000
14013AA	POTATO(WH)-WHOLE	21 COOKED-NFS	7F0521	P 0.100000	0.100000		10.00	0.010000
14013AA	POTATO(WH)-WHOLE	10 RAW-FRESH OR NFS	8F0673	P 0.500000	0.500000		29.00	0.145000
14013AA	POTATO(WH)-WHOLE	22 COOKED-FRESH-BAKED	8F0673	P 0.500000	0.500000		29.00	0.145000
14013AB	POTATO(WH)-UNSPEC	22 COOKED-FRESH-BAKED	8F0673	P 0.500000	0.500000		29.00	0.145000
14013AC	POTATO(WH)-PULP	21 COOKED-NFS	8F0673	P 0.500000	0.500000		29.00	0.145000
14013AC	POTATO(WH)-PULP	22 COOKED-FRESH-BAKED	8F0673	P 0.500000	0.500000		29.00	0.145000
14013AC	POTATO(WH)-PULP	23 COOKED-FRESH-BOILED	8F0673	P 0.500000	0.500000		29.00	0.145000
14013AC	POTATO(WH)-PULP	25 COOKED-FRESH-FRIED	8F0673	P 0.500000	0.500000		29.00	0.145000
14013DA	POTATO(WH)-DRY	10 RAW-FRESH OR NFS	8F0673	P 0.500000	0.500000		29.00	0.145000
14013DA	POTATO(WH)-DRY	31 COOKED-FRESH OR CANNED	8F0673	P 0.500000	0.500000		29.00	0.145000
14013HA	POTATO(WH)-PEEL	22 COOKED-FRESH-BAKED	8F0673	P 0.500000	0.500000		29.00	0.145000
15001AA	BEANS-DRY-GRN NO 00	NOT SPECIFIED (NO CONSUMPTION)	8F0727	P 0.100000	0.100000		2.00	0.002000
15001AB	BEANS-DRY-KIDNEY 21	COOKED-NFS	8F0727	P 0.100000	0.100000		2.00	0.002000
15001AB	BEANS-DRY-KIDNEY 31	COOKED-FRESH OR CANNED	8F0727	P 0.100000	0.100000		2.00	0.002000
15001AC	BEANS-DRY-LIMA 21	COOKED-NFS	8F0727	P 0.100000	0.100000		2.00	0.002000
15001AD	BEANS-DRY-NAVY 21	COOKED-FRESH OR CANNED	8F0727	P 0.100000	0.100000		2.00	0.002000
15001AE	BEANS-DRY-NAVY 31	COOKED-FRESH OR CANNED	8F0727	P 0.100000	0.100000		2.00	0.002000
15001AE	BEANS-DRY-OTHER 21	COOKED-NFS	8F0727	P 0.100000	0.100000		2.00	0.002000
15001AE	BEANS-DRY-OTHER 25	COOKED-FRESH-FRIED	8F0727	P 0.100000	0.100000		2.00	0.002000
15001AE	BEANS-DRY-OTHER 31	COOKED-FRESH OR CANNED	8F0727	P 0.100000	0.100000		2.00	0.002000

(4)

CHEMICAL Phorate (Thimet) Caswell #660 CAS No. 298-02-2 A.I. CODE: 057201 CFR No. 180.206	STUDY TYPE 1yr feeding- dog NOEL= 0.0500 mg/kg 0.00 ppm LEL= 0.2500 mg/kg 0.00 ppm ONCO: E (RfD/PR Committee)	EFFECTS Brain CHE inhibition; .slight tremors in M&F, marginal inhibition of body weight gain in M. No evidence of carcinog- enicity in rats or mice.	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
			ADI UF -->100 OPP RfD= 0.000500 EPA RfD= 0.000000	No data gaps.  RfD Pending RAC approval of RAF CHE report.	WHO reviewed 1985 HED reviewed 06/13/86 EPA deferred 08/05/86 HED deferred 05/05/88 EPA deferred 07/20/88 RfD/PR reviewed 09/23/93

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
15001AF	BEANS-DRY-PINTO	21 COOKED-NFS	8F0727	P 0.100000	0.100000		2.00	0.002000
15002AA	BEANS-SUCC-LIMA	10 RAW-FRESH OR NFS	8F0727	P 0.100000	0.100000		6.00	0.006000
15002AA	BEANS-SUCC-LIMA	21 COOKED-NFS	8F0727	P 0.100000	0.100000		6.00	0.006000
15003AA	BEANS-SUCC-GREEN	21 COOKED-NFS	8F0727	P 0.100000	0.100000		6.00	0.006000
15003AB	BEANS-SUCC-OTH	10 RAW-FRESH OR NFS	8F0727	P 0.100000	0.100000		6.00	0.006000
15003AB	BEANS-SUCC-OTH	21 COOKED-NFS	8F0727	P 0.100000	0.100000		6.00	0.006000
15003AC	BEANS-SUCC-WAX	21 COOKED-NFS	8F0727	P 0.100000	0.100000		6.00	0.006000
15005AA	CORN, SWEET	10 RAW-FRESH OR NFS	7F0521	P 0.100000	0.100000		5.00	0.005000
15005AA	CORN, SWEET	21 COOKED-NFS	7F0521	P 0.100000	0.100000		5.00	0.005000
15005AA	CORN, SWEET	31 COOKED-FRESH OR CANNED	7F0521	P 0.100000	0.100000		5.00	0.005000
15006AA	PEANUTS-WHOLE	10 RAW-FRESH OR NFS	NOPE7#	P 0.100000	0.100000		12.00	0.012000
15006AA	PEANUTS-WHOLE	21 COOKED-NFS	NOPE7#	P 0.100000	0.100000		12.00	0.012000
15006AA	PEANUTS-WHOLE	22 COOKED-FRESH-BAKED	NOPE7#	P 0.100000	0.100000		12.00	0.012000
15013AA	MUNG BEANS	10 RAW-FRESH OR NFS	8F0727	P 0.100000	0.100000		6.00	0.006000
15013AA	MUNG BEANS	21 COOKED-NFS	8F0727	P 0.100000	0.100000		6.00	0.006000
15022AA	BEANS-DRY-BROAD	00 NOT SPECIFIED (NO CONSUMPTION)	8F0727	P 0.100000	0.100000		2.00	0.002000
15022AA	BEANS-SUCC-BROAD	00 NOT SPECIFIED (NO CONSUMPTION)	8F0727	P 0.100000	0.100000		2.00	0.002000
15023AA	BEANS-DRY-PIGEON	21 COOKED-NFS	8F0727	P 0.100000	0.100000		2.00	0.002000
15027AA	BEANS-UNSPEC	21 COOKED-NFS	8F0727	P 0.100000	0.100000		6.00	0.006000
15029AA	SOYBEAN-SPROUTED	00 NOT SPECIFIED (NO CONSUMPTION)	NOPE7#	P 0.100000	0.100000		1.00	0.001000
15030AA	BEANS-DRY-HYAC	00 NOT SPECIFIED (NO CONSUMPTION)	8F0727	P 0.100000	0.100000		2.00	0.002000
15030AB	BEANS-SUCC-HYAC	00 NOT SPECIFIED (NO CONSUMPTION)	8F0727	P 0.100000	0.100000		6.00	0.006000
15031AA	BLKEYE PEAS-DRY	21 COOKED-NFS	8F0727	P 0.100000	0.100000		2.00	0.002000
15032AA	BEANS-DRY	21 COOKED-NFS	8F0727	P 0.100000	0.100000		2.00	0.002000
15032AA	BEANS-DRY	31 COOKED-FRESH OR CANNED	8F0727	P 0.100000	0.100000		2.00	0.002000
24001AA	BARLEY	21 COOKED-NFS	8F0727	P 0.100000	0.100000		1.00	0.001000
24002EA	CORN, GRAIN-ENDO	10 RAW-FRESH OR NFS	7F0521	P 0.100000	0.100000		2.00	0.002000
24002EA	CORN, GRAIN-ENDO	21 COOKED-NFS	7F0521	P 0.100000	0.100000		2.00	0.002000
24002EA	CORN, GRAIN-ENDO	22 COOKED-FRESH-BAKED	7F0521	P 0.100000	0.100000		2.00	0.002000
24002EA	CORN, GRAIN-ENDO	23 COOKED-FRESH-BOILED	7F0521	P 0.100000	0.100000		2.00	0.002000
24002HA	CORN, GRAIN-BRAN	00 NOT SPECIFIED (NO CONSUMPTION)	7F0521	P 0.100000	0.100000		2.00	0.002000
24002SA	CORN SUGAR	10 RAW-FRESH OR NFS	7F0521	P 0.100000	0.100000		2.00	0.002000
24002SA	CORN SUGAR	21 COOKED-NFS	7F0521	P 0.100000	0.100000		2.00	0.002000
24002SA	CORN SUGAR	22 COOKED-FRESH-BAKED	7F0521	P 0.100000	0.100000		2.00	0.002000
24004AA	RICE-ROUGH	21 COOKED-NFS	7F0521	P 0.100000	0.100000		10.00	0.010000
24004AA	RICE-ROUGH	23 COOKED-FRESH-BOILED	7F0521	P 0.100000	0.100000		10.00	0.010000
24004AB	RICE-MILLED	21 COOKED-NFS	7F0521	P 0.100000	0.100000		10.00	0.010000
24004AB	RICE-MILLED	22 COOKED-FRESH-BAKED	7F0521	P 0.100000	0.100000		10.00	0.010000
24004AB	RICE-MILLED	23 COOKED-FRESH-BOILED	7F0521	P 0.100000	0.100000		10.00	0.010000
24004AB	RICE-MILLED	31 COOKED-FRESH OR CANNED	7F0521	P 0.100000	0.100000		10.00	0.010000

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Phorate (Thimet) Caswell #660 CAS No. 298-02-2 A.I. CODE: 057201 CFR No. 180.206	1yr feeding- dog NOEL= 0.0500 mg/kg 0.00 ppm LEL= 0.2500 mg/kg 0.00 ppm ONCO: E (Rfd/PR Committee)	Brain CHE inhibition; slight tremors in M&F, marginal inhibition of body weight gain in M. No evidence of carcinog- enicity in rats or mice.	ADI UF -->100 OPP RFD= 0.000500 EPA RFD= 0.000000	No data gaps.  Rfd Pending RAC approval of RAF CHE report.	WHO reviewed 1985 HED reviewed 06/13/86 EPA deferred 08/05/86 HED reviewed 05/05/88 EPA deferred 07/20/88 Rfd/PR reviewed 09/23/93

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
24006AA	SORGHUM	00 NOT SPECIFIED (NO CONSUMPTION)	8F0723	P 0.100000	0.100000		1.00	0.001000
24007AA	WHEAT-ROUGH	10 RAW-FRESH OR NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007AA	WHEAT-ROUGH	21 COOKED-NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007AA	WHEAT-ROUGH	22 COOKED-FRESH-BAKED	0F0938	P 0.050000	0.050000		1.00	0.000500
24007AA	WHEAT-ROUGH	23 COOKED-FRESH-BOILED	0F0938	P 0.050000	0.050000		1.00	0.000500
24007GA	WHEAT-GERM	10 RAW-FRESH OR NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007GA	WHEAT-GERM	22 COOKED-FRESH-BAKED	0F0938	P 0.050000	0.050000		1.00	0.000500
24007HA	WHEAT-BRAN	10 RAW-FRESH OR NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007HA	WHEAT-BRAN	21 COOKED-NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007HA	WHEAT-BRAN	22 COOKED-FRESH-BAKED	0F0938	P 0.050000	0.050000		1.00	0.000500
24007WA	WHEAT-FLOUR	10 RAW-FRESH OR NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007WA	WHEAT-FLOUR	21 COOKED-NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007WA	WHEAT-FLOUR	22 COOKED-FRESH-BAKED	0F0938	P 0.050000	0.050000		1.00	0.000500
24007WA	WHEAT-FLOUR	25 COOKED-FRESH-FRIED	0F0938	P 0.050000	0.050000		1.00	0.000500
25002SA	BEEF SUGAR	10 RAW-FRESH OR NFS	378	P 0.300000	0.300000		3.00	0.009000
25002SA	BEEF SUGAR	21 COOKED-NFS	378	P 0.300000	0.300000		3.00	0.009000
25002SA	BEEF SUGAR	22 COOKED-FRESH-BAKED	378	P 0.300000	0.300000		3.00	0.009000
25002SA	BEEF SUGAR	31 COOKED-FRESH OR CANNED	378	P 0.300000	0.300000		3.00	0.009000
25003SA	CANE SUGAR	10 RAW-FRESH OR NFS	8F0723	P 0.100000	0.100000		11.00	0.011000
25003SA	CANE SUGAR	21 COOKED-NFS	8F0723	P 0.100000	0.100000		11.00	0.011000
25003SA	CANE SUGAR	22 COOKED-FRESH-BAKED	8F0723	P 0.100000	0.100000		11.00	0.011000
25003SA	CANE SUGAR	31 COOKED-FRESH OR CANNED	8F0723	P 0.100000	0.100000		11.00	0.011000
25003SB	SUGAR-MOLASSES	10 RAW-FRESH OR NFS	8F0723	P 0.100000	0.100000		11.00	0.011000
25003SB	SUGAR-MOLASSES	21 COOKED-NFS	8F0723	P 0.100000	0.100000		11.00	0.011000
25003SB	SUGAR-MOLASSES	22 COOKED-FRESH-BAKED	8F0723	P 0.100000	0.100000		11.00	0.011000
25003SB	SUGAR-MOLASSES	31 COOKED-FRESH OR CANNED	8F0723	P 0.100000	0.100000		11.00	0.011000
26011AA	GUAR BEANS	00 NOT SPECIFIED (NO CONSUMPTION)	8F0727	P 0.100000	0.100000		6.00	0.006000
270020A	CORN, GRAIN-OIL	18 PROCESSED OIL	7F0521	P 0.100000	0.100000		2.00	0.002000
270030A	COTTONSEED-OIL	18 PROCESSED OIL	0F0938	P 0.050000	0.050000		6.00	0.003000
27003WA	COTTONSEED-MEAL	18 PROCESSED OIL	0F0938	P 0.050000	0.050000		6.00	0.003000
270070A	PEANUTS-OIL	18 PROCESSED OIL	NOPET#	P 0.100000	0.100000		12.00	0.012000
270100A	SOYBEANS-OIL	18 PROCESSED OIL	NOPET#	P 0.100000	0.100000		1.00	0.001000
28023AA	SOYBEANS-UNSPEC	21 COOKED-NFS	NOPET#	P 0.100000	0.100000		1.00	0.001000
28023AB	SOYBEANS-DRY	10 RAW-FRESH OR NFS	NOPET#	P 0.100000	0.100000		1.00	0.001000
28023AB	SOYBEANS-DRY	21 COOKED-NFS	NOPET#	P 0.100000	0.100000		1.00	0.001000
28023AB	SOYBEANS-DRY	23 COOKED-FRESH-BOILED	NOPET#	P 0.100000	0.100000		1.00	0.001000
28023AB	SOYBEANS-DRY	25 COOKED-FRESH-FRIED	NOPET#	P 0.100000	0.100000		1.00	0.001000
28023AB	SOYBEANS-DRY	31 COOKED-FRESH OR CANNED	NOPET#	P 0.100000	0.100000		1.00	0.001000
28023VA	SOY-FL, FULL FAT	21 COOKED-NFS	NOPET#	P 0.100000	0.100000		1.00	0.001000
28023VA	SOY-FL, FULL FAT	22 COOKED-FRESH-BAKED	NOPET#	P 0.100000	0.100000		1.00	0.001000

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
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FOOD CODE	FOOD	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
28023VA	SOY-FL, FULL FAT	31	COOKED-FRESH OR CANNED	NOPET#	P 0.100000	1.00	0.0010000
28023VB	SOY-FL, LOW FAT	21	COOKED-NFS	NOPET#	P 0.100000	1.00	0.0010000
28023VC	SOY-FL,DEFAT	10	RAW-FRESH OR NFS	NOPET#	P 0.100000	1.00	0.0010000
28023VD	SOY-FL,DEFAT	21	COOKED-NFS	NOPET#	P 0.100000	1.00	0.0010000
28023VE	SOY-FL,DEFAT	22	COOKED-FRESH-BAKED	NOPET#	P 0.100000	1.00	0.0010000
28023VF	SOY-FL,DEFAT	51	COOKED-CANNED	NOPET#	P 0.100000	1.00	0.0010000
28023VG	SOY-FL,DEFAT	53	COOKED-CANNED-BOILED	NOPET#	P 0.100000	1.00	0.0010000
50000DB	MILK-NON-FAT SOL	10	RAW-FRESH OR NFS	8F0673	P 0.020000	100.00	0.020000
50000DB	MILK-NON-FAT SOL	21	COOKED-NFS	8F0673	P 0.020000	100.00	0.020000
50000DB	MILK-NON-FAT SOL	51	COOKED-CANNED	8F0673	P 0.020000	100.00	0.020000
50000FA	MILK-FAT SOLIDS	21	RAW-FRESH OR NFS	8F0673	P 0.020000	100.00	0.020000
50000FA	MILK-FAT SOLIDS	21	COOKED-NFS	8F0673	P 0.020000	100.00	0.020000
50000FA	MILK-FAT SOLIDS	51	COOKED-CANNED	8F0673	P 0.020000	100.00	0.020000
50000SA	MILK SUG (LACT)	21	COOKED-NFS	8F0673	P 0.020000	100.00	0.020000
50000SA	MILK SUG (LACT)	51	COOKED-CANNED	8F0673	P 0.020000	100.00	0.020000
53001BA	BEEF-MEAT BYP	21	COOKED-NFS	8F0673	P 0.050000	100.00	0.050000
53001BA	BEEF-MEAT BYP	26	COOKED-FRESH-PICKLED,CORNED,OR CURED	8F0673	P 0.050000	100.00	0.050000
53001BB	BEEF-OTH ORGAN	21	COOKED-NFS	8F0673	P 0.050000	100.00	0.050000
53001BB	BEEF-OTH ORGAN	51	COOKED-CANNED	8F0673	P 0.050000	100.00	0.050000
53001DA	BEEF-DRIED	21	COOKED-NFS	8F0673	P 0.050000	100.00	0.050000
53001FA	BEEF-FAT	10	RAW-FRESH OR NFS	8F0673	P 0.050000	100.00	0.050000
53001FA	BEEF-FAT	21	COOKED-NFS	8F0673	P 0.050000	100.00	0.050000
53001FA	BEEF-FAT	22	COOKED-FRESH-BAKED	8F0673	P 0.050000	100.00	0.050000
53001FA	BEEF-FAT	23	COOKED-FRESH-BOILED	8F0673	P 0.050000	100.00	0.050000
53001FA	BEEF-FAT	24	COOKED-FRESH-BOILED	8F0673	P 0.050000	100.00	0.050000
53001FA	BEEF-FAT	25	COOKED-FRESH-FRIED	8F0673	P 0.050000	100.00	0.050000
53001KA	BEEF-KIDNEY	21	COOKED-NFS	8F0673	P 0.050000	100.00	0.050000
53001LA	BEEF-LIVER	25	COOKED-FRESH-FRIED	8F0673	P 0.050000	100.00	0.050000
53001LA	BEEF-LIVER	31	COOKED-FRESH OR CANNED	8F0673	P 0.050000	100.00	0.050000
53001MA	BEEF-LEAN	10	RAW-FRESH OR NFS	8F0673	P 0.050000	100.00	0.050000
53001MA	BEEF-LEAN	21	COOKED-NFS	8F0673	P 0.050000	100.00	0.050000
53001MA	BEEF-LEAN	22	COOKED-FRESH-BAKED	8F0673	P 0.050000	100.00	0.050000
53001MA	BEEF-LEAN	23	COOKED-FRESH-BOILED	8F0673	P 0.050000	100.00	0.050000
53001MA	BEEF-LEAN	24	COOKED-FRESH-BOILED	8F0673	P 0.050000	100.00	0.050000
53002BA	GOAT-MEAT BYP	00	NOT SPECIFIED (NO CONSUMPTION)	8F0673	P 0.050000	100.00	0.050000
53002BB	GOAT-OTH ORGAN	00	NOT SPECIFIED (NO CONSUMPTION)	8F0673	P 0.050000	100.00	0.050000
53002FA	GOAT-FAT	23	COOKED-FRESH-BOILED	8F0673	P 0.050000	100.00	0.050000
53002FA	GOAT-FAT	25	COOKED-FRESH-FRIED	8F0673	P 0.050000	100.00	0.050000
53002KA	GOAT-KIDNEY	00	NOT SPECIFIED (NO CONSUMPTION)	8F0673	P 0.050000	100.00	0.050000
53002LA	GOAT-LIVER	00	NOT SPECIFIED (NO CONSUMPTION)	8F0673	P 0.050000	100.00	0.050000



ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 660

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Phorate (Thimet) Caswell #660 CAS No. 298-02-2 A.I. CODE: 057201 CFR No. 180.206	1yr feeding- dog NOEL= 0.0500 mg/kg 0.00 ppm LEL= 0.2500 mg/kg 0.00 ppm ONCO: E (Rfd/PR Committee)	Brain ChE inhibition; slight tremors in M&F, marginal inhibition of body weight gain in M. No evidence of carcinog- enicity in rats or mice.	ADI UF -->100 OPP Rfd= 0.000500 EPA Rfd= 0.000000	No data gaps.  Rfd Pending RAC approval of RAF ChE report.	WHO reviewed 1985 HED reviewed 06/13/86 EPA deferred 08/05/88 HED reviewed 05/05/88 EPA deferred 07/20/88. Rfd/PR reviewed 09/23/93

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
53002MA	GOAT-LEAN	23 COOKED-FRESH-BOILED	8F0673	P 0.050000	0.050000		100.00	0.050000
53002MA	GOAT-LEAN	25 COOKED-FRESH-FRIED	8F0673	P 0.050000	0.050000		100.00	0.050000
53003AA	HORSE	00 NOT SPECIFIED (NO CONSUMPTION)	8F0673	P 0.050000	0.050000		100.00	0.050000
53003BA	SHEEP-MEAT BYP	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
53003BB	SHEEP-OTH ORGAN	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
53005FA	SHEEP-FAT	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
53005KA	SHEEP-KIDNEY	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
53005LA	SHEEP-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)	8F0673	P 0.050000	0.050000		100.00	0.050000
53005MA	SHEEP-LEAN	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
53005MA	SHEEP-LEAN	31 COOKED-FRESH OR CANNED	8F0673	P 0.050000	0.050000		100.00	0.050000
530068A	PORK-MEAT BYP	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
530068B	PORK-OTH ORGAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	8F0673	P 0.050000	0.050000		100.00	0.050000
530068B	PORK-OTH ORGAN	10 RAW-FRESH OR NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
53006FA	PORK-FAT	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
53006FA	PORK-FAT	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
53006FA	PORK-FAT	23 COOKED-FRESH-BOILED	8F0673	P 0.050000	0.050000		100.00	0.050000
53006FA	PORK-FAT	25 COOKED-FRESH-FRIED	8F0673	P 0.050000	0.050000		100.00	0.050000
53006FA	PORK-FAT	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	8F0673	P 0.050000	0.050000		100.00	0.050000
53006FA	PORK-FAT	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	8F0673	P 0.050000	0.050000		100.00	0.050000
53006KA	PORK-KIDNEY	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
53006LA	PORK-LIVER	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
53006LA	PORK-LIVER	25 COOKED-FRESH-FRIED	8F0673	P 0.050000	0.050000		100.00	0.050000
53006MA	PORK-LEAN	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
53006MA	PORK-LEAN	25 COOKED-FRESH-FRIED	8F0673	P 0.050000	0.050000		100.00	0.050000
53006MA	PORK-LEAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	8F0673	P 0.050000	0.050000		100.00	0.050000
53006MA	PORK-LEAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	8F0673	P 0.050000	0.050000		100.00	0.050000
550088A	TURKEY-BYP	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
550088A	TURKEY-BYP	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	8F0673	P 0.050000	0.050000		100.00	0.050000
550088A	TURKEY ORGAN	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
550088A	TURKEY ORGAN	25 COOKED-FRESH-FRIED	8F0673	P 0.050000	0.050000		100.00	0.050000
550088A	TURKEY W/O SKIN	31 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
550088A	TURKEY W/O SKIN	62 COOKED-FRESH OR FROZEN-BAKED	8F0673	P 0.050000	0.050000		100.00	0.050000
550088B	TURKEY+SKIN	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
550088B	TURKEY+SKIN	25 COOKED-FRESH-FRIED	8F0673	P 0.050000	0.050000		100.00	0.050000
550088C	TURKEY-UNSPEC	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
55013BA	POULTRY, OTH-BYP	00 NOT SPECIFIED (NO CONSUMPTION)	8F0673	P 0.050000	0.050000		100.00	0.050000
55013LA	POULTRY, ORGAN	25 COOKED-FRESH-FRIED	8F0673	P 0.050000	0.050000		100.00	0.050000
55013MA	POULTRY, OTHER	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
55014AA	EGGS-WHOLE	10 RAW-FRESH OR NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
55014AA	EGGS-WHOLE	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
55014AA	EGGS-WHOLE	22 COOKED-FRESH-BAKED	8F0673	P 0.050000	0.050000		100.00	0.050000



ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 660

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Phorate (Thimet) Caswell #660 CAS No. 298-02-2 A.I. CODE: 057201 CFR No. 180.206	1yr feeding- dog NOEL= 0.0500 mg/kg LEL= 0.2500 mg/kg ONCO: E. (Rfd/PR Committee)	Brain CHE inhibition; slight tremors in M&F, marginal inhibition of body weight gain in M. No evidence of carcinog- enicity in rats or mice.	ADI UF -->100 OPP Rfd= 0.000500 EPA Rfd= 0.000000	No data gaps.  Rfd Pending RAC approval of RAF CHE report.	WHO reviewed 1985 HED reviewed 06/13/86 EPA deferred 08/05/86 HED reviewed 05/05/88 EPA deferred 07/20/88 Rfd/PR reviewed 09/23/93

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
55014AA	EGGS-WHOLE	23 COOKED-FRESH-BOILED	8F0673	P 0.050000	0.050000		100.00	0.050000
55014AA	EGGS-WHOLE	25 COOKED-FRESH-FRIED	8F0673	P 0.050000	0.050000		100.00	0.050000
55014AB	EGGS-WHITE ONLY	10 RAW-FRESH OR NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
55014AB	EGGS-WHITE ONLY	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
55014AB	EGGS-WHITE ONLY	22 COOKED-FRESH-BAKED	8F0673	P 0.050000	0.050000		100.00	0.050000
55014AB	EGGS-WHITE ONLY	62 COOKED-FRESH OR FROZEN-BAKED	8F0673	P 0.050000	0.050000		100.00	0.050000
55014AB	EGGS-WHITE ONLY	81 COOKED-FROZEN	8F0673	P 0.050000	0.050000		100.00	0.050000
55014AC	EGGS-YOLK ONLY	10 RAW-FRESH OR NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
55014AC	EGGS-YOLK ONLY	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
55014AC	EGGS-YOLK ONLY	25 COOKED-FRESH-FRIED	8F0673	P 0.050000	0.050000		100.00	0.050000
55014AC	EGGS-YOLK ONLY	31 COOKED-FRESH OR CANNED	8F0673	P 0.050000	0.050000		100.00	0.050000
55015BA	CHICKEN-BYP	00 NOT SPECIFIED (NO CONSUMPTION)	8F0673	P 0.050000	0.050000		100.00	0.050000
55015LA	CHICKEN-ORGAN	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
55015LA	CHICKEN-ORGAN	25 COOKED-FRESH-FRIED	8F0673	P 0.050000	0.050000		100.00	0.050000
55015LA	CHICKEN-ORGAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	8F0673	P 0.050000	0.050000		100.00	0.050000
55015MA	CHICKEN-W/O SKIN	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
55015MA	CHICKEN-W/O SKIN	22 COOKED-FRESH-BAKED	8F0673	P 0.050000	0.050000		100.00	0.050000
55015MA	CHICKEN-W/O SKIN	25 COOKED-FRESH-FRIED	8F0673	P 0.050000	0.050000		100.00	0.050000
55015MA	CHICKEN-W/O SKIN	31 COOKED-FRESH OR CANNED	8F0673	P 0.050000	0.050000		100.00	0.050000
55015MA	CHICKEN-W/O SKIN	53 COOKED-CANNED-BOILED	8F0673	P 0.050000	0.050000		100.00	0.050000
55015MB	CHICKEN+SKIN	21 COOKED-NFS	8F0673	P 0.050000	0.050000		100.00	0.050000
55015MB	CHICKEN+SKIN	25 COOKED-FRESH-FRIED	8F0673	P 0.050000	0.050000		100.00	0.050000

Table 2

CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Phorate (Thimet) Caswell #660 CAS No. 298-02-2 A.I. CODE: 057201 CPR No. 180.206	1yr feeding- dog NOEL= 0.0500 mg/kg 0.00 ppm LEL= 0.2500 mg/kg 0.00 ppm ONCO: E (Rfd/PR Committee)	Brain CHE inhibition; slight tremors in M&F, marginal inhibition of body weight gain in M. No evidence of carcinog- enicity in rats or mice.	ADI UF -->100 OPP Rfd= 0.000500 EPA Rfd= 0.000000	No data gaps.  Rfd Pending RAC approval of RAF CHE report.	WHO reviewed 1985 HED reviewed 06/13/86 EPA deferred 08/05/86 HED reviewed 05/05/88 EPA deferred 07/20/88 Rfd/PR reviewed 09/23/93

POPULATION SUBGROUP	TOTAL TMRC (MG/KG BODY WEIGHT/DAY)		NEW TMRC AS PERCENT OF RFD	DIFFERENCE AS PERCENT OF RFD	EFFECT OF ANTICIPATED RESIDUES	
	CURRENT TMRC*	NEW TMRC**			ARC	%RFD
U.S. POPULATION - 48 STATES	0.001523	0.001523	304.597000	0.000000	0.000577	115.45260
U.S. POPULATION - SPRING SEASON	0.001476	0.001476	295.288000	0.000000	0.000556	111.20720
U.S. POPULATION - SUMMER SEASON	0.001512	0.001512	302.391600	0.000000	0.000569	113.81140
U.S. POPULATION - FALL SEASON	0.001553	0.001553	310.699200	0.000000	0.000595	119.06540
U.S. POPULATION - WINTER SEASON	0.001541	0.001541	308.137600	0.000000	0.000589	117.71780
NORTHEAST REGION	0.001475	0.001475	295.055000	0.000000	0.000576	115.10020
NORTH CENTRAL REGION	0.001602	0.001602	320.313400	0.000000	0.000604	120.78200
SOUTHERN REGION	0.001504	0.001504	300.800000	0.000000	0.000551	110.14620
WESTERN REGION	0.001492	0.001492	298.399200	0.000000	0.000587	117.30440
HISPANICS	0.001710	0.001710	342.056000	0.000000	0.000684	136.74020
NON-HISPANIC WHITES	0.001521	0.001521	304.166400	0.000000	0.000574	114.72880
NON-HISPANIC BLACKS	0.001442	0.001442	288.486000	0.000000	0.000550	110.01820
NON-HISPANIC OTHERS	0.001407	0.001407	281.447000	0.000000	0.000578	115.59620
NURSING INFANTS (< 1 YEAR OLD)	0.000841	0.000841	168.288400	0.000000	0.000441	88.15680
NON-NURSING INFANTS (< 1 YEAR OLD)	0.003095	0.003095	618.903800	0.000000	0.001746	349.21480
FEMALES (13+ YEARS, PREGNANT)	0.001081	0.001081	216.178400	0.000000	0.000404	80.88720
FEMALES 13+ YEARS, NURSING	0.001232	0.001232	246.390200	0.000000	0.000476	95.12460
CHILDREN (1-6 YEARS OLD)	0.003290	0.003290	657.939200	0.000000	0.001339	267.89000
CHILDREN (7-12 YEARS OLD)	0.002364	0.002364	472.807800	0.000000	0.000902	180.30920
MALES (13-19 YEARS OLD)	0.001672	0.001672	334.333200	0.000000	0.000631	126.21680
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)	0.001373	0.001373	274.516200	0.000000	0.000502	100.46500
MALES (20 YEARS AND OLDER)	0.001200	0.001200	240.060800	0.000000	0.000432	86.49340
FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)	0.001026	0.001026	205.212000	0.000000	0.000368	73.55820

\*Current TMRC does not include new or pending tolerances.

\*\*New TMRC includes new, pending, and published tolerances.



TOLERANCE ASSESSMENT SUMMARY FOR Phorate (Thimet)  
USING ANTICIPATED RESIDUES  
CASWELL #660

DATE: 02/05/96

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

EXISTING ANTICIPATED RESIDUES (PUBLISHED ONLY)  
RESULT IN AN ARC OF: 0.000577 MG/KG/DAY  
THE EXISTING ARC IS EQUIVALENT TO: 115.453 % OF THE ADI.

NO NEW ANTICIPATED RESIDUES ARE IN THE FILE.

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: 0.001746 MG/KG/DAY  
THE EXISTING ARC IS EQUIVALENT TO: 349.215 % OF THE ADI.

NO NEW ANTICIPATED RESIDUES ARE IN THE FILE.

NO OTHER PENDING ANTICIPATED RESIDUES ARE IN THE FILE

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CHEMICAL	STUDY TYPE:	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Phorate (Thimet) Caswell #660 CAS No. 298-02-2 A.I. CODE: 057201 CFR No. 180.206	1yr feeding- dog NOEL= 0.0500 mg/kg 0.00 ppm LEL= 0.2500 mg/kg 0.00 ppm ONCO: E (RfD/PR Committee)	Brain ChE inhibition; slight tremors in M&F, marginal inhibition of body weight gain in M. No evidence of carcinog- enicity in rats or mice.	ADI UF -->100 OPP RfD= 0.000500 EPA RfD= 0.000000	No data gaps.  RfD Pending RAC approval of RAF ChE report.	WHO reviewed 1985 HED reviewed 06/13/86 EPA deferred 08/05/86 HED deferred 05/05/88 EPA deferred 07/20/88 RfD/PR reviewed 09/23/93

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
07002AA	COFFEE	21 COOKED-NFS	OE2391	P 0.020000	0.020000		100.00	0.020000
08020AA	HOPS	21 COOKED-NFS	9F0809	P 2.000000	2.000000		2.00	0.040000
14013AA	POTATO(WH)-WHOLE	10 RAW-FRESH OR NFS	8F0673	P 0.200000	0.200000		29.00	0.058000
14013AA	POTATO(WH)-WHOLE	21 COOKED-NFS	8F0673	P 0.200000	0.200000		29.00	0.058000
14013AA	POTATO(WH)-WHOLE	22 COOKED-FRESH-BAKED	8F0673	P 0.200000	0.200000		29.00	0.058000
14013AB	POTATO(WH)-UNSP	22 COOKED-FRESH-BAKED	8F0673	P 0.200000	0.200000		29.00	0.058000
14013AC	POTATO(WH)-PULP	21 COOKED-NFS	8F0673	P 0.200000	0.200000		29.00	0.058000
14013AC	POTATO(WH)-PULP	22 COOKED-FRESH-BAKED	8F0673	P 0.200000	0.200000		29.00	0.058000
14013AC	POTATO(WH)-PULP	23 COOKED-FRESH-BOILED	8F0673	P 0.200000	0.200000		29.00	0.058000
14013AC	POTATO(WH)-PULP	25 COOKED-FRESH-FRIED	8F0673	P 0.200000	0.200000		29.00	0.058000
14013DA	POTATO(WH)-DRY	10 RAW-FRESH OR NFS	8F0673	P 0.200000	0.200000		29.00	0.058000
14013DA	POTATO(WH)-DRY	31 COOKED-FRESH OR CANNED	8F0673	P 0.200000	0.200000		29.00	0.058000
14013DA	POTATO(WH)-PEEL	22/COOKED-FRESH-BAKED	8F0673	P 0.200000	0.200000		29.00	0.058000
15001AA	BEANS-DRY-GRT	00 NOT SPECIFIED (NO CONSUMPTION)	8F0727	P 0.050000	0.050000		2.00	0.001000
15001AB	BEANS-DRY-KIDNEY	21 COOKED-NFS	8F0727	P 0.050000	0.050000		2.00	0.001000
15001AB	BEANS-DRY-KIDNEY	31 COOKED-FRESH OR CANNED	8F0727	P 0.050000	0.050000		2.00	0.001000
15001AC	BEANS-DRY-LIMA	21 COOKED-NFS	8F0727	P 0.050000	0.050000		2.00	0.001000
15001AD	BEANS-DRY-NAVY	21 COOKED-NFS	8F0727	P 0.050000	0.050000		2.00	0.001000
15001AD	BEANS-DRY-NAVY	31 COOKED-FRESH OR CANNED	8F0727	P 0.050000	0.050000		2.00	0.001000
15001AE	BEANS-DRY-OTHER	21 COOKED-NFS	8F0727	P 0.050000	0.050000		2.00	0.001000
15001AE	BEANS-DRY-OTHER	25 COOKED-FRESH-FRIED	8F0727	P 0.050000	0.050000		2.00	0.001000
15001AE	BEANS-DRY-OTHER	31 COOKED-FRESH OR CANNED	8F0727	P 0.050000	0.050000		2.00	0.001000
15001AF	BEANS-DRY-PINTO	21 COOKED-NFS	8F0727	P 0.050000	0.050000		2.00	0.001000
15002AA	BEANS-SUCC-LIMA	10 RAW-FRESH OR NFS	8F0727	P 0.050000	0.050000		6.00	0.003000
15002AA	BEANS-SUCC-LIMA	21 COOKED-NFS	8F0727	P 0.050000	0.050000		6.00	0.003000
15003AA	BEANS-SUCC-GREEN	21 COOKED-NFS	8F0727	P 0.050000	0.050000		6.00	0.003000
15003AB	BEANS-SUCC-OTH	10 RAW-FRESH OR NFS	8F0727	P 0.050000	0.050000		6.00	0.003000
15003AC	BEANS-SUCC-MAX	21 COOKED-NFS	8F0727	P 0.050000	0.050000		6.00	0.003000
15005AA	CORN, SWEET	10 RAW-FRESH OR NFS	8F0727	P 0.050000	0.050000		6.00	0.003000
15005AA	CORN, SWEET	21 COOKED-NFS	7F0521	P 0.050000	0.050000		5.00	0.002500
15005AA	CORN, SWEET	31 COOKED-FRESH OR CANNED	7F0521	P 0.050000	0.050000		5.00	0.002500
15006AA	PEANUTS-WHOLE	10 RAW-FRESH OR NFS	NOPE#	P 0.100000	0.100000		12.00	0.012000
15006AA	PEANUTS-WHOLE	21 COOKED-NFS	NOPE#	P 0.100000	0.100000		12.00	0.012000
15006AA	PEANUTS-WHOLE	22 COOKED-FRESH-BAKED	NOPE#	P 0.100000	0.100000		6.00	0.003000
15013AA	MUNG BEANS	10 RAW-FRESH OR NFS	8F0727	P 0.050000	0.050000		6.00	0.003000
15013AA	MUNG BEANS	21 COOKED-NFS	8F0727	P 0.050000	0.050000		6.00	0.003000
15022AA	BEANS-DRY-BROAD	00 NOT SPECIFIED (NO CONSUMPTION)	8F0727	P 0.050000	0.050000		2.00	0.001000
15022AB	BEANS-SUCC-BROAD	00 NOT SPECIFIED (NO CONSUMPTION)	8F0727	P 0.050000	0.050000		6.00	0.003000
15023AA	BEANS-DRY-PIGEON	21 COOKED-NFS	8F0727	P 0.050000	0.050000		2.00	0.001000

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ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 660

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Phorate (Thimet) Caswell #660 CAS No. 298-02-2 A.I. CODE: 057201 CFR No. 180.206	1yr feeding- dog NOEL= 0.0500 mg/kg 0.00 ppm LEL= 0.2500 mg/kg 0.00 ppm OMCO: E (Rfd/PR Committee)	Brain ChE inhibition; slight tremors in M&F, marginal inhibition of body weight gain in M. No evidence of carcinog- enicity in rats or mice.	ADI UF -->100 OPP RfD= 0.000500 EPA RfD= 0.000000	No data gaps.  Rfd Pending RAC approval of RAF ChE report.	WHO reviewed 1985 HED reviewed 06/13/86 EPA deferred 08/05/86 HED reviewed 05/05/88 EPA deferred 07/20/88 Rfd/PR reviewed 09/23/93

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
15027AA	BEANS-UNSPEC	21 COOKED-NFS	8F0727	P 0.050000	0.050000		6.00	0.003000
15029AA	SOYBEAN-SPROUTED	00 NOT SPECIFIED (NO CONSUMPTION)	NOPE#	P 0.050000	0.050000		1.00	0.000500
15030AA	BEANS-DRY-HYAC	00 NOT SPECIFIED (NO CONSUMPTION)	8F0727	P 0.050000	0.050000		2.00	0.001000
15030AB	BEANS-SUCC-HYAC	00 NOT SPECIFIED (NO CONSUMPTION)	8F0727	P 0.050000	0.050000		6.00	0.003000
15031AA	BLKEYE PEAS-DRY	21 COOKED-NFS	8F0727	P 0.050000	0.050000		2.00	0.001000
15032AA	BEANS-DRY	21 COOKED-NFS	8F0727	P 0.050000	0.050000		2.00	0.001000
15032AA	BEANS-DRY	31 COOKED-FRESH OR CANNED	8F0727	P 0.050000	0.050000		2.00	0.001000
24002EA	CORN, GRAIN-ENDO	10 RAW-FRESH OR NFS	7F0521	P 0.050000	0.050000		2.00	0.001000
24002EA	CORN, GRAIN-ENDO	21 COOKED-NFS	7F0521	P 0.050000	0.050000		2.00	0.001000
24002EA	CORN, GRAIN-ENDO	22 COOKED-FRESH-BAKED	7F0521	P 0.050000	0.050000		2.00	0.001000
24002EA	CORN, GRAIN-ENDO	23 COOKED-FRESH-BOILED	7F0521	P 0.050000	0.050000		2.00	0.001000
24002HA	CORN, GRAIN-BRAN	00 NOT SPECIFIED (NO CONSUMPTION)	7F0521	P 0.050000	0.050000		2.00	0.001000
24002SA	CORN SUGAR	10 RAW-FRESH OR NFS	7F0521	P 0.050000	0.050000		2.00	0.001000
24002SA	CORN SUGAR	21 COOKED-NFS	7F0521	P 0.050000	0.050000		2.00	0.001000
24002SA	CORN SUGAR	22 COOKED-FRESH-BAKED	7F0521	P 0.050000	0.050000		2.00	0.001000
24006AA	SORGHUM	00 NOT SPECIFIED (NO CONSUMPTION)	8F0723	P 0.050000	0.050000		1.00	0.000500
24007AA	WHEAT-ROUGH	10 RAW-FRESH OR NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007AA	WHEAT-ROUGH	21 COOKED-NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007AA	WHEAT-ROUGH	22 COOKED-FRESH-BAKED	0F0938	P 0.050000	0.050000		1.00	0.000500
24007AA	WHEAT-ROUGH	23 COOKED-FRESH-BOILED	0F0938	P 0.050000	0.050000		1.00	0.000500
24007GA	WHEAT-GERM	10 RAW-FRESH OR NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007GA	WHEAT-GERM	22 COOKED-FRESH-BAKED	0F0938	P 0.050000	0.050000		1.00	0.000500
24007HA	WHEAT-BRAN	10 RAW-FRESH OR NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007HA	WHEAT-BRAN	21 COOKED-NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007HA	WHEAT-BRAN	22 COOKED-FRESH-BAKED	0F0938	P 0.050000	0.050000		1.00	0.000500
24007MA	WHEAT-FLOUR	10 RAW-FRESH OR NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007MA	WHEAT-FLOUR	21 COOKED-NFS	0F0938	P 0.050000	0.050000		1.00	0.000500
24007MA	WHEAT-FLOUR	22 COOKED-FRESH-BAKED	0F0938	P 0.050000	0.050000		1.00	0.000500
24007MA	WHEAT-FLOUR	25 COOKED-FRESH-FRIED	0F0938	P 0.050000	0.050000		1.00	0.000500
25002SA	BEEF SUGAR	10 RAW-FRESH OR NFS	378	P 0.300000	0.300000		3.00	0.009000
25002SA	BEEF SUGAR	21 COOKED-NFS	378	P 0.300000	0.300000		3.00	0.009000
25002SA	BEEF SUGAR	22 COOKED-FRESH-BAKED	378	P 0.300000	0.300000		3.00	0.009000
25002SA	BEEF SUGAR	31 COOKED-FRESH OR CANNED	378	P 0.300000	0.300000		3.00	0.009000
25003SA	CANE SUGAR	10 RAW-FRESH OR NFS	8F0723	P 0.050000	0.050000		11.00	0.005500
25003SA	CANE SUGAR	21 COOKED-NFS	8F0723	P 0.050000	0.050000		11.00	0.005500
25003SA	CANE SUGAR	22 COOKED-FRESH-BAKED	8F0723	P 0.050000	0.050000		11.00	0.005500
25003SA	CANE SUGAR	31 COOKED-FRESH OR CANNED	8F0723	P 0.050000	0.050000		11.00	0.005500
25003SB	SUGAR-MOLASSES	10 RAW-FRESH OR NFS	8F0723	P 0.050000	0.050000		11.00	0.005500
25003SB	SUGAR-MOLASSES	21 COOKED-NFS	8F0723	P 0.050000	0.050000		11.00	0.005500
25003SB	SUGAR-MOLASSES	22 COOKED-FRESH-BAKED	8F0723	P 0.050000	0.050000		11.00	0.005500

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Phorate (Thimet) Caswell #660 CAS No. 298-02-2 A.I. CODE: 057201 CFR No. 180.206	1yr feeding- dog NOEL= 0.0500 mg/kg LEL= 0.2500 mg/kg ONCO: E (Rfd/PR Committee)	Brain CHE inhibition; slight tremors in M&F, marginal inhibition of body weight gain in M. No evidence of carcinog- enicity in rats or mfce.	ADI UF -->100 OPP Rfd= 0.000500 EPA Rfd= 0.000000	No data gaps.  Rfd Pending RAC approval of RAF CHE report.	HED reviewed 06/13/86 EPA deferred 08/05/86 HED reviewed 05/05/88 EPA deferred 07/20/88 Rfd/PR reviewed 09/23/93

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
25003SB	SUGAR-MOLASSES	31 COOKED-FRESH OR CANNED	8F0723	P 0.050000	0.050000		11.00	0.005500
26011AA	GUAR BEANS	00 NOT SPECIFIED (NO CONSUMPTION)	8F0727	P 0.050000	0.050000		6.00	0.003000
270020A	CORN, GRAIN-OIL	18 PROCESSED OIL	7F0521	P 0.050000	0.050000		2.00	0.001000
270030A	COTTONSEED-OIL	18 PROCESSED OIL	0F0938	P 0.050000	0.050000		6.00	0.003000
270030A	COTTONSEED-MEAL	18 PROCESSED OIL	0F0938	P 0.050000	0.050000		6.00	0.003000
270070A	PEANUTS-OIL	18 PROCESSED OIL	NOPE#	P 0.100000	0.100000		12.00	0.012000
270100A	SOYBEANS-OIL	18 PROCESSED OIL	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023AA	SOYBEANS-UNSPEC	21 COOKED-NFS	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023AB	SOYBEANS-DRY	10 RAW-FRESH OR NFS	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023AB	SOYBEANS-DRY	21 COOKED-NFS	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023AB	SOYBEANS-DRY	23 COOKED-FRESH-BOILED	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023AB	SOYBEANS-DRY	25 COOKED-FRESH-FRIED	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023AB	SOYBEANS-DRY	31/ COOKED-FRESH OR CANNED	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023BA	SOY-FL, FULL FAT	21 COOKED-NFS	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023WA	SOY-FL, FULL FAT	22 COOKED-FRESH-BAKED	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023VA	SOY-FL, FULL FAT	31 COOKED-FRESH OR CANNED	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023VB	SOY-FL, LOW FAT	21 COOKED-NFS	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023WC	SOY-FL,DEFAT	10 RAW-FRESH OR NFS	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023WC	SOY-FL,DEFAT	21 COOKED-NFS	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023WC	SOY-FL,DEFAT	22 COOKED-FRESH-BAKED	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023WC	SOY-FL,DEFAT	51 COOKED-CANNED	NOPE#	P 0.050000	0.050000		1.00	0.000500
28023WC	SOY-FL,DEFAT	53 COOKED-CANNED-BOILED	NOPE#	P 0.050000	0.050000		1.00	0.000500

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CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Phorate (Thimet) Caswell #660 CAS No. 298-02-2 A.I. CODE: 057201 CFR No. 180.206	1yr feeding- dog NOEL= 0.0500 mg/kg 0.00 ppm LEL= 0.2500 mg/kg .00 ppm ONCO: E (Rfd/PR Committee)	Brain ChE inhibition; slight tremors in M&F, marginal inhibition of body weight gain in M. No evidence of carcinog- enicity in rats or mice.	ADI UF -->100 OPP Rfd= 0.000500 EPA Rfd= 0.000000	No data gaps.  Rfd Pending RAC approval of RAF ChE report.	WHO reviewed 1985 HED reviewed 06/13/86 EPA deferred 08/05/86 HED reviewed 05/05/88 EPA deferred 07/20/88 Rfd/PR reviewed 09/23/93

POPULATION SUBGROUP	TOTAL TMRC (MG/KG BODY WEIGHT/DAY)		NEW TMRC AS PERCENT OF RFD	DIFFERENCE AS PERCENT OF RFD	EFFECT OF ANTICIPATED RESIDUES	
	CURRENT TMRC*	NEW TMRC**			ARC	XRFD
U.S. POPULATION - 48 STATES	0.000518	0.000518	103.615200	0.000000	0.000078	15.51840
U.S. POPULATION - SPRING SEASON	0.000509	0.000509	101.720600	0.000000	0.000076	15.10460
U.S. POPULATION - SUMMER SEASON	0.000514	0.000514	102.832000	0.000000	0.000075	15.02560
U.S. POPULATION - FALL SEASON	0.000525	0.000525	104.973000	0.000000	0.000080	16.00000
U.S. POPULATION - WINTER SEASON	0.000520	0.000520	103.990200	0.000000	0.000080	15.93360
NORTHEAST REGION	0.000490	0.000490	97.921400	0.000000	0.000073	14.60460
NORTH CENTRAL REGION	0.000551	0.000551	110.179800	0.000000	0.000086	17.11460
SOUTHERN REGION	0.000530	0.000530	105.952200	0.000000	0.000079	15.74580
WESTERN REGION	0.000482	0.000482	96.301600	0.000000	0.000070	14.00280
HISPANICS	0.000526	0.000526	105.149200	0.000000	0.000077	15.35060
NON-HISPANIC WHITES	0.000520	0.000520	103.942800	0.000000	0.000079	15.75800
NON-HISPANIC BLACKS	0.000505	0.000505	100.998600	0.000000	0.000073	14.54200
NON-HISPANIC OTHERS	0.000424	0.000424	84.762000	0.000000	0.000055	11.03660
NURSING INFANTS (< 1 YEAR OLD)	0.000199	0.000199	39.767200	0.000000	0.000024	4.88020
NON-NURSING INFANTS (< 1 YEAR OLD)	0.000693	0.000693	138.630600	0.000000	0.000096	19.11960
FEMALES (13+ YEARS, PREGNANT)	0.000353	0.000353	70.646600	0.000000	0.000052	10.35940
FEMALES 13+ YEARS, NURSING	0.000404	0.000404	80.761000	0.000000	0.000057	11.48160
CHILDREN (1-6 YEARS OLD)	0.001111	0.001111	222.214200	0.000000	0.000157	31.35540
CHILDREN (7-12 YEARS OLD)	0.000815	0.000815	163.007600	0.000000	0.000117	23.31360
MALES (13-19 YEARS OLD)	0.000577	0.000577	115.344600	0.000000	0.000086	17.12660
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)	0.000479	0.000479	95.811000	0.000000	0.000071	14.25060
MALES (20 YEARS AND OLDER)	0.000421	0.000421	84.216200	0.000000	0.000066	13.13140
FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)	0.000346	0.000346	69.211400	0.000000	0.000055	11.00800

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



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TOLERANCE ASSESSMENT SUMMARY FOR Phorate (Thimet)  
USING ANTICIPATED RESIDUES  
CASWELL #660

DATE: 02/05/96

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

EXISTING ANTICIPATED RESIDUES (PUBLISHED ONLY)  
RESULT IN AN ARC OF: 0.000078 MG/KG/DAY  
THE EXISTING ARC IS EQUIVALENT TO: 15.518 % OF THE ADI.

NO NEW ANTICIPATED RESIDUES ARE IN THE FILE.

NO OTHER PENDING ANTICIPATED RESIDUES ARE IN THE FILE

ANALYSIS FOR POPULATION SUB-GROUP: CHILDREN (1-6 YEARS OLD)

EXISTING ANTICIPATED RESIDUES (PUBLISHED ONLY)  
RESULT IN AN ARC OF: 0.000157 MG/KG/DAY  
THE EXISTING ARC IS EQUIVALENT TO: 31.355 % OF THE ADI.

NO NEW ANTICIPATED RESIDUES ARE IN THE FILE.

NO OTHER PENDING ANTICIPATED RESIDUES ARE IN THE FILE