

US EPA ARCHIVE DOCUMENT



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

APR 28 1992

OFFICE OF  
PESTICIDES AND TOXIC  
SUBSTANCES

MEMORANDUM

SUBJECT: RfD Exceeders Project: Dietary Exposure Analysis  
for Malathion

FROM: Stephen A. Schaible *S. Schaible*  
Dietary Exposure Section  
HED/SACB (H7509C) *SPK*

TO: Jack Housenger, Acting Chief *J. Housenger*  
Special Review Branch  
Special Review and Reregistration Division (H7508W)

As part of the RfD Exceeders Project, Dietary Exposure Section was requested by SRRD to conduct a DRES chronic exposure analysis for malathion, using anticipated residues generated by CBRS and percent of crop treated information supplied by BEAD.

Toxicological Endpoints

A Reference Dose (RfD) of 0.02 mg/kg body weight/day was used in this analysis, based on a no observed effect level (NOEL) of 0.23 mg/kg bwt/day and an uncertainty factor of 10. The RfD is based on a human cholinesterase study in which the effect was decreased cholinesterase activity. This RfD has been approved by both HED (3/06/87) and Agency (3/18/87) RfD committees.

Residue Information

Food uses evaluated in this analysis were most of the food uses listed in 40 CFR 180.111 and the food additive tolerances for raisins (12 ppm) and safflower oil (0.6 ppm) listed in 40 CFR 180.3850. The malathion tolerances listed in the CFR for "chayote fruit" and "chayote roots" were not included in the analysis because there is no comparable commodity listing in DRES. Tolerances for the commodities rhubarb, chicory, and upland cress, not present in the DRES file for malathion previously, were added for this analysis; these commodities belong to the "non-brassica leafy vegetables" crop group, for which there is a tolerance for malathion use in the CFR. Percent crop treated information used in this analysis was supplied by BEAD in the form of a Preliminary Quantitative Usage Analysis (PQUA) for malathion (B. Torla, 3/21/91). Anticipated residues used in the analysis were supplied by Chemistry Branch II-Reregistration Support (J. Smith, 3/2/92) and are based on FDA domestic and import surveillance data.

In calculating the anticipated residues, Chemistry Branch assumed a log normal distribution of the data. Utilizing the log normal distribution, anticipated residues were determined from the monitoring data such that no more than 5% of residues are predicted to be in excess of the AR values. One hundred percent crop treated was assumed in calculating the anticipated residues since the percentages of detectable residues from the monitoring data exceed the percent crop treated estimates supplied by BEAD (J. Smith memo). Since percent of crop treated information went in to the determination of the anticipated residues from the FDA monitoring data, 100 percent crop treated was assumed in the DRES analysis for those commodities where ARs were supplied. Where anticipated residues were not calculated for a commodity, tolerance level residues and percent crop treated estimates supplied in the BEAD PQUA (Torla, 3/21/91) were used.

Several assumptions were made in this analysis relating to the residue information. In the Chemistry memo, ARs are listed by commodity and the specific DRES food item to which they should apply (Table I, p.3, J. Smith memo, 3/2/92). However, in the DRES analysis, if an anticipated residue was reported for a commodity, it was applied to all DRES food items for that commodity, not just those that were listed in the Chemistry memo. For instance, in the Chemistry memo there is an AR of 0.005 ppm listed for "potatoes, whole" which in the DRES analysis was assumed for all of the potato "food items", including "pulp", "dry", "peel", and "unspecified", in addition to "whole". Other residue assumptions made in the DRES analysis were that the residues reported in the Chemistry memo for cattle and pork also applied to goats, horses, and sheep, and that the residue value given for "corn" in the Chemistry memo applied to all corn commodities in DRES (sweet corn, popcorn, and corn grain). All of these assumptions are supported by Chemistry Branch in the appendix of the malathion anticipated residue memo. Also, because the tolerance for milk in the CFR is specifically for "milk, fat", it was assumed that malathion concentrates in the fat solids of milk and therefore the DRES concentration factor for "milk, fat" was turned off. A summary of the residue information used in this analysis is attached as Table 1.

#### DRES Analysis

The DRES chronic exposure analysis used percent crop treated information and anticipated residues to estimate the Anticipated Residue Contribution (ARC) for the overall U.S. population and 22 population subgroups. The ARC for the overall U.S. population from published tolerances is 0.0011322 mg/kg bwt/day, which represents 57% of the RfD. Non nursing infants less than one year old is the subgroup most highly exposed and one of the two subgroups (the other being children age one through six) for which the ARC exceeds the RfD. The ARC for non-nursing infants less than one year old is 0.023542 mg/kg bwt/day, or 118% of the RfD, and the ARC for children one through six is 0.022016 mg/kg bwt/day, or 110% of the RfD. A summary of the TMRCs, the ARCs,

and their representations as percentages of the Reference Dose for the overall U.S. population and the 22 population subgroups is attached as Table 2.

Because of several assumptions made in calculating the anticipated residues and performing the DRES chronic analysis for malathion, it is expected that the ARCs are probably overestimates of dietary exposure. The assumption of 100 percent crop treated, both in the determination of the anticipated residues and in the DRES analysis for those commodities for which neither percent crop treated nor anticipated residues were supplied, serves to overestimate exposure, as does the assumption of tolerance level residues for all commodities for which ARs were not supplied. Nonetheless, using anticipated residues and percent crop treated for those commodities for which this information is available, it seems that the dietary exposure from malathion is no longer in exceedance of the RfD for most of the DRES subgroups.

#### Attachments

cc: DES, CBRS, Tox 1, P. Parsons, E. Budd, Caswell # 535

# TABLE 1

## ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 535

DATE: 03/03/92

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CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Malathion Caswell #535 CAS No. 121-75-5 A.I. CODE: 057701 CFR No. 180.111	Human CHE Study NOEL = 0.2300 mg/kg 0.00 ppm LEL = 0.3400 mg/kg 0.00 ppm ONCO: Class D (HED NOTED).	Decreased CHE activity. No evidence of oncogenicity in rats, mouse study equivocal.	PADI UF -->10 OPP RfD = 0.020000 EPA RfD = 0.020000	Chronic feeding - dog Reproduction - rat Developmental tox - rabbit	HED complete 08/29/86. HED reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. 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)
01002AA	BLACKBERRIES	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		100.00	8.000000
01002AA	BLACKBERRIES	21 COOKED-NFS	89	P 8.000000	8.000000		100.00	8.000000
01002AA	BLACKBERRIES	62 COOKED-FRESH OR FROZEN-BAKED	89	P 8.000000	8.000000		100.00	8.000000
01003AA	BOYSENBERRIES	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		100.00	8.000000
01004AA	DEWBERRIES	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 8.000000	8.000000		100.00	8.000000
01005AA	LOGANBERRIES	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 8.000000	8.000000		100.00	8.000000
01006AA	RASPBERRIES	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		100.00	8.000000
01006AA	RASPBERRIES	15 RAW-FRESH OR CANNED	89	P 8.000000	8.000000		100.00	8.000000
01006AA	RASPBERRIES	31 COOKED-FRESH OR CANNED	89	P 8.000000	8.000000		100.00	8.000000
01006AA	RASPBERRIES	62 COOKED-FRESH OR FROZEN-BAKED	89	P 8.000000	8.000000		100.00	8.000000
01009AA	BLUEBERRIES	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		100.00	8.000000
01009AA	BLUEBERRIES	22 COOKED-NFS	19	P 8.000000	8.000000		100.00	8.000000
01009AA	BLUEBERRIES	22 COOKED-FRESH-BAKED	19	P 8.000000	8.000000		100.00	8.000000
01009AA	BLUEBERRIES	62 COOKED-FRESH OR FROZEN-BAKED	19	P 8.000000	8.000000		100.00	8.000000
01010AA	CRANBERRIES	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		100.00	8.000000
01010AA	CRANBERRIES	21 COOKED-NFS	19	P 8.000000	8.000000		100.00	8.000000
01010AA	CRANBERRIES	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		100.00	8.000000
01010AA	CRANBERRY-JUICE	15 RAW-FRESH OR CANNED	19	P 8.000000	8.000000		100.00	8.000000
01010AA	CRANBERRY-JUICE	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		100.00	8.000000
01011AA	CURRANTS	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		100.00	8.000000
01011AA	CURRANTS	21 COOKED-NFS	89	P 8.000000	8.000000		100.00	8.000000
01011AA	CURRANTS	22 COOKED-FRESH-BAKED	89	P 8.000000	8.000000		100.00	8.000000
01013AA	GOOSEBERRIES	62 COOKED-FRESH OR FROZEN-BAKED	89	P 8.000000	8.000000		100.00	8.000000
01014AA	GRAPES-FRESH	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
01014AA	GRAPES-FRESH	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
01014AA	GRAPES-FRESH	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		10.00	0.800000
01014DA	GRAPES-RAISINS	10 RAW-FRESH OR NFS	9H2348	P 12.000000	12.000000C		10.00	1.200000
01014DA	GRAPES-RAISINS	22 COOKED-NFS	9H2348	P 12.000000	12.000000C		10.00	1.200000
01014DA	GRAPES-RAISINS	22 COOKED-FRESH-BAKED	9H2348	P 12.000000	12.000000C		10.00	1.200000
01014JA	GRAPES-JUICE	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
01014JA	GRAPES-JUICE	15 RAW-FRESH OR CANNED	19	P 8.000000	8.000000		10.00	0.800000
01014JA	GRAPES-JUICE	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
01016AA	STRAWBERRIES	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		100.00	8.000000
01016AA	STRAWBERRIES	21 COOKED-NFS	19	P 8.000000	8.000000		100.00	8.000000
01016AA	STRAWBERRIES	70 RAW-FROZEN	19	P 8.000000	8.000000		100.00	8.000000
02002AA	GRAPEFRUIT-UNSP	00 NOT SPECIFIED (NO CONSUMPTION)	64	P 8.000000	8.000000		2.00	0.160000
02002AB	GRAPEFRUIT-PULP	10 RAW-FRESH OR NFS	64	P 8.000000	8.000000		2.00	0.160000
02002AB	GRAPEFRUIT-PULP	21 COOKED-NFS	64	P 8.000000	8.000000		2.00	0.160000
02002AA	GRAPEFRUIT-JUICE	15 RAW-FRESH OR CANNED	64	P 8.000000	8.000000		2.00	0.160000

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 535

DATE: 03/03/92

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Malathion Caswell #535 CAS No. 121-75-5 A.I. CODE: 057701 CFR No. 180.111	CHEMICAL	Human Che Study NOEL= 0.2500 mg/kg 0.00 ppm LEL= 0.3400 mg/kg 0.00 ppm OMCO: Class D (HED NOTE).	STUDY TYPE	Decreased Che activity. No evidence of oncogenicity in rats, mouse study equivocal.	EFFECTS	REFERENCE DOSES PADI UF -->10 OPP RD= 0.020000 EPA RD= 0.020000	DATA GAPS/COMMENTS Chronic feeding- dog Reproduction- rat Developmental tox- rabbit	STATUS HED complete 08/29/86. HED reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. ON IRIS.
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FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
02002JA	GRAPEFRUIT- JUICE	31 COOKED- FRESH OR CANNED	64	P 8.000000	8.000000		2.00	0.160000
02003AA	KUMQUATS	10 RAW- FRESH OR NFS	64	P 8.000000	8.000000		2.00	0.160000
02004AA	LEMONS- UNSPEC	10 RAW- FRESH OR NFS	64	P 8.000000	8.000000		2.00	0.160000
02004AA	LEMONS- UNSPEC	22 COOKED- FRESH- BAKED	64	P 8.000000	8.000000		2.00	0.160000
02004AB	LEMONS- PULP	10 RAW- FRESH OR NFS	64	P 8.000000	8.000000		2.00	0.160000
02004AB	LEMONS- PULP	31 COOKED- FRESH OR CANNED	64	P 8.000000	8.000000		2.00	0.160000
02004HA	LEMONS- PEEL	10 RAW- FRESH OR NFS	64	P 8.000000	8.000000		2.00	0.160000
02004HA	LEMONS- PEEL	21 COOKED- NFS	64	P 8.000000	8.000000		2.00	0.160000
02004JA	LEMONS- JUICE	10 RAW- FRESH OR NFS	64	P 8.000000	8.000000		2.00	0.160000
02004JA	LEMONS- JUICE	15 RAW- FRESH OR CANNED	64	P 8.000000	8.000000		2.00	0.160000
02004JA	LEMONS- JUICE	21 COOKED- NFS	64	P 8.000000	8.000000		2.00	0.160000
02004JA	LEMONS- JUICE	31 COOKED- FRESH OR CANNED	64	P 8.000000	8.000000		2.00	0.160000
02005AA	LEMONS- UNSPEC	00 NOT SPECIFIED (NO CONSUMPTION)	64	P 8.000000	8.000000		2.00	0.160000
02005AB	LEMONS- PULP	10 RAW- FRESH OR NFS	64	P 8.000000	8.000000		2.00	0.160000
02005HA	LIMES- PEEL	21 COOKED- NFS	64	P 8.000000	8.000000		2.00	0.160000
02005JA	LIMES- JUICE	10 RAW- FRESH OR NFS	64	P 8.000000	8.000000		2.00	0.160000
02005JA	LIMES- JUICE	15 RAW- FRESH OR CANNED	64	P 8.000000	8.000000		2.00	0.160000
02005JA	LIMES- JUICE	31 COOKED- FRESH OR CANNED	64	P 8.000000	8.000000		2.00	0.160000
02006AA	ORANGES- UNSPEC	00 NOT SPECIFIED (NO CONSUMPTION)	64	P 8.000000	8.000000		2.00	0.160000
02006AB	ORANGES- PULP	10 RAW- FRESH OR NFS	64	P 8.000000	8.000000		2.00	0.160000
02006AB	ORANGES- PULP	21 COOKED- NFS	64	P 8.000000	8.000000		2.00	0.160000
02006HA	ORANGES- PEEL	21 COOKED- NFS	64	P 8.000000	8.000000		2.00	0.160000
02006HA	ORANGES- PEEL	22 COOKED- FRESH- BAKED	64	P 8.000000	8.000000		2.00	0.160000
02006HA	ORANGES- PEEL	31 COOKED- FRESH OR CANNED	64	P 8.000000	8.000000		2.00	0.160000
02006JA	ORANGES- JUICE	15 RAW- FRESH OR CANNED	64	P 8.000000	8.000000		2.00	0.160000
02006JA	ORANGES- JUICE	31 COOKED- FRESH OR CANNED	64	P 8.000000	8.000000		2.00	0.160000
02008AA	TANGERINES	10 RAW- FRESH OR NFS	64	P 8.000000	8.000000		2.00	0.160000
02008JA	TANGERINE- JUICE	15 RAW- FRESH OR CANNED	64	P 8.000000	8.000000		2.00	0.160000
03001AA	ALMONDS	10 RAW- FRESH OR NFS	64	P 8.000000	8.000000		2.00	0.160000
03001AA	ALMONDS	21 COOKED- NFS	64	P 8.000000	8.000000		2.00	0.160000
03001AA	ALMONDS	22 COOKED- FRESH- BAKED	64	P 8.000000	8.000000		2.00	0.160000
03001AA	ALMONDS	21 COOKED- NFS	64	P 8.000000	8.000000		2.00	0.160000
03004AA	CHESTNUTS	21 COOKED- NFS	64	P 8.000000	8.000000		2.00	0.160000
03005AA	FILBERTS	10 RAW- FRESH OR NFS	64	P 1.000000	1.000000		10.00	0.100000
03005AA	FILBERTS	21 COOKED- NFS	64	P 1.000000	1.000000		10.00	0.100000
03005AA	FILBERTS	22 COOKED- FRESH- BAKED	64	P 1.000000	1.000000		10.00	0.100000
03007AA	MACADAMIA NUTS	10 RAW- FRESH OR NFS	128	P 1.000000	1.000000		10.00	0.100000
03008AA	PECANS	10 RAW- FRESH OR NFS	128	P 8.000000	8.000000		10.00	0.800000
03008AA	PECANS	21 COOKED- NFS	128	P 8.000000	8.000000		10.00	0.800000
03008AA	PECANS	22 COOKED- FRESH- BAKED	128	P 8.000000	8.000000		10.00	0.800000
03008AA	PECANS	23 COOKED- FRESH- BOTTLED	128	P 8.000000	8.000000		10.00	0.800000

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 535

DATE: 03/03/92

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CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Malathion Caswell #535 CAS No. 121-75-5 A.I. CODE: 057701 CFR No. 180.111	Human CHE Study NOEL = 0.2300 mg/kg LEL = 0.3400 mg/kg 0.00 ppm ONCO: Class D (HED NOTE).	Decreased CHE activity. No evidence of oncogenicity in rats, mouse study equivocal.	PADI UF -->10 OPP RfD = 0.020000 EPA RfD = 0.020000	Chronic feeding- dog Reproduction- rat Developmental tox- rabbit	HED complete 08/29/86. HED reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. 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)
03008AA	PECANS	62 COOKED-FRESH OR FROZEN-BAKED	128	P 8.000000	8.000000		10.00	0.800000
03009AA	WALNUTS	10 RAW-FRESH OR NFS	128	P 8.000000	8.000000		10.00	0.800000
03009AA	WALNUTS	21 COOKED-NFS	128	P 8.000000	8.000000		10.00	0.800000
03009AA	WALNUTS	22 COOKED-FRESH-BAKED	128	P 8.000000	8.000000		10.00	0.800000
04001AA	APPLES-FRESH	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		5.00	0.400000
04001AA	APPLES-FRESH	21 COOKED-NFS	19	P 8.000000	8.000000		5.00	0.400000
04001AA	APPLES-FRESH	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		5.00	0.400000
04001AA	APPLES-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	19	P 8.000000	8.000000		5.00	0.400000
04001DA	APPLES-DRIED	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		5.00	0.400000
04001DA	APPLES-DRIED	22 COOKED-FRESH-BAKED	19	P 8.000000	8.000000		5.00	0.400000
04001JA	APPLES-JUICE	15 RAW-FRESH OR CANNED	19	P 8.000000	8.000000		5.00	0.400000
04001JA	APPLES-JUICE	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		5.00	0.400000
04003AA	PEARS-FRESH	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		5.00	0.400000
04003AA	PEARS-FRESH	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		5.00	0.400000
04003AA	PEARS-FRESH	51 COOKED-CANNED	19	P 8.000000	8.000000		5.00	0.400000
04003DA	PEARS-DRIED	62 COOKED-FRESH OR FROZEN-BAKED	19	P 8.000000	8.000000		5.00	0.400000
04003DA	PEARS-DRIED	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		5.00	0.400000
04003DA	PEARS-DRIED	21 COOKED-NFS	19	P 8.000000	8.000000		5.00	0.400000
04004AA	QUINCES	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 8.000000	8.000000		5.00	0.400000
05001AA	APRICOTS-FRESH	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		5.00	0.400000
05001AA	APRICOTS-FRESH	21 COOKED-NFS	19	P 8.000000	8.000000		5.00	0.400000
05001AA	APRICOTS-FRESH	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		5.00	0.400000
05001DA	APRICOTS-DRIED	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		5.00	0.400000
05001DA	APRICOTS-DRIED	22 COOKED-FRESH-BAKED	19	P 8.000000	8.000000		5.00	0.400000
05002AA	CHERRIES-FRESH	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		5.00	0.400000
05002AA	CHERRIES-FRESH	21 COOKED-NFS	19	P 8.000000	8.000000		5.00	0.400000
05002AA	CHERRIES-FRESH	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		5.00	0.400000
05002AA	CHERRIES-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	19	P 8.000000	8.000000		5.00	0.400000
05002DA	CHERRIES-DRIED	00 NOT SPECIFIED (NO CONSUMPTION)	19	P 8.000000	8.000000		5.00	0.400000
05002JA	CHERRIES-JUICE	15 RAW-FRESH OR CANNED	19	P 8.000000	8.000000		5.00	0.400000
05002JA	CHERRIES-JUICE	21 COOKED-NFS	19	P 8.000000	8.000000		5.00	0.400000
05003AA	NECTARINES	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		5.00	0.400000
05004AA	PEACHES-FRESH	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		5.00	0.400000
05004AA	PEACHES-FRESH	21 COOKED-NFS	19	P 8.000000	8.000000		5.00	0.400000
05004AA	PEACHES-FRESH	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		5.00	0.400000
05004DA	PEACHES-DRIED	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		5.00	0.400000
05004DA	PEACHES-DRIED	21 COOKED-NFS	19	P 8.000000	8.000000		5.00	0.400000
05005AA	PLUMS-FRESH	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		5.00	0.400000

<b>CHEMICAL</b> Malathion Caswell #535 CAS No. 121-75-5 A.I. CODE: 057701 CFR No. 180.111	<b>STUDY TYPE</b> Human CHE Study NOEL= 0.2500 mg/kg 0.00 ppm LEI= 0.3400 mg/kg 0.00 ppm ONCO: Class D (HED NOTE).	<b>EFFECTS</b> Decreased CHE activity. No evidence of oncogenicity in rats, mouse study equi vocal.	<b>REFERENCE DOSES</b> PADI UF -->10 OPP RfD= 0.020000 EPA RfD= 0.020000	<b>DATA GAPS/COMMENTS</b> Chronic feeding- dog Reproduction- rat Developmental tox- rabbit	<b>STATUS</b> HED complete 08/29/86. HED reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. 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)
050055AA	PLUMS-FRESH	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		5.00	0.400000
050055DA	PLUMS-PRUNES	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		5.00	0.400000
050055EA	PLUMS-PRUNES	21 COOKED-NFS	89	P 8.000000	8.000000		5.00	0.400000
050055FA	PLUMS-PRUNES	31 COOKED-FRESH OR CANNED	89	P 8.000000	8.000000		5.00	0.400000
050055JA	PRUNE -JUICE	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		5.00	0.400000
050055KA	PRUNE -JUICE	62 COOKED-FRESH OR FROZEN-BAKED	89	P 8.000000	8.000000		5.00	0.400000
060011AA	AVOCADOS	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		1.00	0.080000
060004AA	DATES	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		60.00	4.800000
060004AA	DATES	22 COOKED-FRESH-BAKED	19	P 8.000000	8.000000		60.00	4.800000
060055AA	FIGS	10 RAW-FRESH OR NFS	187	P 8.000000	8.000000		10.00	0.800000
060055AA	FIGS	22 COOKED-NFS	187	P 8.000000	8.000000		10.00	0.800000
060055AA	FIGS	22 COOKED-FRESH-BAKED	187	P 8.000000	8.000000		10.00	0.800000
060055AA	FIGS	22 COOKED-FRESH-BAKED	489	P 8.000000	8.000000		100.00	8.000000
060066AA	GUAVA	21 COOKED-NFS	489	P 8.000000	8.000000		100.00	8.000000
060066AA	GUAVA	62 COOKED-FRESH OR FROZEN-BAKED	489	P 8.000000	8.000000		100.00	8.000000
060077AA	MANGOES	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		100.00	8.000000
060077AA	MANGOES	21 COOKED-NFS	19	P 8.000000	8.000000		100.00	8.000000
06010AA	PAPAYAS-UNSPEC	00 NOT SPECIFIED (NO CONSUMPTION)	8F0634	P 1.000000	1.000000		100.00	1.000000
06010AB	PAPAYAS-PULP	10 RAW-FRESH OR NFS	8F0634	P 1.000000	1.000000		100.00	1.000000
06010AB	PAPAYAS-PULP	51 COOKED-CANNED	8F0634	P 1.000000	1.000000		100.00	1.000000
06010DA	PAPAYAS-DRIED	10 RAW-FRESH OR NFS	8F0634	P 1.000000	1.000000		100.00	1.000000
06010JA	PAPAYAS -JUICE	10 RAW-FRESH OR NFS	8F0634	P 1.000000	1.000000		100.00	1.000000
06013AA	PINEAPPLE-PULP	21 COOKED-NFS	19	P 8.000000	0.009000	FDA MON.	100.00	0.009000
06013AA	PINEAPPLE-PULP	31 COOKED-FRESH OR CANNED	19	P 8.000000	0.009000	FDA MON.	100.00	0.009000
06013DA	PINEAPPLE-DRIED	10 RAW-FRESH OR NFS	19	P 8.000000	0.009000	FDA MON.	100.00	0.009000
06013JA	PINEAPPLE -JUICE	10 RAW-FRESH OR NFS	19	P 8.000000	0.009000	FDA MON.	100.00	0.009000
06013JA	PINEAPPLE -JUICE	15 RAW-FRESH OR CANNED	19	P 8.000000	0.009000	FDA MON.	100.00	0.009000
06013JA	PINEAPPLE -JUICE	21 COOKED-NFS	19	P 8.000000	0.009000	FDA MON.	100.00	0.009000
06013JA	PINEAPPLE -JUICE	31 COOKED-FRESH OR CANNED	19	P 8.000000	0.009000	FDA MON.	100.00	0.009000
06014AA	PASSION FRUIT	00 NOT SPECIFIED (NO CONSUMPTION)	0E0891	P 1.000000	1.000000		100.00	1.000000
08020AA	HOPS	21 COOKED-NFS	0E0891	P 1.000000	1.000000		100.00	1.000000
08022AA	HORSERADISH	11 RAW-FRESH-PICKLED,CORNED,OR CURED	89	P 8.000000	8.000000		10.00	0.800000
10002AA	CANTALOUPE-UNSP	00 NOT SPECIFIED (NO CONSUMPTION)	19	P 8.000000	8.000000		10.00	0.800000
10002AB	CANTALOUPE-PULP	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
10002AB	CANTALOUPE-PULP	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
10003AA	CASABAS	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
10004AA	CRENSHAW	00 NOT SPECIFIED (NO CONSUMPTION)	19	P 8.000000	8.000000		10.00	0.800000
10005AA	HONEYDEW MELONS	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000



ANTICIPATED RESIDUE INFORMATION FOR CASSELL NUMBER 535

DATE: 03/03/92

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CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Malathion Caswell #535 CAS No. 121-75-5 A.I. CODE: 057701 CR No. 180.111	Human Che Study NOEL= 0.2300 mg/kg LEI= 0.3400 mg/kg 0.00 ppm	Decreased Che activity. No evidence of oncogenicity in rats, mouse study equivocal.	PADI UF -->10 OPP RfD= 0.020000 EPA RfD= 0.020000	Chronic feeding- dog Reproduction- rat Developmental tox- rabbit	HED complete 08/29/86. HED reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. 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)
10007AA	PERSIAN MELONS	00 NOT SPECIFIED (NO CONSUMPTION)	19	P 8.000000	8.000000		10.00	0.800000
10008AA	WATERMELON	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
10008AA	WATERMELON	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
10010AA	CUCUMBERS	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
10010AA	CUCUMBERS	11 RAW-FRESH-PICKLED, CORNED, OR CURED	19	P 8.000000	8.000000		10.00	0.800000
10010AA	CUCUMBERS	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
10011AA	PUMPKIN	22 COOKED-FRESH-BAKED	89	P 8.000000	8.000000		10.00	0.800000
10011AA	PUMPKIN	62 COOKED-FRESH OR FROZEN-BAKED	89	P 8.000000	8.000000		10.00	0.800000
10013AA	SQUASH-SUMMER	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
10013AA	SQUASH-SUMMER	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
10014AA	SQUASH-WINTER	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
10014AA	SQUASH-WINTER	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
10014AA	SQUASH-WINTER	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		10.00	0.800000
10014AA	SQUASH-WINTER	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
10011AA	EGGPLANT	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
10011AA	EGGPLANT	25 COOKED-FRESH-FRIED	19	P 8.000000	8.000000		10.00	0.800000
11003AA	PEPPERS-SWEET	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
11003AA	PEPPERS-SWEET	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
11003AB	CHILL PEPPERS	00 NOT SPECIFIED (NO CONSUMPTION)	19	P 8.000000	8.000000		10.00	0.800000
11003AB	PEPPERS-OTHER	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
11003AD	PEPPERS-OTHER	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
11003AD	PEPPERS-OTHER	51 COOKED-CANNED	19	P 8.000000	8.000000		10.00	0.800000
11004AA	PEPPERS-OTHER	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
11004AA	PEPPERS-OTHER	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
11005AA	PIMIENTOS	31 COOKED-FRESH OR CANNED	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005AA	PIMIENTOS	10 RAW-FRESH OR NFS	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005AA	PIMIENTOS	21 COOKED-NFS	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005AA	PIMIENTOS	31 COOKED-FRESH OR CANNED	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005JA	TOMATOES-WHOLE	10 RAW-FRESH OR NFS	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005JA	TOMATOES-WHOLE	21 COOKED-NFS	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005JA	TOMATOES-WHOLE	10 RAW-FRESH OR NFS	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005JA	TOMATOES-WHOLE	21 COOKED-NFS	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005RA	TOMATOES-PUREE	10 RAW-FRESH OR NFS	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005RA	TOMATOES-PUREE	21 COOKED-NFS	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005RA	TOMATOES-PUREE	31 COOKED-FRESH OR CANNED	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005RA	TOMATOES-PUREE	51 COOKED-CANNED	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005TA	TOMATOES-PASTE	21 COOKED-NFS	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005TA	TOMATOES-PASTE	22 COOKED-FRESH-BAKED	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005TA	TOMATOES-PASTE	31 COOKED-FRESH OR CANNED	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000
11005UA	TOMATOES-CATSUP	21 COOKED-NFS	19	P 8.000000	0.007000	FDA MON.	100.00	0.007000

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Malathion Caswell #535 CAS No. 121-75-5 A.I. CODE: 057701 CFR No. 180.111	Human Che Study NOEL= 0.2300 mg/kg LEL= 0.3600 mg/kg 0.00 ppm 0.00 ppm ONCO: Class D (HED NOTE).	Decreased Che activity. No evidence of oncogenicity in rats, mouse study equivocal.	PADI UF -->10 DPP RfD= 0.020000 EPA RfD= 0.020000	Chronic feeding- dog Reproduction- rat Developmental tox- rabbit	HED complete 08/29/86. HED reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. 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)
13001AA	BETS-TOPS	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		10.00	0.800000
13001AA	BETS-TOPS	63 COOKED-FRESH OR FROZEN-BOILED	19	P 8.000000	8.000000		10.00	0.800000
13002AA	CELERY	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
13002AA	CELERY	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
13003AA	CHICORY	10 RAW-FRESH OR NFS	ADDEDON	P 8.000000	8.000000		10.00	0.800000
13005AA	BROCCOLI	21 COOKED-NFS	19	P 5.000000	5.000000		10.00	0.500000
13005AA	BROCCOLI	31 COOKED-FRESH OR CANNED	19	P 5.000000	5.000000		10.00	0.500000
13005AA	BROCCOLI	63 COOKED-FRESH OR FROZEN-BOILED	19	P 5.000000	5.000000		10.00	0.500000
13006AA	BRUSSEL SPROUTS	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
13006AA	BRUSSEL SPROUTS	23 COOKED-FRESH-BOILED	19	P 8.000000	8.000000		10.00	0.800000
13007AA	CABBAGE	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
13007AA	CABBAGE	11 RAW-FRESH-PICKLED,CORNEED,OR CURED	19	P 8.000000	8.000000		10.00	0.800000
13007AA	CABBAGE	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
13008AA	CAULIFLOWER	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
13008AA	CAULIFLOWER	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
13009AA	COLLARDS	51 COOKED-CANNED	89	P 8.000000	8.000000		10.00	0.800000
13010AA	CABBAGE-CHINESE	63 COOKED-FRESH OR FROZEN-BOILED	89	P 8.000000	8.000000		10.00	0.800000
13010AA	CABBAGE-CHINESE	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
13011AA	KALE	63 COOKED-FRESH OR FROZEN-BOILED	89	P 8.000000	8.000000		10.00	0.800000
13012AA	KOHLRABI	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
13013AA	LETTUCE-LEAFY	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
13014AA	DANDELION	63 COOKED-FRESH OR FROZEN-BOILED	89	P 8.000000	8.000000		10.00	0.800000
13015AA	ENDIVE	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		10.00	0.800000
13015AA	ENDIVE	21 COOKED-NFS	89	P 8.000000	8.000000		10.00	0.800000
13016AA	FENNEL	00 NOT SPECIFIED (NO CONSUMPTION)	19	P 8.000000	8.000000		10.00	0.800000
13017AA	CRESS	00 NOT SPECIFIED (NO CONSUMPTION)	ADDEDON	P 8.000000	8.000000		10.00	0.800000
13020AA	LETTUCE-UNSPEC	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
13021AA	MUSTARD GREENS	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
13021AA	MUSTARD GREENS	63 COOKED-FRESH OR FROZEN-BOILED	89	P 8.000000	8.000000		10.00	0.800000
13022AA	PARSLEY	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		10.00	0.800000
13022AA	PARSLEY	21 COOKED-NFS	89	P 8.000000	8.000000		10.00	0.800000
13023AA	PARSLEY	53 COOKED-CANNED-BOILED	ADDEDON	P 8.000000	8.000000		10.00	0.800000
13023AA	RHUBARB	10 RAW-FRESH OR NFS	ADDEDON	P 8.000000	8.000000		10.00	0.800000
13023AA	RHUBARB	21 COOKED-NFS	ADDEDON	P 8.000000	8.000000		10.00	0.800000
13023AA	RHUBARB	31 COOKED-FRESH OR CANNED	ADDEDON	P 8.000000	8.000000		10.00	0.800000
13024AA	RHUBARB	62 COOKED-FRESH OR FROZEN-BAKED	ADDEDON	P 8.000000	8.000000		10.00	0.800000
13024AA	SPINACH	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
13024AA	SPINACH	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
13024AA	SPINACH	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		10.00	0.800000

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 535

DATE: 03/03/92

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CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Malathion Caswell #535 CAS No. 121-75-5 A.I. CODE: 057701 CFR No. 180.111	Human Che Study NOEL = 0.2300 mg/kg LOEL = 0.00 ppm LEL = 0.3400 mg/kg 0.00 ppm ONCO: Class D (HED NOTE).	Decreased Che activity. No evidence of oncogeni- city in rats, mouse study equivocal.	PADI UF --> 10 OPP RfD = 0.020000 EPA RfD = 0.020000	Chronic feeding- dog Reproduction- rat Developmental tox- rabbit	HED complete 08/29/86. HED reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. 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)
13025AA	SWISS CHARD	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		10.00	0.800000
13025AA	SWISS CHARD	31 COOKED-FRESH OR CANNED	89	P 8.000000	8.000000		10.00	0.800000
13025AA	SWISS CHARD	63 COOKED-FRESH OR FROZEN-BOILED	89	P 8.000000	8.000000		10.00	0.800000
13026AA	TURNIPS-TOPS	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
13026AA	TURNIPS-TOPS	21 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		10.00	0.800000
13026AA	TURNIPS-TOPS	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		10.00	0.800000
13027AA	WATERCRESS	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		10.00	0.800000
13027AA	WATERCRESS	21 COOKED-FRESH OR CANNED	89	P 8.000000	8.000000		10.00	0.800000
13039AA	CRESS, JPLAND	00 NOT SPECIFIED (NO CONSUMPTION)	ADDEDON	P 8.000000	8.000000		10.00	0.800000
13045AA	LETTUCE-HEAD	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
13045AA	LETTUCE-HEAD	21 COOKED-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
14001AA	BETS-ROOTS	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
14001AA	BETS-ROOTS	21 COOKED-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
14001AA	BETS-ROOTS	26 COOKED-FRESH OR PICKLED, CORNED, OR CURED	19	P 8.000000	8.000000		10.00	0.800000
14001AA	BETS-ROOTS	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		10.00	0.800000
14003AA	CARROTS	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		10.00	0.800000
14003AA	CARROTS	21 COOKED-FRESH OR NFS	89	P 8.000000	8.000000		10.00	0.800000
14003AA	CARROTS	23 COOKED-FRESH OR BOILED	89	P 8.000000	8.000000		10.00	0.800000
14003AA	CARROTS	31 COOKED-FRESH OR CANNED	89	P 8.000000	8.000000		10.00	0.800000
14003AA	CARROTS	51 COOKED-CANNED	89	P 8.000000	8.000000		10.00	0.800000
14007AA	GARLIC	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		10.00	0.800000
14007AA	GARLIC	21 COOKED-FRESH OR NFS	89	P 8.000000	8.000000		10.00	0.800000
14007AA	GARLIC	32 COOKED-FRESH OR CANNED-BAKED	89	P 8.000000	8.000000		10.00	0.800000
14010AA	LEEKS	31 COOKED-FRESH OR CANNED	89	P 8.000000	8.000000		10.00	0.800000
14011AA	ONIONS-DRY-BULB	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
14011AA	ONIONS-DRY-BULB	21 COOKED-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
14011AA	ONIONS-DRY-BULB	22 COOKED-FRESH-BAKED	19	P 8.000000	8.000000		10.00	0.800000
14011AA	ONIONS-DRY-BULB	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		10.00	0.800000
14011AA	ONIONS-DRY-BULB	12 RAW-FRESH-DRIED	19	P 8.000000	8.000000		10.00	0.800000
14013AA	POTATO(WH)-WHOLE	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
14013AA	POTATO(WH)-WHOLE	21 COOKED-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
14013AA	POTATO(WH)-WHOLE	22 COOKED-FRESH-BAKED	19	P 8.000000	8.000000		10.00	0.800000
14013AA	POTATO(WH)-WHOLE	22 COOKED-FRESH-BAKED	19	P 8.000000	8.000000		10.00	0.800000
14013AB	POTATO(WH)-PULP	21 COOKED-FRESH-BAKED	19	P 8.000000	8.000000		10.00	0.800000
14013AC	POTATO(WH)-PULP	22 COOKED-FRESH-BAKED	19	P 8.000000	8.000000		10.00	0.800000
14013AC	POTATO(WH)-PULP	23 COOKED-FRESH-BOILED	19	P 8.000000	8.000000		10.00	0.800000
14013AC	POTATO(WH)-PULP	25 COOKED-FRESH-FRIED	19	P 8.000000	8.000000		10.00	0.800000
14013DA	POTATO(WH)-DRY	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
14013DA	POTATO(WH)-DRY	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		10.00	0.800000
14013HA	POTATO(WH)-PEEL	22 COOKED-FRESH-BAKED	19	P 8.000000	8.000000		10.00	0.800000

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Matation Caswell #535 CAS No. 121-75-5 A.I. CODE: 057701 CFR No. 180.111	Human CHE Study NOEL= 0.2300 mg/kg LOEL= 0.00 ppm LEL= 0.3600 mg/kg 0.00 ppm ONCO: Class D (HED NOTE).	Decreased CHE activity. No evidence of oncogeni- city in rats, mouse study equivocal.	PADI UF -->10 OPP RfD= 0.020000 EPA RfD= 0.020000	Chronic feeding- dog Reproduction- rat Developmental tox- rabbit	HED complete 08/29/86. HED reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. 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)
14014AA	RADISHES-ROOTS	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		10.00	0.800000
14015AA	RUTABAGAS-ROOTS	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
14015AA	RUTABAGAS-ROOTS	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
14016AA	SALSIFY	21 COOKED-NFS	89	P 8.000000	8.000000		10.00	0.800000
14017AA	SHALLOTS	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 8.000000	8.000000		10.00	0.100000
14018AA	SWEETPOTATOES	21 COOKED-NFS	8F0634	P 1.000000	1.000000		10.00	0.100000
14018AA	SWEETPOTATOES	31 COOKED-FRESH OR CANNED	8F0634	P 1.000000	1.000000		10.00	0.100000
14018AA	SWEETPOTATOES	51 COOKED-CANNED	8F0634	P 1.000000	1.000000		10.00	0.100000
14019AA	TURNIPS-ROOTS	10 RAW-FRESH OR NFS	19	P 8.000000	8.000000		10.00	0.800000
14019AA	TURNIPS-ROOTS	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
14021AA	PARSNIPS	21 COOKED-NFS	89	P 8.000000	8.000000		10.00	0.800000
15001AA	BEANS-DRY-GRT NO	00 NOT SPECIFIED (NO CONSUMPTION)	7F0521	P 8.000000	8.000000		10.00	0.800000
15001AB	BEANS-DRY-KIDNEY	21 COOKED-NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15001AB	BEANS-DRY-KIDNEY	31 COOKED-FRESH OR CANNED	7F0521	P 8.000000	8.000000		10.00	0.800000
15001AC	BEANS-DRY-LIMA	21 COOKED-NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15001AD	BEANS-DRY-NAVY	21 COOKED-NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15001AD	BEANS-DRY-NAVY	31 COOKED-FRESH OR CANNED	7F0521	P 8.000000	8.000000		10.00	0.800000
15001AE	BEANS-DRY-OTHER	25 COOKED-FRESH-FRIED	7F0521	P 8.000000	8.000000		10.00	0.800000
15001AE	BEANS-DRY-OTHER	31 COOKED-FRESH OR CANNED	7F0521	P 8.000000	8.000000		10.00	0.800000
15001AF	BEANS-DRY-PINTO	21 COOKED-NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15002AA	BEANS-SUCC-LIMA	10 RAW-FRESH OR NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15002AA	BEANS-SUCC-LIMA	21 COOKED-NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15003AA	BEANS-SUCC-GREEN	21 COOKED-NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15003AB	BEANS-SUCC-OTH	10 RAW-FRESH OR NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15003AB	BEANS-SUCC-OTH	21 COOKED-NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15003AC	BEANS-SUCC-VAX	21 COOKED-NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15004AA	CORN,POP	10 RAW-FRESH OR NFS	89	P 8.000000	0.411000	FDA MON.	100.00	0.411000
15005AA	CORN,SWEET	21 COOKED-NFS	89	P 2.000000	0.411000	FDA MON.	100.00	0.411000
15005AA	CORN,SWEET	31 COOKED-FRESH OR CANNED	89	P 2.000000	0.411000	FDA MON.	100.00	0.411000
15006AA	PEANUTS-WHOLE	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		100.00	0.800000
15006AA	PEANUTS-WHOLE	21 COOKED-NFS	8F0634	P 8.000000	8.000000		1.00	0.080000
15006AA	PEANUTS-WHOLE	22 COOKED-FRESH-BAKED	8F0634	P 8.000000	8.000000		1.00	0.080000
15007AA	PEAS DRY-GARDEN	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
15007AA	PEAS DRY-GARDEN	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		10.00	0.800000
15009AA	PEAS SUCC-GARDEN	21 COOKED-NFS	19	P 8.000000	8.000000		10.00	0.800000
15009AA	PEAS SUCC-GARDEN	31 COOKED-FRESH OR CANNED	19	P 8.000000	8.000000		10.00	0.800000
15011AA	LENTILES-WHOLE	31 COOKED-FRESH OR CANNED	8F0634	P 8.000000	8.000000		10.00	0.800000
15011AB	LENTILES-SPLIT	21 COOKED-NFS	8F0634	P 8.000000	8.000000		10.00	0.800000

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 535

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CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Malathion Caswell #535 CAS No. 121-75-5 A.I. CODE: 057701 CFR No. 180.111	Human CHE Study NOEL= 0.2300 mg/kg 0.00 ppm LEL= 0.3400 mg/kg 0.00 ppm ONCO: Class D (HED NOTE).	Decreased CHE activity. No evidence of oncogenicity in rats, mouse study equivocal.	PADI UF -->10 OPP RfD= 0.020000 EPA RfD= 0.020000	Chronic feeding- dog Reproduction- rat Developmental tox- rabbit	HED complete 08/29/86. HED reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. 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)
15013AA	MUNG BEANS	10 RAW-FRESH OR NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15013AA	MUNG BEANS	21 COOKED-NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15015AA	OKRA	21 COOKED-NFS	8F0634	P 8.000000	8.000000		10.00	0.800000
15015AA	OKRA	25 COOKED-FRESH-FRIED	8F0634	P 8.000000	8.000000		10.00	0.800000
15015AA	OKRA	25 COOKED-FRESH-FRIED	2E2658	P 8.000000	8.000000		100.00	0.800000
15018AA	SUNFLOWER-SEEDS	10 RAW-FRESH OR NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15022AA	BEANS-DRY-BROAD	00 NOT SPECIFIED (NO CONSUMPTION)	7F0521	P 8.000000	8.000000		10.00	0.800000
15022AB	BEANS-SUCC-BROAD	00 NOT SPECIFIED (NO CONSUMPTION)	7F0521	P 8.000000	8.000000		10.00	0.800000
15023AA	BEANS-DRY-PIGEON	21 COOKED-NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15027AA	BEANS-UNSPEC	21 COOKED-NFS	7F0521	P 8.000000	8.000000		1.00	0.080000
15029AA	*SOYBEAN-SPROUTED	00 NOT SPECIFIED (NO CONSUMPTION)	8F0634	P 8.000000	8.000000		10.00	0.800000
15030AA	BEANS-DRY-HYAC	00 NOT SPECIFIED (NO CONSUMPTION)	7F0521	P 8.000000	8.000000		10.00	0.800000
15030AB	BEANS-SUCC-HYAC	00 NOT SPECIFIED (NO CONSUMPTION)	7F0521	P 8.000000	8.000000		10.00	0.800000
15031AA	BLKEYE PEAS-DRY	21 COOKED-NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15032AA	BEANS-DRY	21 COOKED-NFS	7F0521	P 8.000000	8.000000		10.00	0.800000
15032AA	BEANS-DRY	31 COOKED-FRESH OR CANNED	7F0521	P 8.000000	8.000000		10.00	0.800000
16002AA	ASPARAGUS	21 COOKED-NFS	89	P 8.000000	8.000000		10.00	0.800000
16002AA	ASPARAGUS	23 COOKED-FRESH-BOILED	89	P 8.000000	8.000000		100.00	0.800000
16003AA	MUSHROOMS	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		100.00	0.800000
16003AA	MUSHROOMS	21 COOKED-NFS	89	P 8.000000	8.000000		100.00	0.800000
16003AA	MUSHROOMS	31 COOKED-FRESH OR CANNED	89	P 8.000000	8.000000		100.00	0.800000
16003AA	MUSHROOMS	53 COOKED-CANNED-BOILED	89	P 8.000000	8.000000		10.00	0.800000
16004AA	ONIONS-GREEN	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		10.00	0.800000
16004AA	ONIONS-GREEN	21 COOKED-NFS	89	P 8.000000	8.000000		10.00	0.800000
16004AA	ONIONS-GREEN	25 COOKED-FRESH-FRIED	89	P 8.000000	8.000000		30.00	0.411000
24001AA	BARLEY	21 COOKED-NFS	136	P 8.000000	0.411000	FDA MON.	100.00	0.411000
24002EA	CORN, GRAIN-ENDO	10 RAW-FRESH OR NFS	136	P 8.000000	0.411000	FDA MON.	100.00	0.411000
24002EA	CORN, GRAIN-ENDO	21 COOKED-NFS	136	P 8.000000	0.411000	FDA MON.	100.00	0.411000
24002EA	CORN, GRAIN-ENDO	22 COOKED-FRESH-BAKED	136	P 8.000000	0.411000	FDA MON.	100.00	0.411000
24002EA	CORN, GRAIN-ENDO	23 COOKED-FRESH-BAKED	136	P 8.000000	0.411000	FDA MON.	100.00	0.411000
24002EA	CORN, GRAIN-ENDO	25 COOKED-FRESH-BOILED	136	P 8.000000	0.411000	FDA MON.	100.00	0.411000
24002EA	CORN, GRAIN-ENDO	00 NOT SPECIFIED (NO CONSUMPTION)	136	P 8.000000	0.411000	FDA MON.	100.00	0.411000
24002EA	CORN, GRAIN-BRAN	10 RAW-FRESH OR NFS	136	P 8.000000	0.411000	FDA MON.	100.00	0.411000
24002EA	CORN SUGAR	21 COOKED-NFS	136	P 8.000000	0.411000	FDA MON.	100.00	0.411000
24002EA	CORN SUGAR	22 COOKED-FRESH-BAKED	136	P 8.000000	0.411000	FDA MON.	100.00	0.411000
24003AA	OATS	21 COOKED-NFS	89	P 8.000000	8.000000		30.00	2.400000
24003AA	OATS	22 COOKED-FRESH-BAKED	89	P 8.000000	8.000000		30.00	2.400000
24003AA	OATS	23 COOKED-FRESH-BAKED	89	P 8.000000	8.000000		30.00	2.400000
24004AA	RICE-ROUGH	21 COOKED-NFS	89	P 8.000000	8.000000		10.00	0.800000
24004AA	RICE-ROUGH	23 COOKED-FRESH-BOILED	89	P 8.000000	8.000000		10.00	0.800000
24004AB	RICE-MILLED	21 COOKED-NFS	89	P 8.000000	8.000000		10.00	0.800000
24004AB	RICE-MILLED	22 COOKED-FRESH-BAKED	89	P 8.000000	8.000000		10.00	0.800000

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ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 535

DATE: 03/03/92

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Malathion Caswell #535 CAS No. 121-75-8 A.I. CODE: 057701 CFR No. 180.111	CHEMICAL	STUDY TYPE Human CHE Study NOEL= 0.2300 mg/kg 0.00 ppm LEL= 0.3400 mg/kg 0.00 ppm ONCO: Class D (HED NOTE).	EFFECTS Decreased CHE activity. No evidence of oncogeni- city in rats, mouse study equivocal.	REFERENCE DOSES PADI UF --> 10 OPP RfD= 0.020000 EPA RfD= 0.020000	DATA GAPS/COMMENTS Chronic feeding- dog Reproduction: rat Developmental tox- rabbit	STATUS HED complete 08/29/86. HED reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. On IRIS.
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FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAs RUN (ppm)
24004AB	RICE-MILLED	23 COOKED-FRESH-BOILED	89	P 8.000000	8.000000		10.00	0.800000
24004AB	RICE-MILLED	31 COOKED-FRESH OR CANNED	89	P 8.000000	8.000000		10.00	0.800000
24005AA	RYE-ROUGH	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 8.000000	8.000000		30.00	2.400000
24005GA	RYE-GERM	22 COOKED-FRESH-BAKED	89	P 8.000000	8.000000		30.00	2.400000
24005MA	RYE-FLOUR	21 COOKED-FRESH-BAKED	89	P 8.000000	8.000000		30.00	2.400000
24005MA	RYE-FLOUR	22 COOKED-FRESH-BAKED	89	P 8.000000	8.000000		30.00	2.400000
24006AA	SORGHUM	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 8.000000	8.000000		10.00	0.800000
24007AA	WHEAT-ROUGH	10 RAW-FRESH OR NFS	89	P 8.000000	1.297000	FDA MON.	100.00	1.297000
24007AA	WHEAT-ROUGH	21 COOKED-FRESH-BAKED	89	P 8.000000	1.297000	FDA MON.	100.00	1.297000
24007AA	WHEAT-ROUGH	22 COOKED-FRESH-BAKED	89	P 8.000000	1.297000	FDA MON.	100.00	1.297000
24007AA	WHEAT-ROUGH	23 COOKED-FRESH-BOILED	89	P 8.000000	1.297000	FDA MON.	100.00	1.297000
24007GA	WHEAT-GERM	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		50.00	4.000000
24007GA	WHEAT-GERM	22 COOKED-FRESH-BAKED	89	P 8.000000	8.000000		50.00	4.000000
24007HA	WHEAT-BRAN	10 RAW-FRESH OR NFS	89	P 8.000000	0.147000	FDA MON.	100.00	0.147000
24007HA	WHEAT-BRAN	21 COOKED-FRESH-BAKED	89	P 8.000000	0.147000	FDA MON.	100.00	0.147000
24007HA	WHEAT-BRAN	22 COOKED-FRESH-BAKED	89	P 8.000000	0.147000	FDA MON.	100.00	0.147000
24007MA	WHEAT-FLOUR	10 RAW-FRESH OR NFS	89	P 8.000000	0.147000	FDA MON.	100.00	0.147000
24007MA	WHEAT-FLOUR	21 COOKED-FRESH-BAKED	89	P 8.000000	0.147000	FDA MON.	100.00	0.147000
24007MA	WHEAT-FLOUR	22 COOKED-FRESH-BAKED	89	P 8.000000	0.147000	FDA MON.	100.00	0.147000
24007MA	WHEAT-FLOUR	25 COOKED-FRESH-FRIED	89	P 8.000000	0.147000	FDA MON.	100.00	0.147000
25002SA	BEET SUGAR	10 RAW-FRESH OR NFS	89	P 8.000000	1.000000		10.00	0.100000
25002SA	BEET SUGAR	21 COOKED-FRESH-BAKED	89	P 8.000000	1.000000		10.00	0.100000
25002SA	BEET SUGAR	22 COOKED-FRESH-BAKED	89	P 8.000000	1.000000		10.00	0.100000
25002SA	BEET SUGAR	25 COOKED-FRESH-BAKED	89	P 8.000000	1.000000		10.00	0.100000
270020A	CORN, GRAIN-OIL	18 PROCESSED OIL	89	P 8.000000	0.411000	FDA MON.	100.00	0.411000
270030A	COTTONSEED-OIL	18 PROCESSED OIL	89	P 2.000000	2.000000		2.00	0.040000
270030A	COTTONSEED-MEAL	00 NOT SPECIFIED (NO CONSUMPTION)	9E2248	P 0.100000	0.100000		1.00	0.080000
27004AA	FLAX SEED	18 PROCESSED OIL	89	P 2.000000	2.000000		2.00	0.040000
270070A	PEANUTS-OIL	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 8.000000	0.600000C		100.00	0.200000
27008AA	SAFFLOWER-SEED	18 PROCESSED OIL	89	P 8.000000	0.600000C		100.00	0.200000
270080A	SAFFLOWER-OIL	18 PROCESSED OIL	89	P 8.000000	0.600000C		100.00	0.200000
270100A	SOYBEANS-OIL	18 PROCESSED OIL	89	P 8.000000	8.000000		100.00	8.000000
270110A	SUNFLOWER-OIL	18 PROCESSED OIL	89	P 8.000000	8.000000		100.00	8.000000
28023AA	SOYBEANS-UNSPEC	21 COOKED-FRESH-BAKED	89	P 8.000000	8.000000		1.00	0.080000
28023AB	SOYBEANS-DRI	10 RAW-FRESH OR NFS	89	P 8.000000	8.000000		1.00	0.080000
28023AB	SOYBEANS-DRI	21 COOKED-FRESH-BOILED	89	P 8.000000	8.000000		1.00	0.080000
28023AB	SOYBEANS-DRI	23 COOKED-FRESH-FRIED	89	P 8.000000	8.000000		1.00	0.080000
28023AB	SOYBEANS-DRI	25 COOKED-FRESH OR CANNED	89	P 8.000000	8.000000		1.00	0.080000
28023AB	SOYBEANS-DRI	31 COOKED-FRESH OR CANNED	89	P 8.000000	8.000000		1.00	0.080000
28023AA	SOY-FL, FULL FAT	21 COOKED-FRESH-BAKED	89	P 8.000000	8.000000		1.00	0.080000

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ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 535

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CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Malathion Caswell #535 CAS No. 121-75-5 A.I. CODE: 057701 CFR No. 180.111	Human Che Study NOEL = 0.2300 mg/kg 0.00 ppm LEL = 0.3400 mg/kg 0.00 ppm ONCO: Class D (HED NOTE).	Decreased Che activity. No evidence of oncogenicity in rats, mouse study equivocal.	PADI UF -->10 Opp RfD= 0.020000 EPA RfD= 0.020000	Chronic feeding- dog Reproduction- rat Developmental tox- rabbit	HED complete 08/29/86. HED reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. 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)
28023MA	SOY-FL, FULL FAT	22 COOKED-FRESH-BAKED	8F0634	P 8.000000	8.000000		1.00	0.080000
28023MA	SOY-FL, FULL FAT	31 COOKED-FRESH OR CANNED	8F0634	P 8.000000	8.000000		1.00	0.080000
28023MB	SOY-FL, LOW FAT	21 COOKED-NFS	8F0634	P 8.000000	8.000000		1.00	0.080000
28023MC	SOY-FL,DEFAT	10 RAW-FRESH OR NFS	8F0634	P 8.000000	8.000000		1.00	0.080000
28023MC	SOY-FL,DEFAT	21 COOKED-NFS	8F0634	P 8.000000	8.000000		1.00	0.080000
28023MC	SOY-FL,DEFAT	22 COOKED-FRESH-BAKED	8F0634	P 8.000000	8.000000		1.00	0.080000
28023MC	SOY-FL,DEFAT	51 COOKED-CANNED	8F0634	P 8.000000	8.000000		1.00	0.080000
28023MC	SOY-FL,DEFAT	53 COOKED-CANNED-BOILED	8F0634	P 8.000000	8.000000		1.00	0.080000
28080AA	PEPPERMINI	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 8.000000	8.000000		100.00	8.000000
28080AA	PEPPERMINI	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 8.000000	8.000000		100.00	8.000000
28080AA	PEPPERMINI	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 8.000000	8.000000		100.00	8.000000
28081AA	SPEARMINT	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 8.000000	8.000000		100.00	8.000000
28081AA	SPEARMINT	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 8.000000	8.000000		100.00	8.000000
50000FA	MILK-FAT SOLIDS	10 RAW-FRESH OR NFS	8F0634	P 0.500000	0.500000C		100.00	0.500000
50000FA	MILK-FAT SOLIDS	00 NOT SPECIFIED (NO CONSUMPTION)	8F0634	P 0.500000	0.500000C		100.00	0.500000
50000FA	MILK-FAT SOLIDS	21 COOKED-NFS	8F0634	P 0.500000	0.500000C		100.00	0.500000
50000FA	MILK-FAT SOLIDS	51 COOKED-CANNED	8F0634	P 0.500000	0.500000C		100.00	0.500000
53001BA	BEEF-MEAT BYP	21 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53001BA	BEEF-MEAT BYP	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	89	P 4.000000	2.220000		100.00	2.220000
53001BB	BEEF-OTH ORGAN	21 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53001BB	BEEF-OTH ORGAN	51 COOKED-CANNED	89	P 4.000000	2.220000		100.00	2.220000
53001BB	BEEF-OTH ORGAN	51 COOKED-CANNED	89	P 4.000000	2.220000		100.00	2.220000
53001DA	BEEF-DRIED	21 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53001FA	BEEF-FAT	10 RAW-FRESH OR NFS	8F0634	P 4.000000	2.220000		100.00	2.220000
53001FA	BEEF-FAT	21 COOKED-NFS	8F0634	P 4.000000	2.220000		100.00	2.220000
53001FA	BEEF-FAT	22 COOKED-FRESH-BAKED	8F0634	P 4.000000	2.220000		100.00	2.220000
53001FA	BEEF-FAT	23 COOKED-FRESH-BOILED	8F0634	P 4.000000	2.220000		100.00	2.220000
53001FA	BEEF-FAT	24 COOKED-FRESH-BROILED	8F0634	P 4.000000	2.220000		100.00	2.220000
53001FA	BEEF-FAT	25 COOKED-FRESH-FRIED	8F0634	P 4.000000	2.220000		100.00	2.220000
53001FA	BEEF-FAT	21 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53001LA	BEEF-LIVER	25 COOKED-FRESH-FRIED	89	P 4.000000	2.220000		100.00	2.220000
53001LA	BEEF-LIVER	31 COOKED-FRESH OR CANNED	89	P 4.000000	2.220000		100.00	2.220000
53001LA	BEEF-LIVER	10 RAW-FRESH OR NFS	89	P 4.000000	2.220000		100.00	2.220000
53001MA	BEEF-LEAN	21 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53001MA	BEEF-LEAN	22 COOKED-FRESH-BAKED	89	P 4.000000	2.220000		100.00	2.220000
53001MA	BEEF-LEAN	23 COOKED-FRESH-BOILED	89	P 4.000000	2.220000		100.00	2.220000
53001MA	BEEF-LEAN	24 COOKED-FRESH-BROILED	89	P 4.000000	2.220000		100.00	2.220000
53002BA	GOAT-MEAT BYP	00 NOT SPECIFIED (NO CONSUMPTION)	187	P 4.000000	2.220000		100.00	2.220000
53002BA	GOAT-MEAT BYP	00 NOT SPECIFIED (NO CONSUMPTION)	187	P 4.000000	2.220000		100.00	2.220000
53002BA	GOAT-MEAT BYP	23 COOKED-FRESH-BOILED	8F0634	P 4.000000	2.220000		100.00	2.220000
53002FA	GOAT-FAT	25 COOKED-FRESH-FRIED	8F0634	P 4.000000	2.220000		100.00	2.220000
53002FA	GOAT-FAT	00 NOT SPECIFIED (NO CONSUMPTION)	187	P 4.000000	2.220000		100.00	2.220000
53002KA	GOAT-KIDNEY	00 NOT SPECIFIED (NO CONSUMPTION)	187	P 4.000000	2.220000		100.00	2.220000
53002LA	GOAT-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)	187	P 4.000000	2.220000		100.00	2.220000

Malathion Caswell #535 CAS No. 121-75-5 A.I. CODE: 057701 CFR No. 180.111	STUDY TYPE Human CHE Study NOEL= 0.2300 mg/kg 0.00 ppm LEL= 0.3400 mg/kg 0.00 ppm ONCO: Class D (HED NOTE)	EFFECTS Decreased CHE activity. No evidence of oncogenicity in rats, mouse study equivocal.	REFERENCE DOSES PADI UF --> 10 OPP RfD = 0.020000 EPA RfD = 0.020000	DATA GAPS/COMMENTS Chronic feeding - dog Reproduction - rat Developmental tox - rabbit	STATUS HED complete 08/29/86. HED reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. 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)
53002MA	GOAT-LEAN	23 COOKED-FRESH-BOILED	187	P 4.000000	2.220000		100.00	2.220000
53002MA	GOAT-LEAN	25 COOKED-FRESH-FRIED	187	P 4.000000	2.220000		100.00	2.220000
53003AA	HORSE	00 NOT SPECIFIED (NO CONSUMPTION)		P 4.000000	2.220000		100.00	2.220000
53005BA	SHEEP-MEAT BYP	21 COOKED-NFS	187	P 4.000000	2.220000		100.00	2.220000
53005BB	SHEEP-OTH ORGAN	21 COOKED-NFS	187	P 4.000000	2.220000		100.00	2.220000
53005FA	SHEEP-FAT	21 COOKED-NFS	BF0634	P 4.000000	2.220000		100.00	2.220000
53005KA	SHEEP-KIDNEY	21 COOKED-NFS	187	P 4.000000	2.220000		100.00	2.220000
53005LA	SHEEP-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)	187	P 4.000000	2.220000		100.00	2.220000
53005MA	SHEEP-LEAN	21 COOKED-NFS	187	P 4.000000	2.220000		100.00	2.220000
53005MA	SHEEP-LEAN	31 COOKED-FRESH OR CANNED	187	P 4.000000	2.220000		100.00	2.220000
53005MA	SHEEP-MEAT BYP	21 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53006BA	PORK-MEAT BYP	21 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53006BB	PORK-OTH ORGAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	BF0634	P 4.000000	2.220000		100.00	2.220000
53006BB	PORK-OTH ORGAN	10 RAW-FRESH OR NFS	89	P 4.000000	2.220000		100.00	2.220000
53006FA	PORK-FAT	21 COOKED-NFS	BF0634	P 4.000000	2.220000		100.00	2.220000
53006FA	PORK-FAT	23 COOKED-FRESH-BOILED	BF0634	P 4.000000	2.220000		100.00	2.220000
53006FA	PORK-FAT	25 COOKED-FRESH-FRIED	BF0634	P 4.000000	2.220000		100.00	2.220000
53006FA	PORK-FAT	26 COOKED-FRESH-FRIED	BF0634	P 4.000000	2.220000		100.00	2.220000
53006FA	PORK-FAT	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	BF0634	P 4.000000	2.220000		100.00	2.220000
53006KA	PORK-KIDNEY	21 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53006LA	PORK-LIVER	21 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53006LA	PORK-LIVER	25 COOKED-FRESH-FRIED	89	P 4.000000	2.220000		100.00	2.220000
53006MA	PORK-LEAN	21 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53006MA	PORK-LEAN	25 COOKED-FRESH-FRIED	89	P 4.000000	2.220000		100.00	2.220000
53006MA	PORK-LEAN	26 COOKED-FRESH-FRIED	89	P 4.000000	2.220000		100.00	2.220000
53006MA	PORK-LEAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	BF0634	P 4.000000	2.220000		100.00	2.220000
53008BA	TURKEY-BYP	21 COOKED-NFS	BF0634	P 4.000000	2.220000		100.00	2.220000
53008BA	TURKEY-BYP	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	BF0634	P 4.000000	2.220000		100.00	2.220000
53008LA	TURKEY ORGAN	21 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53008LA	TURKEY ORGAN	25 COOKED-FRESH-FRIED	89	P 4.000000	2.220000		100.00	2.220000
53008MA	TURKEY W/O SKIN	31 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53008MA	TURKEY W/O SKIN	31 COOKED-FRESH OR CANNED	89	P 4.000000	2.220000		100.00	2.220000
53008MA	TURKEY W/O SKIN	62 COOKED-FRESH OR FROZEN-BAKED	89	P 4.000000	2.220000		100.00	2.220000
53008MB	TURKEY+SKIN	21 COOKED-NFS	BF0634	P 4.000000	2.220000		100.00	2.220000
53008MB	TURKEY+SKIN	25 COOKED-FRESH-FRIED	BF0634	P 4.000000	2.220000		100.00	2.220000
53008MC	TURKEY-UNSPEC	21 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53013BA	POULTRY, OTH-BYP	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 4.000000	2.220000		100.00	2.220000
53013LA	POULTRY, ORGAN	25 COOKED-FRESH-FRIED	89	P 4.000000	2.220000		100.00	2.220000
53013MA	POULTRY, OTHER	21 COOKED-NFS	89	P 4.000000	2.220000		100.00	2.220000
53014AA	EGGS-WHOLE	10 RAW-FRESH OR NFS	BF0634	P 0.100000	0.100000		100.00	0.100000
53014AA	EGGS-WHOLE	21 COOKED-NFS	BF0634	P 0.100000	0.100000		100.00	0.100000
53014AA	EGGS-WHOLE	22 COOKED-FRESH-BAKED	BF0634	P 0.100000	0.100000		100.00	0.100000

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ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 535

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Malathion Caswell #535 CAS No. 121-75-5 A.I. CODE: 057701 CFR No. 180.111	Human CHE Study NOEL = 0.2300 mg/kg 0.00 ppm LEL = 0.3400 mg/kg 0.00 ppm ONCO: Class D (HED NOTE).	Decreased CHE activity. No evidence of oncogenicity in rats, mouse study equivocal.	PADI UF -->10 OPP RfD = 0.020000 EPA RfD = 0.020000	Chronic feeding- dog Reproduction- rat Developmental tox- rabbit	HED complete 08/29/86. HED reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. 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)
55014AA	EGGS-WHOLE	23 COOKED-FRESH-BOILED	8F0634	P 0.100000	0.100000		100.00	0.100000
55014AB	EGGS-WHOLE	25 COOKED-FRESH-FRIED	8F0634	P 0.100000	0.100000		100.00	0.100000
55014AB	EGGS-WHITE ONLY	10 RAW-FRESH OR NFS	8F0634	P 0.100000	0.100000		100.00	0.100000
55014AB	EGGS-WHITE ONLY	21 COOKED-NFS	8F0634	P 0.100000	0.100000		100.00	0.100000
55014AB	EGGS-WHITE ONLY	22 COOKED-FRESH-BAKED	8F0634	P 0.100000	0.100000		100.00	0.100000
55014AB	EGGS-WHITE ONLY	62 COOKED-FRESH OR FROZEN-BAKED	8F0634	P 0.100000	0.100000		100.00	0.100000
55014AB	EGGS-YOLK ONLY	81 COOKED-FROZEN	8F0634	P 0.100000	0.100000		100.00	0.100000
55014AC	EGGS-YOLK ONLY	10 RAW-FRESH OR NFS	8F0634	P 0.100000	0.100000		100.00	0.100000
55014AC	EGGS-YOLK ONLY	21 COOKED-NFS	8F0634	P 0.100000	0.100000		100.00	0.100000
55014AC	EGGS-YOLK ONLY	25 COOKED-FRESH-FRIED	8F0634	P 0.100000	0.100000		100.00	0.100000
55014AC	EGGS-YOLK ONLY	31 COOKED-FRESH OR CANNED	8F0634	P 0.100000	0.100000		100.00	0.100000
55015BA	CHICKEN-BYP	00 NOT SPECIFIED (NO CONSUMPTION)	89	P 4.000000	4.000000		100.00	4.000000
55015LA	CHICKEN-ORGAN	21 COOKED-NFS	89	P 4.000000	4.000000		100.00	4.000000
55015LA	CHICKEN-ORGAN	25 COOKED-FRESH-FRIED	89	P 4.000000	4.000000		100.00	4.000000
55015LA	CHICKEN-ORGAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	89	P 4.000000	4.000000		100.00	4.000000
55015MA	CHICKEN-W/O SKIN	21 COOKED-NFS	89	P 4.000000	4.000000		100.00	4.000000
55015MA	CHICKEN-W/O SKIN	22 COOKED-FRESH-BAKED	89	P 4.000000	4.000000		100.00	4.000000
55015MA	CHICKEN-W/O SKIN	25 COOKED-FRESH-FRIED	89	P 4.000000	4.000000		100.00	4.000000
55015MA	CHICKEN-W/O SKIN	31 COOKED-FRESH OR CANNED	89	P 4.000000	4.000000		100.00	4.000000
55015MB	CHICKEN+SKIN	21 COOKED-NFS	8F0634	P 4.000000	4.000000		100.00	4.000000
55015MB	CHICKEN+SKIN	25 COOKED-FRESH-FRIED	8F0634	P 4.000000	4.000000		100.00	4.000000

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

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CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Malathion Caswell #535 CAS No. 121-75-5 A.I. CODE: 057701 CFR No. 180.111	Human Che Study NOEL = 0.2300 mg/kg 0.00 ppm LEL = 0.3400 mg/kg 0.00 ppm	Decreased Che activity. No evidence of oncogenicity in rats, mouse study equivocal.	PADI UF -->10 OPP RfD = 0.020000 EPA RfD = 0.020000	Chronic feeding - dog Reproduction - rat Developmental tox - rabbit	HED complete 08/29/86. EPA reassess 03/06/87. EPA verified 03/18/87. WHO last reviewed 1966. On IRIS.

POPULATION SUBGROUP	U.S. POPULATION - 48 STATES	CURRENT TMRC*	NEW TMRC**	NEW TMRC AS PERCENT OF RfD	DIFFERENCE AS PERCENT OF RfD	EFFECT OF ANTICIPATED RESIDUES	%RFD
U.S. POPULATION - SPRING SEASON	0.097034	0.097034	485.168890	0.000000	0.011470	57.35189	
U.S. POPULATION - SUMMER SEASON	0.100741	0.100741	503.705825	0.000000	0.011542	57.71158	
U.S. POPULATION - FALL SEASON	0.100659	0.100659	503.292515	0.000000	0.011107	55.53716	
U.S. POPULATION - WINTER SEASON	0.100376	0.100376	501.882295	0.000000	0.010912	54.56244	
NORTHEAST REGION	0.106770	0.106770	533.847870	0.000000	0.011563	57.81305	
NORTH CENTRAL REGION	0.099041	0.099041	495.204455	0.000000	0.011024	55.12050	
SOUTHERN REGION	0.091942	0.091942	459.708965	0.000000	0.010922	54.61209	
WESTERN REGION	0.104586	0.104586	522.928460	0.000000	0.011774	58.86938	
HISPANICS	0.115947	0.115947	579.737025	0.000000	0.013107	65.53649	
NON-HISPANIC WHITES	0.098981	0.098981	494.905970	0.000000	0.010994	54.97060	
NON-HISPANIC BLACKS	0.094894	0.094894	474.471570	0.000000	0.011793	58.96500	
NON-HISPANIC OTHERS	0.115282	0.115282	576.411485	0.000000	0.013883	69.41454	
NURSING INFANTS (< 1 YEAR OLD)	0.139474	0.139474	697.371820	0.000000	0.012546	62.73026	
NON-NURSING INFANTS (< 1 YEAR OLD)	0.262863	0.262863	1314.317310	0.000000	0.023542	117.71129	
FEMALES (13+ YEARS, PREGNANT)	0.074760	0.074760	373.798300	0.000000	0.007690	38.45201	
FEMALES 13+ YEARS, NURSING	0.083450	0.083450	417.248970	0.000000	0.009062	45.31064	
CHILDREN (1-6 YEARS OLD)	0.222568	0.222568	1112.841810	0.000000	0.022016	110.08134	
CHILDREN (7-12 YEARS OLD)	0.145261	0.145261	726.303795	0.000000	0.015338	76.69214	
MALES (13-19 YEARS OLD)	0.093912	0.093912	469.561065	0.000000	0.011043	55.21617	
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)	0.081817	0.081817	409.082875	0.000000	0.009290	46.45095	
MALES (20 YEARS AND OLDER)	0.074564	0.074564	372.817980	0.000000	0.009754	48.77101	
FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)	0.073206	0.073206	366.032045	0.000000	0.008548	42.73780	

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