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

JUN 29 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Dietary Exposure Analysis for Permethrin through the Proposed Use on Wheat (PP#7F3514).

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

TO: L. Arrington/G. LaRocca, PM Team 13
Insecticide-Rodenticide Branch
Registration Division (7505C)

THROUGH: James P. Kariya, Section Head *Kariya*
Dietary Risk Evaluation Section *J.P.P. for W.B.*
SAB/Health Effects Division

Action Requested

Provide estimates of chronic dietary exposure, upper bound carcinogenic risk and acute dietary risk for the proposed use of permethrin on wheat grain at 0.05 ppm.

Discussion

1. Toxicological Endpoints: For chronic dietary exposure the Reference Dose (RfD) of 0.05 mg/kg bwt/day is based on a NOEL of 5.0 mg/kg/day and an uncertainty factor of 100. The NOEL is taken from a two year rat feeding study and the effect is increased liver weights at 25 mg/kg/day. The RfD has been approved by both HED (9/12/86) and Agency (10/28/86) RfD committees.

Based on weight of the evidence (WOTE), permethrin has been classified as a Category C₄ (possible human) carcinogen with a Q₁ of 0.0184 (mg/kg/day)⁻¹ [K. Dearfield note, 3/31/94].

A Toxicology Endpoint Selection Document for permethrin (M. Copley and J. Doherty memo, 4/26/94) indicates that acute neurotoxicity is of concern. In order to calculate the acute dietary risk a NOEL of 25 mg/kg bwt/day was supplied in the same memo as appropriate for acute dietary assessment.

2. Residue Information: Food uses indicated in the Tolerance Index System and in 40 CFR §180.378 were included in the analysis. A time-limited tolerance on cottonseed due to expire on 11/15/94 was included in the analysis as a published tolerance. Pending tolerances on sunflower seeds and raspberries and pending increases in tolerances for pistachio nuts and asparagus were included also. CBTS recommends for the proposed tolerance on wheat grain at 0.05



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contains at least 50% recycled fiber

①

ppm (G. Otakie memo, 3/18/94).

Percent crop treated information used in this analysis was provided by BEAD in two J. Faulkner memos dated 3/6/90 and 6/21/90.

Anticipated residues were provided by Chemistry Branch Tolerance Support in a L. Cheung memo dated 3/13/90.

Meat and milk tolerances exist for permethrin in 40 CFR §180.378 (c). The proposed use on wheat grain will not result in residues above current tolerances on meat and dairy products already established for permethrin (G. Otakie memo, 3/18/94).

For chronic and upper bound carcinogenicity exposure estimates anticipated residue and percent crop treated information were incorporated into the analyses. For the acute dietary analysis tolerance level residues were used and only published tolerances were included. A summary of the residue information is attached as Table 1.

3. Chronic Exposure Analysis: For chronic dietary exposure the anticipated residue contribution (ARC) for the general U.S. population and the highest exposed subgroups is as follows (as percent of the Reference Dose):

U.S. population	0.5%
Children (1-6)	0.8%
Children (7-12)	0.6%

The ARC from the proposed use on wheat is 7.1×10^{-5} mg/kg/day, representing 0.1% of the RfD. The pending uses contribute an additional 1.6×10^{-5} mg/kg/day, representing 0.03% of the RfD. If all pending uses and the proposed wheat tolerance are published the resulting ARC would be 2.4×10^{-4} mg/kg/day, or 0.5% of the RfD for the general U.S. population. A summary of the chronic exposure estimates is attached as Table 2. Table 3 is a summary of the chronic exposure contribution for each tolerance type.

4. Upper Bound Carcinogenic Exposure: The upper bound carcinogenic risk from food uses of permethrin was calculated using the following equation:

$$\text{Upper Bound Cancer Risk} = \text{Dietary Exposure (ARC)} \times Q_1^*$$

Based on a Q_1^* of $0.0184 \text{ (mg/kg/day)}^{-1}$, the upper bound cancer risk was calculated to be 4.5×10^{-6} , contributed through all the published and proposed uses for permethrin. The upper bound risk from wheat alone, using tolerance residues is 1.3×10^{-6} . A summary of the commodity contribution by raw agricultural commodity (RAC) for the overall U.S. population subgroup is attached as Table 4.

5. Acute Exposure: The DRES detailed acute exposure analysis evaluates individual food consumption as reported by respondents in the USDA 77-78 Nationwide Food Consumption Survey (NFCS) and estimates the distribution of single day exposures through the diet for the U.S. population and certain subgroups. The analysis assumes uniform distribution of permethrin in the commodity supply. Since

the toxicological effect to which high end exposure is being compared to in this analysis is neurotoxicity, all standard DRES subgroups are of concern. The analysis includes the U.S. population-48 states and four subgroups: Infants (<1 year), children (1-6 years), females (13+ years) and males (13+ years).

The Margin of Exposure (MOE) is a measure of how closely the high end exposure comes to the NOEL (the highest dose at which no effects were observed in the laboratory test), and is calculated as the ratio of the NOEL to the exposure (NOEL/exposure = MOE). For substances whose acute NOEL is based on animal studies, the Agency is not generally concerned unless the MOE is below 100.

Using only published tolerances and the proposed wheat tolerance of 0.05 ppm, the MOE for the U.S. general population is 167 for high end exposure and 1465 for mean exposure. The estimated percent of potential person days that are consumers of any commodity for which permethrin has published tolerances ranges from 93-100% of the population. The table below provides the calculated MOEs for all five subgroups.

DRES Subgroup	High End Exposure (mg/kg bwt/day)	Mean MOE NOEL/Mean Exposure	MOE NOEL/High Exposure
U.S. pop. -48 states	0.15	1465	167
Infants (< 1 year)	0.25	736	100
Children (1-6 years)	0.2	887	125
Females (13+ years)	0.1	1682	250
Males (13+ years)	0.1	1746	250

This is the first time that acute exposure has been calculated for permethrin using the DRES system. The calculated MOEs are at or above the level the Agency generally considers negligible for the five subgroups used in the DRES acute program. A table of distribution of exposures in this analysis is attached as Table 5.

Conclusions

The chronic and acute dietary risk estimates are not of concern for the proposed wheat tolerance for permethrin. When using present refinements in the residue and percent of crop treated information the upper bound carcinogenic risk exceeds the Agency's *de minimis* value for negligible risk of 10^{-6} . Because anticipated residues were not available for all commodities and 100 percent crop treated was assumed for many of the commodities, including wheat, these cancer risks are probably overestimated. However, DRES has concern for granting the proposed use on wheat until supportable data can be obtained which lowers the upper bound carcinogenic risk to the level generally considered negligible by the Agency.

Attachments

cc: DRES, CBTS (G. Otakie), Tox I (J. Doherty), Caswell #652BB

Table 1.

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Permethrin Caswell #652BB CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat NOEL= 5.0000 mg/kg 100.00 ppm LEL= 25.0000 mg/kg 500.00 ppm ONCO: C(q)(HED NOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	ADI UF -->100 OPP RfD= 0.050000 EPA RfD= 0.050000 q*: 0.01860	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
01006AA	RASPBERRIES	10 RAW-FRESH OR NFS	8E3675	A 1.000000	1.000000		100.00	1.000000
01006AA	RASPBERRIES	15 RAW-FRESH OR CANNED	8E3675	A 1.000000	1.000000		100.00	1.000000
01006AA	RASPBERRIES	31 COOKED-FRESH OR CANNED	8E3675	A 1.000000	1.000000		100.00	1.000000
01006AA	RASPBERRIES	62 COOKED-FRESH OR FROZEN-BAKED	8E3675	A 1.000000	1.000000		100.00	1.000000
01006AA	RASPBERRIES	70 RAW-FROZEN	8E3675	A 1.000000	1.000000		100.00	0.005000
03001AA	ALMONDS	10 RAW-FRESH OR NFS	2F2675	P 0.050000	0.050000		10.00	0.005000
03001AA	ALMONDS	21 COOKED-NFS	2F2675	P 0.050000	0.050000		10.00	0.005000
03001AA	ALMONDS	22 COOKED-FRESH-BAKED	2F2675	P 0.050000	0.050000		10.00	0.005000
03005AA	FILBERTS	10 RAW-FRESH OR NFS	4F3130	P 0.050000	0.050000		100.00	0.050000
03005AA	FILBERTS	21 COOKED-NFS	4F3130	P 0.050000	0.050000		100.00	0.050000
03005AA	FILBERTS	22 COOKED-FRESH-BAKED	4F3130	P 0.050000	0.050000		100.00	0.050000
03009AA	WALNUTS	10 RAW-FRESH OR NFS	4F3130	P 0.050000	0.050000		100.00	0.050000
03009AA	WALNUTS	21 COOKED-NFS	4F3130	P 0.050000	0.050000		100.00	0.050000
03009AA	WALNUTS	22 COOKED-FRESH-BAKED	4F3130	P 0.050000	0.050000		100.00	0.050000
03011AA	PISTACHIO NUTS	10 RAW-FRESH OR NFS	4F2995	P 0.100000	0.100000		100.00	0.050000
03011AA	PISTACHIO NUTS	10 RAW-FRESH OR NFS	0F3914	A 0.050000	0.050000		100.00	0.010000
04001AA	APPLES-FRESH	10 RAW-FRESH OR NFS	1F2562	P 0.050000	0.010000		100.00	0.010000
04001AA	APPLES-FRESH	10 RAW-FRESH OR NFS	1F2562	P 0.050000	0.010000		100.00	0.010000
04001AA	APPLES-FRESH	21 COOKED-NFS	1F2562	P 0.050000	0.010000		100.00	0.010000
04001AA	APPLES-FRESH	31 COOKED-FRESH OR CANNED	1F2562	P 0.050000	0.010000		100.00	0.010000
04001AA	APPLES-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	1F2562	P 0.050000	0.010000		100.00	0.010000
04001DA	APPLES-DRIED	10 RAW-FRESH OR NFS	1F2562	P 0.050000	0.010000		100.00	0.010000
04001DA	APPLES-DRIED	22 COOKED-FRESH-BAKED	1F2562	P 0.050000	0.010000		100.00	0.010000
04001DA	APPLES-DRIED	62 COOKED-FRESH OR FROZEN-BAKED	1F2562	P 0.050000	0.010000		100.00	0.010000
04001JA	APPLES-JUICE	15 RAW-FRESH OR CANNED	1F2562	P 0.050000	0.010000		100.00	0.010000
04001JA	APPLES-JUICE	31 COOKED-FRESH OR CANNED	1F2562	P 0.050000	0.010000		100.00	0.010000
04003AA	PEARS-FRESH	10 RAW-FRESH OR NFS	0F2425	P 3.000000	0.010000		100.00	0.010000
04003AA	PEARS-FRESH	31 COOKED-FRESH OR CANNED	0F2425	P 3.000000	0.010000		100.00	0.010000
04003AA	PEARS-FRESH	51 COOKED-CANNED	0F2425	P 3.000000	0.010000		100.00	0.010000
04003AA	PEARS-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	0F2425	P 3.000000	0.010000		100.00	0.010000
04003DA	PEARS-DRIED	10 RAW-FRESH OR NFS	0F2425	P 3.000000	0.010000		100.00	0.010000
04003DA	PEARS-DRIED	21 COOKED-NFS	0F2425	P 3.000000	0.010000		100.00	0.010000
05002AA	CHERRIES-FRESH	10 RAW-FRESH OR NFS	5F3271	P 3.000000	0.010000		100.00	0.010000
05002AA	CHERRIES-FRESH	21 COOKED-NFS	5F3271	P 3.000000	0.010000		100.00	0.010000
05002AA	CHERRIES-FRESH	31 COOKED-FRESH OR CANNED	5F3271	P 3.000000	0.010000		100.00	0.010000
05002AA	CHERRIES-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	5F3271	P 3.000000	0.010000		100.00	0.010000
05002DA	CHERRIES-DRIED	00 NOT SPECIFIED (NO CONSUMPTION)	5F3271	P 3.000000	0.010000		100.00	0.010000
05002JA	CHERRIES-JUICE	15 RAW-FRESH OR CANNED	5F3271	P 3.000000	0.010000		100.00	0.010000
05002JA	CHERRIES-JUICE	21 COOKED-NFS	5F3271	P 3.000000	0.010000		100.00	0.010000
05004AA	PEACHES-FRESH	10 RAW-FRESH OR NFS	3F2802	P 5.000000	0.010000		100.00	0.010000
05004AA	PEACHES-FRESH	21 COOKED-NFS	3F2802	P 5.000000	0.010000		100.00	0.010000

Table 1.

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 652BB

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			ADI	UF		
Permethrin Caswell #652BB CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat	Increased liver weights.	AD1	-->100	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.
	NOEL=	5,0000 mg/kg	OPP Rfd=	0.0500000		
	LEL=	100.00 ppm	EPA Rfd=	0.0500000		
	ONCO: C(Q)(HED NOTE)	500.00 ppm	Q*	0.01800		

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
05004AA	PEACHES-FRESH	31 COOKED-FRESH OR CANNED	3F2802	P 5.000000	0.010000		100.00	0.010000
05004AA	PEACHES-FRESH	51 COOKED-CANNED	3F2802	P 5.000000	0.010000		100.00	0.010000
05004DA	PEACHES-DRIED	10 RAW-FRESH OR NFS	3F2802	P 5.000000	0.010000		100.00	0.010000
05004DA	PEACHES-DRIED	21 COOKED-NFS	4E3146	P 1.000000	0.010000		100.00	1.000000
06001AA	AVOCADOS	10 RAW-FRESH OR NFS	4E3146	P 1.000000	0.010000		100.00	1.000000
06010AA	PAPAYAS-UNSPEC	00 NOT SPECIFIED (NO CONSUMPTION)	4E3186	P 1.000000	1.000000		100.00	1.000000
06010AB	PAPAYAS-PULP	10 RAW-FRESH OR NFS	4E3186	P 1.000000	1.000000		100.00	1.000000
06010AB	PAPAYAS-PULP	51 COOKED-CANNED	4E3186	P 1.000000	1.000000		100.00	1.000000
06010DA	PAPAYAS-DRIED	10 RAW-FRESH OR NFS	4E3186	P 1.000000	1.000000		100.00	1.000000
06010JA	PAPAYAS-JUICE	10 RAW-FRESH OR NFS	1E2514	P 2.000000	2.000000		100.00	2.000000
06018AA	KIWI	10 RAW-FRESH OR NFS	0E2377	P 1.000000	1.000000		100.00	0.010000
08022AA	HORSERADISH	11 RAW-FRESH-PICKLED, CORNED, OR CURED	8E3625	P 3.000000	0.010000		100.00	0.010000
10002AA	CANTALOUPE-UNSP	00 NOT SPECIFIED (NO CONSUMPTION)	8E3625	P 3.000000	0.010000		100.00	0.010000
10002AB	CANTALOUPE-PULP	10 RAW-FRESH OR NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10002AB	CANTALOUPE-PULP	21 COOKED-NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10003AA	CASABAS	10 RAW-FRESH OR NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10004AA	CRENSHAW	00 NOT SPECIFIED (NO CONSUMPTION)	8E3625	P 3.000000	0.010000		100.00	0.010000
10005AA	HONEYDEW MELONS	10 RAW-FRESH OR NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10007AA	PERSION MELONS	00 NOT SPECIFIED (NO CONSUMPTION)	8E3625	P 3.000000	0.010000		100.00	0.010000
10008AA	WATERMELON	10 RAW-FRESH OR NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10008AA	WATERMELON	21 COOKED-NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10010AA	CUCUMBERS	11 RAW-FRESH-PICKLED, CORNED, OR CURED	8E3625	P 3.000000	0.010000		100.00	0.010000
10010AA	CUCUMBERS	21 COOKED-NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10010AA	CUCUMBERS	21 COOKED-NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10011AA	PUMPKIN	22 COOKED-FRESH-BAKED	8E3625	P 3.000000	0.010000		100.00	0.010000
10011AA	PUMPKIN	62 COOKED-FRESH OR FROZEN-BAKED	8E3625	P 3.000000	0.010000		100.00	0.010000
10011AA	PUMPKIN	21 COOKED-NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10013AA	SQUASH-SUMMER	10 RAW-FRESH OR NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10013AA	SQUASH-SUMMER	21 COOKED-NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10014AA	SQUASH-WINTER	10 RAW-FRESH OR NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10014AA	SQUASH-WINTER	21 COOKED-NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10014AA	SQUASH-WINTER	31 COOKED-FRESH OR CANNED	8E3625	P 3.000000	0.010000		100.00	0.010000
10014AA	SQUASH-WINTER	21 COOKED-NFS	8E3625	P 3.000000	0.010000		100.00	0.010000
10017AA	BITTER MELON	00 NOT SPECIFIED (NO CONSUMPTION)	3E2892	P 1.000000	1.000000		100.00	1.000000
10020AA	TOMELGOURD	10 RAW-FRESH OR NFS	3E2892	P 1.000000	1.000000		100.00	1.000000
11001AA	EGGPLANT	21 COOKED-NFS	3E2892	P 1.000000	1.000000		100.00	0.010000
11001AA	EGGPLANT	25 COOKED-FRESH-FRIED	3E2892	P 1.000000	0.010000		100.00	0.010000
11003AA	PEPPERS, SWEET	10 RAW-FRESH OR NFS	3E2892	P 1.000000	0.010000		100.00	0.010000
11003AA	PEPPERS, SWEET	21 COOKED-NFS	4F2985	P 2.000000	0.010000		100.00	0.010000
11005AA	TOMATOES-WHOLE	10 RAW-FRESH OR NFS	4F2985	P 2.000000	0.010000		100.00	0.010000

Table 1.

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 652BB

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			ADI	UF		
Permethrin Caswell #652BB CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat	Increased liver weights.	AD1	UF -->100	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.
	NOEL= 5.0000 mg/kg		Opp Rfd= 0.0500000			
	100.00 ppm		EPA Rfd= 0.0500000			
	LEL= 25.0000 mg/kg		q*: 0.01800			
	ONCO: C(g)(HED NOTE)	Evidence of carcinogenicity in mice (liver, lung) negative in rat.				

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
11005AA	TOMATOES-WHOLE	21 COOKED-NFS	4F2985	P 2.000000	0.010000		100.00	0.010000
11005AA	TOMATOES-WHOLE	31 COOKED-FRESH OR CANNED	4F2985	P 2.000000	0.010000		100.00	0.010000
13002AA	CELERY	10 RAW-FRESH OR NFS	8F2099	P 5.000000	0.040000		100.00	0.040000
13002AA	CELERY	21 COOKED-NFS	8F2099	P 5.000000	0.040000		100.00	0.070000
13003AA	CHICORY	10 RAW-FRESH OR NFS	4F3018	P 20.000000	0.070000		100.00	0.010000
13003AA	CHICORY	21 COOKED-NFS	9F2207	P 1.000000	0.010000		100.00	0.010000
13005AA	BROCCOLI	21 COOKED-FRESH OR CANNED	9F2207	P 1.000000	0.010000		100.00	0.010000
13005AA	BROCCOLI	31 COOKED-FRESH OR CANNED	9F2207	P 1.000000	0.010000		100.00	0.010000
13005AA	BROCCOLI	63 COOKED-FRESH OR FROZEN-BOILED	9F2207	P 1.000000	0.010000		100.00	0.010000
13006AA	BRUSSEL SPROUTS	21 COOKED-NFS	9F2207	P 1.000000	0.010000		100.00	0.010000
13006AA	BRUSSEL SPROUTS	23 COOKED-FRESH-BOILED	9F2207	P 1.000000	0.010000		100.00	0.030000
13006AA	BRUSSEL SPROUTS	10 RAW-FRESH OR NFS	9F2192	P 6.000000	0.030000		100.00	0.030000
13007AA	CABBAGE	11 RAW-FRESH-PICKLED, CORNED, OR CURED	9F2192	P 6.000000	0.030000		100.00	0.010000
13007AA	CABBAGE	21 COOKED-NFS	9F2207	P 1.000000	0.010000		100.00	0.010000
13007AA	CABBAGE	10 RAW-FRESH OR NFS	9F2207	P 1.000000	0.010000		100.00	0.150000
13008AA	CAULIFLOWER	21 COOKED-NFS	6E3360	P 20.000000	0.150000		100.00	0.030000
13008AA	CAULIFLOWER	51 COOKED-CANNED	6E3360	P 20.000000	0.150000		100.00	0.030000
13009AA	COLLARDS	63 COOKED-FRESH OR FROZEN-BOILED	9F2192	P 6.000000	0.030000		100.00	0.030000
13009AA	COLLARDS	10 RAW-FRESH OR NFS	9F2192	P 6.000000	0.030000		100.00	0.070000
13010AA	CABBAGE-CHINESE	21 COOKED-NFS	4F3018	P 20.000000	0.070000		100.00	0.070000
13010AA	CABBAGE-CHINESE	10 RAW-FRESH OR NFS	4F3018	P 20.000000	0.070000		100.00	0.070000
13010AA	CABBAGE-CHINESE	63 COOKED-FRESH OR FROZEN-BOILED	4F3018	P 20.000000	0.070000		100.00	5.000000
13014AA	LETTUCE-LEAFY	10 RAW-FRESH OR NFS	4F3018	P 20.000000	0.070000		100.00	20.000000
13014AA	DANDELION	10 RAW-FRESH OR NFS	4F3018	P 20.000000	0.070000		100.00	0.010000
13015AA	ENDIVE	21 COOKED-NFS	8F2099	P 5.000000	20.000000		100.00	0.010000
13015AA	ENDIVE	00 NOT SPECIFIED (NO CONSUMPTION)	4F3018	P 20.000000	0.010000		100.00	0.230000
13016AA	FENNEL	00 NOT SPECIFIED (NO CONSUMPTION)	4F3114	P 10.000000	0.230000		100.00	0.020000
13017AA	CRESS	21 COOKED-NFS	4F3018	P 20.000000	0.020000		100.00	0.020000
13018AA	ARTICHOKE-GLOBE	10 RAW-FRESH OR NFS	4F3018	P 20.000000	0.010000		100.00	0.010000
13020AA	LETTUCE-UNSPEC	10 RAW-FRESH OR NFS	4F3018	P 20.000000	0.010000		100.00	0.010000
13022AA	PARSLEY	21 COOKED-NFS	4F3018	P 20.000000	0.020000		100.00	0.010000
13022AA	PARSLEY	53 COOKED-CANNED-BOILED	4F3018	P 20.000000	0.010000		100.00	0.010000
13022AA	PARSLEY	10 RAW-FRESH OR NFS	4F3018	P 20.000000	0.010000		100.00	0.010000
13023AA	RHUBARB	10 RAW-FRESH OR NFS	4F3018	P 20.000000	0.010000		100.00	0.010000
13023AA	RHUBARB	21 COOKED-NFS	4F3018	P 20.000000	0.010000		100.00	0.210000
13023AA	RHUBARB	31 COOKED-FRESH OR CANNED	4F3018	P 20.000000	0.010000		100.00	0.210000
13023AA	RHUBARB	62 COOKED-FRESH OR FROZEN-BAKED	4F3018	P 20.000000	0.010000		100.00	0.210000
13023AA	RHUBARB	10 RAW-FRESH OR NFS	2E2701	P 20.000000	0.210000		100.00	0.210000
13024AA	SPINACH	21 COOKED-NFS	2E2701	P 20.000000	0.210000		100.00	0.070000
13024AA	SPINACH	31 COOKED-FRESH OR CANNED	2E2701	P 20.000000	0.070000		100.00	0.070000
13024AA	SPINACH	10 RAW-FRESH OR NFS	4F3018	P 20.000000	0.070000		100.00	0.070000
13025AA	SWISS CHARD	31 COOKED-FRESH OR CANNED	4F3018	P 20.000000	0.070000		100.00	0.070000
13025AA	SWISS CHARD	63 COOKED-FRESH OR FROZEN-BOILED	4F3018	P 20.000000	0.070000		100.00	0.070000
13025AA	SWISS CHARD							

Table 1.

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			ADI	UF		
Permethrin Caswell #65288 CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat NOEL= 5.0000 mg/kg 100.00 ppm LEL= 25.0000 mg/kg 500.00 ppm ONCO: C(g)(HED NOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	OPP Rfd= 0.050000 EPA Rfd= 0.050000	-->100	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). 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)
13026AA	TURNIPS-TOPS	10 RAW-FRESH OR NFS	6E3360	P 20.00000	0.150000		100.00	0.150000
13026AA	TURNIPS-TOPS	21 COOKED-NFS	6E3360	P 20.00000	0.150000		100.00	0.150000
13026AA	TURNIPS-TOPS	31 COOKED-FRESH OR CANNED	6E3360	P 20.00000	0.150000		100.00	5.000000
13027AA	WATERCRESS	10 RAW-FRESH OR NFS	4E3113	P 5.000000	5.000000		100.00	5.000000
13027AA	WATERCRESS	21 COOKED-NFS	4E3113	P 5.000000	5.000000		100.00	20.000000
13039AA	CRESS,UPLAND	00 NOT SPECIFIED (NO CONSUMPTION)	4F3018	P 20.00000	20.000000		100.00	0.230000
13039AA	CRESS,UPLAND	10 RAW-FRESH OR NFS	9F2192	P 20.00000	0.230000		100.00	0.100000
13045AA	LETTUCE-HEAD	21 COOKED-NFS	8E3583	P 0.100000	0.100000		100.00	0.100000
14007AA	GARLIC	10 RAW-FRESH OR NFS	8E3583	P 0.100000	0.100000		100.00	0.100000
14007AA	GARLIC	21 COOKED-NFS	8E3583	P 0.100000	0.100000		100.00	0.100000
14007AA	GARLIC	32 COOKED-FRESH OR CANNED-BAKED	8E3583	P 0.100000	0.100000		10.00	0.010000
14011AA	ONIONS-DRY-BULB	10 RAW-FRESH OR NFS	8E3583	P 0.100000	0.100000		10.00	0.010000
14011AA	ONIONS-DRY-BULB	21 COOKED-NFS	8E3583	P 0.100000	0.100000		10.00	0.010000
14011AA	ONIONS-DRY-BULB	22 COOKED-FRESH-BAKED	8E3583	P 0.100000	0.100000		10.00	0.010000
14011AA	ONIONS-DRY-BULB	31 COOKED-FRESH OR CANNED	8E3583	P 0.100000	0.100000		20.00	0.002000
14013AA	POTATO(WH)-WHOLE	10 RAW-FRESH OR NFS	0F2307	P 0.050000	0.010000		20.00	0.002000
14013AA	POTATO(WH)-WHOLE	21 COOKED-NFS	0F2307	P 0.050000	0.010000		20.00	0.002000
14013AA	POTATO(WH)-WHOLE	22 COOKED-FRESH-BAKED	0F2307	P 0.050000	0.010000		20.00	0.002000
14013AA	POTATO(WH)-WHOLE	23 COOKED-FRESH-BAKED	0F2307	P 0.050000	0.010000		20.00	0.002000
14013AB	POTATO(WH)-PULP	21 COOKED-NFS	0F2307	P 0.050000	0.010000		20.00	0.002000
14013AC	POTATO(WH)-PULP	22 COOKED-FRESH-BAKED	0F2307	P 0.050000	0.010000		20.00	0.002000
14013AC	POTATO(WH)-PULP	23 COOKED-FRESH-BOILED	0F2307	P 0.050000	0.010000		20.00	0.002000
14013AC	POTATO(WH)-PULP	25 COOKED-FRESH-FRIED	0F2307	P 0.050000	0.010000		20.00	0.002000
14013DA	POTATO(WH)-DRY	10 RAW-FRESH OR NFS	0F2307	P 0.050000	0.010000		20.00	0.002000
14013DA	POTATO(WH)-DRY	31 COOKED-FRESH OR CANNED	0F2307	P 0.050000	0.010000		20.00	0.002000
14013HA	POTATO(WH)-PEEL	22 COOKED-FRESH-BAKED	0F2307	P 0.050000	0.010000		100.00	0.010000
14019AA	TURNIPS-ROOTS	10 RAW-FRESH OR NFS	6E3360	P 1.000000	0.010000		100.00	0.010000
14019AA	TURNIPS-ROOTS	21 COOKED-NFS	6E3360	P 1.000000	0.010000		60.00	0.030000
15004AA	CORN,POP	21 COOKED-NFS	1F2476	P 0.050000	0.050000		60.00	0.006000
15005AA	CORN,SHEET	10 RAW-FRESH OR NFS	3F2781	P 0.100000	0.010000		60.00	0.006000
15005AA	CORN,SHEET	21 COOKED-NFS	3F2781	P 0.100000	0.010000		60.00	0.006000
15005AA	CORN,SHEET	31 COOKED-FRESH OR CANNED	3F2781	P 0.100000	0.010000		100.00	0.050000
15018AA	SUNFLOWER-SEEDS	10 RAW-FRESH OR NFS	4F2981	A 0.050000	0.050000		5.00	0.002500
15029AA	SOYBEAN-SPROUTED	00 NOT SPECIFIED (NO CONSUMPTION)	9F2196	P 0.050000	0.050000		100.00	1.000000
16002AA	ASPARAGUS	21 COOKED-NFS	3E2914	P 1.000000	1.000000		100.00	1.000000
16002AA	ASPARAGUS	21 COOKED-NFS	8F3595	A 1.000000	1.000000		100.00	1.000000
16002AA	ASPARAGUS	23 COOKED-FRESH-BOILED	3E2914	P 1.000000	1.000000		100.00	1.000000
16002AA	ASPARAGUS	23 COOKED-FRESH-BOILED	8F3595	A 1.000000	1.000000		100.00	1.000000
16003AA	MUSHROOMS	10 RAW-FRESH OR NFS	2F2752	P 6.000000	0.010000		100.00	0.010000
16003AA	MUSHROOMS	21 COOKED-NFS	2F2752	P 6.000000	0.010000		100.00	0.010000

Table 1.

DATE: 06/21/94

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 6528B

DATA GAPS/COMMENTS

STATUS
HED complete 09/12/86
EPA verified 10/28/86
WHO last reviewed 1987;
(ADI extended to 25:75
mixture).
On IRIS.

REFERENCE DOSES

ADI UF -->100
OPP RfD= 0.050000
EPA RfD= 0.050000
q*: 0.01800

EFFECTS

Increased liver weights.
Evidence of carcinogenic-
ity in mice (liver, lung)
negative in rat.

STUDY TYPE

2yr feeding- rat
NOEL= 5.0000 mg/kg
100.00 ppm
LEL= 25.0000 mg/kg
500.00 ppm
ONCO: C(q)(HED NOTE)

CHEMICAL

Permethrin
Caswell #6528B
CAS No. 52645-53-1
A.I. CODE: 109701
CFR No. 180.378

RES. VALUE USED
IN TAS RUN (ppm)

AR STATISTIC TYPE

ANTICIPATED
RESIDUE (ppm)

TOLERANCE
(ppm)

PET.#

FOOD FORM

FOOD CODE

FOOD CODE	FOOD	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
16003AA	MUSHROOMS	2F2752	P 6.000000	0.010000		100.00	0.010000
16003AA	MUSHROOMS	2F2752	P 6.000000	0.010000		100.00	0.010000
24002EA	CORN, GRAIN-ENDO	1F2476	P 0.050000	0.010000		10.00	0.010000
24002EA	CORN, GRAIN-ENDO	1F2476	P 0.050000	0.010000		10.00	0.010000
24002EA	CORN, GRAIN-ENDO	1F2476	P 0.050000	0.010000		10.00	0.010000
24002EA	CORN, GRAIN-ENDO	1F2476	P 0.050000	0.010000		10.00	0.010000
24002HA	CORN, GRAIN-BRAN	1F2476	P 0.050000	0.010000		10.00	0.010000
24002SA	CORN SUGAR	1F2476	P 0.050000	0.010000		10.00	0.010000
24002SA	CORN SUGAR	1F2476	P 0.050000	0.010000		10.00	0.010000
24002SA	CORN SUGAR	1F2476	P 0.050000	0.010000		10.00	0.010000
24007AA	WHEAT-ROUGH	7F3514	N 0.050000	0.050000		100.00	0.050000
24007AA	WHEAT-ROUGH	7F3514	N 0.050000	0.050000		100.00	0.050000
24007AA	WHEAT-ROUGH	7F3514	N 0.050000	0.050000		100.00	0.050000
24007AA	WHEAT-ROUGH	7F3514	N 0.050000	0.050000		100.00	0.050000
24007GA	WHEAT-GERM	7F3514	N 0.050000	0.050000		100.00	0.050000
24007GA	WHEAT-GERM	7F3514	N 0.050000	0.050000		100.00	0.050000
24007GA	WHEAT-GERM	7F3514	N 0.050000	0.050000		100.00	0.050000
24007HA	WHEAT-BRAN	7F3514	N 0.050000	0.050000		100.00	0.050000
24007HA	WHEAT-BRAN	7F3514	N 0.050000	0.050000		100.00	0.050000
24007HA	WHEAT-BRAN	7F3514	N 0.050000	0.050000		100.00	0.050000
24007WA	WHEAT-FLOUR	7F3514	N 0.050000	0.050000		100.00	0.050000
24007WA	WHEAT-FLOUR	7F3514	N 0.050000	0.050000		100.00	0.050000
24007WA	WHEAT-FLOUR	7F3514	N 0.050000	0.050000		100.00	0.050000
270020A	CORN, GRAIN-OIL	1F2476	P 0.050000	0.010000		10.00	0.010000
270030A	COTTONSEED-OIL	8F2044	P 0.500000	0.010000		100.00	0.010000
270030A	COTTONSEED-OIL	8F2044	P 0.500000	0.010000		100.00	0.010000
270100A	SOYBEANS-OIL	4F2981	A 0.050000	0.050000		5.00	0.050000
270110A	SUNFLOWER-OIL	9F2196	P 0.050000	0.050000		5.00	0.050000
28023AA	SOYBEANS-UNSPEC	9F2196	P 0.050000	0.050000		5.00	0.050000
28023AB	SOYBEANS-DRY	9F2196	P 0.050000	0.050000		5.00	0.050000
28023AB	SOYBEANS-DRY	9F2196	P 0.050000	0.050000		5.00	0.050000
28023AB	SOYBEANS-DRY	9F2196	P 0.050000	0.050000		5.00	0.050000
28023AB	SOYBEANS-DRY	9F2196	P 0.050000	0.050000		5.00	0.050000
28023WA	SOY-FL, FULL FAT	9F2196	P 0.050000	0.050000		5.00	0.050000
28023WA	SOY-FL, FULL FAT	9F2196	P 0.050000	0.050000		5.00	0.050000
28023WA	SOY-FL, FULL FAT	9F2196	P 0.050000	0.050000		5.00	0.050000
28023WB	SOY-FL, LOW FAT	9F2196	P 0.050000	0.050000		5.00	0.050000
28023WB	SOY-FL, LOW FAT	9F2196	P 0.050000	0.050000		5.00	0.050000
28023WC	SOY-FL,DEFAT	9F2196	P 0.050000	0.050000		5.00	0.050000
28023WC	SOY-FL,DEFAT	9F2196	P 0.050000	0.050000		5.00	0.050000

Table 1.

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 652BB

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			ADI	UF		
Permethrin Caswell #652BB CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat NOEL= 5.0000 mg/kg 100.00 ppm LEL= 25.0000 mg/kg 500.00 ppm ONCO: C(q)(HED WOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	ADJ OPP Rfd= 0.050000 EPA Rfd= 0.050000	-->100	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.

RES. VALUE USED
IN TAS RUN (ppm)

FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
28023WC	SOY-FL,DEFAT	22 COOKED-FRESH-BAKED	9F2196	P 0.050000	0.050000		5.00	0.002500
28023WC	SOY-FL,DEFAT	51 COOKED-CANNED	9F2196	P 0.050000	0.050000		5.00	0.002500
28023WC	SOY-FL,DEFAT	53 COOKED-CANNED-BOILED	9F2196	P 0.050000	0.050000		5.00	0.002500
50000DB	MILK-NON-FAT SOL	10 RAW-FRESH OR NFS	0F2389	P 0.250000	0.001000C		100.00	0.001000
50000DB	MILK-NON-FAT SOL	21 COOKED-NFS	0F2389	P 0.250000	0.001000C		100.00	0.001000
50000DB	MILK-NON-FAT SOL	51 COOKED-CANNED	0F2389	P 0.250000	0.001000C		100.00	0.001000
50000FA	MILK-FAT SOLIDS	10 RAW-FRESH OR NFS	0F2389	P 6.250000	0.025000C		100.00	0.025000
50000FA	MILK-FAT SOLIDS	21 COOKED-NFS	0F2389	P 6.250000	0.025000C		100.00	0.025000
50000SA	MILK SUG (LACT)	21 COOKED-NFS	0F2389	P 0.250000	0.001000C		100.00	0.001000
50000SA	MILK SUG (LACT)	51 COOKED-CANNED	0F2389	P 0.250000	0.001000C		100.00	0.001000
53001BA	BEEF-MEAT BYP	21 COOKED-NFS	0F2389	P 2.000000	0.000300		100.00	0.000300
53001BA	BEEF-MEAT BYP	51 COOKED-CANNED	0F2389	P 2.000000	0.000300		100.00	0.000300
53001BB	BEEF-OTH ORGAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	0F2389	P 2.000000	0.000300		100.00	0.000300
53001BB	BEEF-OTH ORGAN	51 COOKED-NFS	0F2389	P 2.000000	0.000300		100.00	0.000300
53001DA	BEEF-DRIED	21 COOKED-NFS	0F2389	P 2.000000	0.000300		100.00	0.000300
53001FA	BEEF-FAT	10 RAW-FRESH OR NFS	0F2389	P 3.000000	0.003000		100.00	0.003000
53001FA	BEEF-FAT	21 COOKED-NFS	0F2389	P 3.000000	0.003000		100.00	0.003000
53001FA	BEEF-FAT	22 COOKED-FRESH-BAKED	0F2389	P 3.000000	0.003000		100.00	0.003000
53001FA	BEEF-FAT	23 COOKED-FRESH-BOILED	0F2389	P 3.000000	0.003000		100.00	0.003000
53001FA	BEEF-FAT	24 COOKED-FRESH-BROILED	0F2389	P 3.000000	0.003000		100.00	0.003000
53001FA	BEEF-FAT	25 COOKED-FRESH-FRIED	0F2389	P 3.000000	0.002000		100.00	0.000500
53001FA	BEEF-FAT	21 COOKED-NFS	0F2389	P 2.000000	0.000300		100.00	0.000300
53001KA	BEEF-KIDNEY	25 COOKED-FRESH-FRIED	0F2389	P 2.000000	0.000300		100.00	0.000300
53001LA	BEEF-LIVER	31 COOKED-FRESH OR CANNED	0F2389	P 2.000000	0.000300		100.00	0.000300
53001LA	BEEF-LIVER	10 RAW-FRESH OR NFS	0F2389	P 0.250000	0.000300		100.00	0.000300
53001MA	BEEF-LEAN	21 COOKED-NFS	0F2389	P 0.250000	0.000300		100.00	0.000300
53001MA	BEEF-LEAN	22 COOKED-FRESH-BAKED	0F2389	P 0.250000	0.000300		100.00	0.000300
53001MA	BEEF-LEAN	23 COOKED-FRESH-BOILED	0F2389	P 0.250000	0.000300		100.00	0.000300
53001MA	BEEF-LEAN	24 COOKED-FRESH-BROILED	0F2389	P 0.250000	0.000300		100.00	0.000300
53001MA	BEEF-LEAN	00 NOT SPECIFIED (NO CONSUMPTION)	0F2389	P 2.000000	0.000300		100.00	0.003000
53002BA	GOAT-MEAT BYP	00 NOT SPECIFIED (NO CONSUMPTION)	0F2389	P 3.000000	0.003000		100.00	0.000200
53002BB	GOAT-OTH ORGAN	23 COOKED-FRESH-BOILED	0F2389	P 3.000000	0.003000		100.00	0.000300
53002FA	GOAT-FAT	25 COOKED-FRESH-FRIED	0F2389	P 2.000000	0.000200		100.00	0.000300
53002FA	GOAT-FAT	00 NOT SPECIFIED (NO CONSUMPTION)	0F2389	P 2.000000	0.000300		100.00	0.000300
53002KA	GOAT-KIDNEY	00 NOT SPECIFIED (NO CONSUMPTION)	0F2389	P 0.250000	0.000300		100.00	0.000300
53002LA	GOAT-LIVER	23 COOKED-FRESH-BOILED	0F2389	P 0.250000	0.000300		100.00	0.000300
53002MA	GOAT-LEAN	25 COOKED-FRESH-FRIED	0F2389	P 3.000000	0.000300		100.00	0.000300
53003AA	HORSE	00 NOT SPECIFIED (NO CONSUMPTION)	0F2389	P 2.000000	0.000300		100.00	0.000300
53005BA	SHEEP-MEAT BYP	21 COOKED-NFS	0F2389	P 2.000000	0.000300		100.00	0.000300
53005BB	SHEEP-OTH ORGAN	21 COOKED-NFS	0F2389	P 2.000000	0.000300		100.00	0.000300

Table 1.

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 652BB

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Permethrin Caswell #65288 CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat NOEL= 5.0000 mg/kg 100.00 ppm LEL= 25.0000 mg/kg 500.00 ppm ONCO: C(g)(HED NOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	ADI UF -->100 OPP Rfd= 0.050000 EPA Rfd= 0.050000 q*: 0.01800	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.

FOOD CODE	FOOD	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
55014AB	EGGS-WHITE ONLY	0F2389	P 1.000000	0.000010		100.00	0.000010
55014AB	EGGS-WHITE ONLY	0F2389	P 1.000000	0.000010		100.00	0.000010
55014AC	EGGS-YOLK ONLY	0F2389	P 1.000000	0.000010		100.00	0.000010
55014AC	EGGS-YOLK ONLY	0F2389	P 1.000000	0.000010		100.00	0.000010
55014AC	EGGS-YOLK ONLY	0F2389	P 1.000000	0.000010		100.00	0.000010
55014AC	EGGS-YOLK ONLY	0F2389	P 1.000000	0.000010		100.00	0.000010
55014AC	EGGS-YOLK ONLY	0F2389	P 1.000000	0.000010		100.00	0.000010
55015BA	CHICKEN-BYP	0F2389	P 0.250000	0.000005		100.00	0.000005
55015BA	CHICKEN-ORGAN	0F2389	P 0.250000	0.000005		100.00	0.000005
55015LA	CHICKEN-ORGAN	0F2389	P 0.250000	0.000005		100.00	0.000005
55015LA	CHICKEN-ORGAN	0F2389	P 0.250000	0.000005		100.00	0.000005
55015MA	CHICKEN-W/O SKIN	1F2564	P 0.050000	0.000005		100.00	0.000005
55015MA	CHICKEN-W/O SKIN	1F2564	P 0.050000	0.000005		100.00	0.000005
55015MA	CHICKEN-W/O SKIN	1F2564	P 0.050000	0.000005		100.00	0.000005
55015MA	CHICKEN-W/O SKIN	1F2564	P 0.050000	0.000005		100.00	0.000005
55015MA	CHICKEN-W/O SKIN	1F2564	P 0.050000	0.000005		100.00	0.000005
55015MB	CHICKEN+SKIN	0F2389	P 0.050000	0.000005		100.00	0.000005
55015MB	CHICKEN+SKIN	0F2389	P 0.050000	0.000005		100.00	0.000005

Table 2.

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 06/21/94

PAGE: 1

CHEMICAL INFORMATION		STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS	
Permethrin Caswell #65288 CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat NOEL= 5.0000 mg/kg 100.00 ppm LEL= 25.0000 mg/kg 500.00 ppm ONCO: C(g)(HED NOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	ADI UF -->100 OPP Rfd= 0.050000 EPA Rfd= 0.050000 Q*: 0.01800	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.		
TOTAL TMRC (MG/KG BODY WEIGHT/DAY)							
POPULATION SUBGROUP		CURRENT TMRC*	NEW TMRC**	NEW TMRC AS PERCENT OF RFD	DIFFERENCE AS PERCENT OF RFD	EFFECT OF ANTICIPATED RESIDUES ARC	%RFD
U.S. POPULATION - 48 STATES		0.016914	0.017001	34.001922	0.173482	0.000243	0.48648
U.S. POPULATION - SPRING SEASON		0.017332	0.017426	34.851860	0.187750	0.000252	0.50336
U.S. POPULATION - SUMMER SEASON		0.018465	0.018545	37.090684	0.160008	0.000224	0.44786
U.S. POPULATION - FALL SEASON		0.015942	0.016026	32.052960	0.168000	0.000254	0.50708
U.S. POPULATION - WINTER SEASON		0.015915	0.016004	32.008670	0.178074	0.000239	0.47835
NORTHEAST REGION		0.017465	0.017553	35.106666	0.177286	0.000258	0.51689
NORTH CENTRAL REGION		0.016218	0.016310	32.620118	0.183528	0.000244	0.48821
SOUTHERN REGION		0.015719	0.015797	31.594730	0.156484	0.000210	0.42049
WESTERN REGION		0.019262	0.019353	38.706208	0.183138	0.000272	0.54494
HISPANICS		0.017793	0.017867	35.734508	0.147574	0.000206	0.41117
NON-HISPANIC WHITES		0.016695	0.016787	33.573258	0.182292	0.000250	0.50030
NON-HISPANIC BLACKS		0.017514	0.017580	35.160328	0.131388	0.000203	0.40586
NON-HISPANIC OTHERS		0.020333	0.020409	40.817816	0.150936	0.000282	0.56429
NURSING INFANTS (< 1 YEAR OLD)		0.015371	0.015398	30.796760	0.053998	0.000132	0.26319
NON-NURSING INFANTS (< 1 YEAR OLD)		0.036314	0.036369	72.738260	0.110072	0.000287	0.57338
FEMALES (13+ YEARS, PREGNANT)		0.012995	0.013051	26.101794	0.111378	0.000157	0.31392
FEMALES 13+ YEARS, NURSING		0.017678	0.017769	35.537122	0.180560	0.000236	0.47242
CHILDREN (1-6 YEARS OLD)		0.028055	0.028226	56.452412	0.342928	0.000384	0.76794
CHILDREN (7-12 YEARS OLD)		0.022497	0.022622	45.243144	0.250090	0.000303	0.60659
MALES (13-19 YEARS OLD)		0.015428	0.015521	31.042696	0.186068	0.000217	0.43386
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)		0.014108	0.014179	28.358746	0.143248	0.000203	0.40580
MALES (20 YEARS AND OLDER)		0.013950	0.014025	28.050226	0.149534	0.000213	0.42681
FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)		0.014889	0.014956	29.911360	0.133008	0.000222	0.44488

*Current TMRC does not include new or pending tolerances.

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

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Table 3.

TOLERANCE ASSESSMENT SUMMARY FOR Permethrin
 USING ANTICIPATED RESIDUES
 CASWELL #652BB

DATE: 06/21/94

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

EXISTING ANTICIPATED RESIDUES (PUBLISHED ONLY)		
RESULT IN AN ARC OF:	0.000157	MG/KG/DAY
THE EXISTING ARC IS EQUIVALENT TO:	0.313	% OF THE ADI.
PROPOSED NEW ANTICIPATED RESIDUES (CURRENT PETITION ONLY)		
RESULT IN AN ARC OF:	0.000071	MG/KG/DAY
THESE NEW ANTICIPATED RESIDUES WILL OCCUPY:	0.141	% OF THE ADI.
IF THE NEW ANTICIPATED RESIDUES (CURRENT PETITION ONLY)		
ARE APPROVED THE RESULTANT ARC WILL BE:	0.000227	MG/KG/DAY
THE NEW ARC WILL OCCUPY	0.454	% OF THE ADI.
OTHER PENDING ANTICIPATED RESIDUES EXCLUDING THE		
CURRENT NEW PETITION HAVE AN ARC OF:	0.000016	MG/KG/DAY
THIS ARC WILL OCCUPY	0.032	% OF THE ADI.
IF ALL PENDING ANTICIPATED RESIDUES (INCLUDING THE		
CURRENT NEW PETITION) ARE GRANTED		
THE RESULTANT ARC WILL BE:	0.000243	MG/KG/DAY
THE TOTAL ARC WILL OCCUPY	0.486	% OF THE ADI.

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

EXISTING ANTICIPATED RESIDUES (PUBLISHED ONLY)		
RESULT IN AN ARC OF:	0.000232	MG/KG/DAY
THE EXISTING ARC IS EQUIVALENT TO:	0.463	% OF THE ADI.
PROPOSED NEW ANTICIPATED RESIDUES (CURRENT PETITION ONLY)		
RESULT IN AN ARC OF:	0.000052	MG/KG/DAY
THESE NEW ANTICIPATED RESIDUES WILL OCCUPY:	0.103	% OF THE ADI.
IF THE NEW ANTICIPATED RESIDUES (CURRENT PETITION ONLY)		
ARE APPROVED THE RESULTANT ARC WILL BE:	0.000283	MG/KG/DAY
THE NEW ARC WILL OCCUPY	0.566	% OF THE ADI.
OTHER PENDING ANTICIPATED RESIDUES EXCLUDING THE		
CURRENT NEW PETITION HAVE AN ARC OF:	0.000003	MG/KG/DAY
THIS ARC WILL OCCUPY	0.007	% OF THE ADI.
IF ALL PENDING ANTICIPATED RESIDUES (INCLUDING THE		
CURRENT NEW PETITION) ARE GRANTED		
THE RESULTANT ARC WILL BE:	0.000287	MG/KG/DAY
THE TOTAL ARC WILL OCCUPY	0.573	% OF THE ADI.

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

EXISTING ANTICIPATED RESIDUES (PUBLISHED ONLY)		
RESULT IN AN ARC OF:	0.000213	MG/KG/DAY
THE EXISTING ARC IS EQUIVALENT TO:	0.425	% OF THE ADI.
PROPOSED NEW ANTICIPATED RESIDUES (CURRENT PETITION ONLY)		
RESULT IN AN ARC OF:	0.000158	MG/KG/DAY
THESE NEW ANTICIPATED RESIDUES WILL OCCUPY:	0.315	% OF THE ADI.
IF THE NEW ANTICIPATED RESIDUES (CURRENT PETITION ONLY)		
ARE APPROVED THE RESULTANT ARC WILL BE:	0.000370	MG/KG/DAY
THE NEW ARC WILL OCCUPY	0.740	% OF THE ADI.
OTHER PENDING ANTICIPATED RESIDUES EXCLUDING THE		
CURRENT NEW PETITION HAVE AN ARC OF:	0.000014	MG/KG/DAY
THIS ARC WILL OCCUPY	0.027	% OF THE ADI.
IF ALL PENDING ANTICIPATED RESIDUES (INCLUDING THE		
CURRENT NEW PETITION) ARE GRANTED		
THE RESULTANT ARC WILL BE:	0.000384	MG/KG/DAY
THE TOTAL ARC WILL OCCUPY	0.768	% OF THE ADI.

Table 4.

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 06/29/94

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CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS
			ADI	UF	No data gaps.	HED complete	
Permethrin Caswell #65288 CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat NOEL= 5.0000 mg/kg 100.00 ppm LEL= 25.0000 mg/kg 500.00 ppm ONCO: C(q)(HED WOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	AD1 OPP RfD= 0.050000 EPA RfD= 0.050000 Q*: 0.01840	-->100	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.	

COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES

FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	TMRC TYPE	TMRC (UG/KG/DAY)	%RFD	TMRC ONCO RISK	ANTICIPATED RESIDUE			ONCO RISK
							(PPM)	(UG/KG/DAY)	(UG/KG/DAY)	
03011AA	PISTACHIO NUTS 10 RAW-FRESH OR NFS	0.100	P	0.000025	0.000	0.000000000046	0.10000	0.000025	0.000	0.000000000046
	10 RAW-FRESH OR NFS						0.05000	0.000013	0.000	0.000000000024
06001AA	AVOCADOS 10 RAW-FRESH OR NFS	1.000	P	0.012537	0.025	0.00000023068	0.01000	0.000125	0.000	0.000000000230
06010AA	PAPAYAS-UNSPECIFIED 00 NOT SPECIFIED (NO CONSUMPTION)	1.000	P	0.000001	0.000	0.000000000002	1.00000	0.000001	0.000	0.000000000002
06010AB	PAPAYAS-PULP 10 RAW-FRESH OR NFS	1.000	P	0.001339	0.003	0.00000002464	1.00000	0.001300	0.003	0.00000002392
	51 COOKED-CANNED						1.00000	0.000039	0.000	0.000000000072
06010DA	PAPAYAS-DRIED 10 RAW-FRESH OR NFS	1.000	P	0.001728	0.003	0.000000003180	1.00000	0.001728	0.003	0.000000003180
06010JA	PAPAYAS-JUICE 10 RAW-FRESH OR NFS	1.000	P	0.004580	0.009	0.00000008427	1.00000	0.004580	0.009	0.00000008427
06018AA	KIWI 10 RAW-FRESH OR NFS	2.000	P	0.000038	0.000	0.000000000070	2.00000	0.000038	0.000	0.000000000070
13016AA	FENNEL 00 NOT SPECIFIED (NO CONSUMPTION)	5.000	P	0.001105	0.002	0.00000002033	5.00000	0.001105	0.002	0.00000002033
13018AA	ARTICHOKES-GLOBE 21 COOKED-NFS	10.000	P	0.032120	0.064	0.00000059101	0.01000	0.000032	0.000	0.000000000059
13027AA	WATERCRESS 10 RAW-FRESH OR NFS	5.000	P	0.001777	0.004	0.00000003270	5.00000	0.001417	0.003	0.00000002607
	21 COOKED-NFS						5.00000	0.000360	0.001	0.00000000662
15018AA	SUNFLOWER-SEEDS 10 RAW-FRESH OR NFS	0.050	A	0.000087	0.000	0.00000000160	0.05000	0.000087	0.000	0.00000000160
16002AA	ASPARAGUS 21 COOKED-NFS	1.000	P	0.013110	0.026	0.00000024122	1.00000	0.011684	0.023	0.00000021499
	23 COOKED-FRESH-BOILED						1.00000	0.011684	0.023	0.00000021499
	23 COOKED-FRESH-BOILED						1.00000	0.001425	0.003	0.00000002622
	23 COOKED-FRESH-BOILED						1.00000	0.001425	0.003	0.00000002622
16003AA	MUSHROOMS 10 RAW-FRESH OR NFS	6.000	P	0.128329	0.257	0.00000236125	0.01000	0.000009	0.000	0.00000000017
	21 COOKED-NFS						0.01000	0.000152	0.000	0.00000000280
	31 COOKED-FRESH OR CANNED						0.01000	0.000038	0.000	0.00000000070
	53 COOKED-CANNED-BOILED						0.01000	0.000015	0.000	0.00000000028
270030A	COTTONSEED-OIL 18 PROCESSED OIL	0.500	P	0.010204	0.020	0.00000018775	0.01000	0.000204	0.000	0.000000000375
27003WA	COTTONSEED-MEAL 18 PROCESSED OIL	0.500	P	0.000059	0.000	0.0000000109	0.01000	0.000001	0.000	0.000000000002
270110A	SUNFLOWER-OIL 18 PROCESSED OIL	0.050	A	0.000124	0.000	0.00000000228	0.05000	0.000124	0.000	0.000000000228

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Table 4.

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 06/29/94

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CHEMICAL INFORMATION		STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS			
Permethrin	2yr feeding- rat	Increased liver weights.	ADI UF -->100	No data gaps.	HED complete 09/12/86				
Caswell #65288	NOEL= 5,0000 mg/kg	Evidence of carcinogenicity in mice (liver, lung) negative in rat.	OPP Rfd= 0.050000		EPA verified 10/28/86				
CAS No. 52645-53-1	LEL= 100.00 ppm		EPA Rfd= 0.050000		WHO last reviewed 1987;				
A.I. CODE: 109701	ONCO: C(Q)(HED NOTE)		Q*: 0.01840		(ADI extended to 25:75 mixture).				
CFR No. 180.378					On IRIS.				
COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES									
FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	TMRC TYPE (UG/KG/DAY)	%RFD	TMRC ONCO RISK	ANTICIPATED RESIDUE (PPM)	ARC (UG/KG/DAY)	%RFD	ARC ONCO RISK
CROP GROUP TOTALS FOR UNSPECIFIED:									
14013AA	POTATOES(WHITE)-WHOLE	0.050	P	0.017003	0.034	0.00000031286	0.00200	0.000091	0.0000000167
	10 RAW-FRESH OR NFS						0.00200	0.000300	0.0000000552
	21 COOKED-NFS						0.00200	0.000289	0.0000000532
14013AB	22 COOKED-FRESH-BAKED	0.050	P	0.0000004	0.000	0.00000000007	0.00200	0.000000	0.00000000000
14013AC	POTATOES(WHITE)-UNSPECIFIED	0.050	P	0.039213	0.078	0.00000072152	0.00200	0.000144	0.0000000265
	22 COOKED-FRESH-BAKED						0.00200	0.000085	0.0000000156
	21 COOKED-NFS						0.00200	0.000867	0.0000001595
	22 COOKED-FRESH-BAKED						0.00200	0.000472	0.0000000868
	23 COOKED-FRESH-BOILED						0.00200	0.000007	0.0000000013
	25 COOKED-FRESH-FRIED						0.00200	0.000010	0.0000000018
14013DA	POTATOES(WHITE)-DRY	0.050	P	0.0000422	0.001	0.00000000776	0.00200	0.000000	0.00000000000
	10 RAW-FRESH OR NFS						0.00200	0.000010	0.0000000018
	31 COOKED-FRESH OR CANNED						0.00200	0.000000	0.00000000000
14013HA	POTATOES(WHITE)-PEEL ONLY	0.050	P	0.0000001	0.000	0.00000000002	0.01000	0.000005	0.00000000009
14019AA	22 COOKED-FRESH-BAKED	1.000	P	0.008239	0.016	0.00000015160	0.01000	0.000077	0.00000000142
	TURNIPS-ROOTS						0.01000	0.000077	0.00000000142
	10 RAW-FRESH OR NFS						0.00200	0.000000	0.00000000000
	21 COOKED-NFS						0.00200	0.000000	0.00000000000
CROP GROUP TOTALS FOR ROOT AND TUBER VEGETABLES:									
13026AA	TURNIPS-TOPS	20.000	P	0.294222	0.588	0.00000541368	0.15000	0.000653	0.00000001202
	10 RAW-FRESH OR NFS						0.15000	0.000528	0.0000000972
	21 COOKED-NFS						0.15000	0.001025	0.0000001886
	31 COOKED-FRESH OR CANNED						0.15000	0.001025	0.0000001886
CROP GROUP TOTALS FOR LEAVES OF ROOT AND TUBER VEG.:									
14007AA	GARLIC	0.100	P	0.000076	0.000	0.00000000140	0.10000	0.000003	0.00000000006
	10 RAW-FRESH OR NFS						0.10000	0.000047	0.00000000086
	21 COOKED-NFS						0.10000	0.000026	0.00000000048
	32 COOKED-FRESH OR CANNED-BAKED						0.10000	0.000185	0.00000000340
14011AA	ONIONS-DRY-BULB (CIPOLLINI)	0.100	P	0.010606	0.021	0.00000019515	0.01000	0.000708	0.00000001303
	10 RAW-FRESH OR NFS						0.01000	0.000103	0.00000000190
	21 COOKED-NFS						0.01000	0.000103	0.00000000190
	22 COOKED-FRESH-BAKED						0.01000	0.000064	0.00000000118
	31 COOKED-FRESH OR CANNED						0.01000	0.000064	0.00000000118

Table 4.

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

STATUS

CHEMICAL INFORMATION		STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Permethrin Caswell #65288 CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat NOEL= 5.0000 mg/kg 100.00 ppm LEL= 25.0000 mg/kg 500.00 ppm ONCO: C(g)(HED NOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	ADI UF -->100 OPP RfD= 0.050000 EPA RfD= 0.050000 Q*: 0.01840	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.	

COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES

FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	TMRC TYPE (UG/KG/DAY)	%RFD	TMRC ONCO RISK	ANTICIPATED RESIDUE (PPM)	ARC (UG/KG/DAY)	%RFD	ARC ONCO RISK
CROP GROUP TOTALS FOR BULB VEGETABLES:									
13002AA	CELERY	5.000	P 0.010682	0.021	0.00000019655	0.001136	0.001136	0.002	0.00000002090
	10 RAW-FRESH OR NFS			0.610	0.000000560843	0.04000	0.001912	0.004	0.00000003518
	21 COOKED-NFS					0.04000	0.000526	0.001	0.00000000968
13003AA	CHTCORY (FRENCH OR BELGIAN ENDIVE)	20.000	P 0.013414	0.027	0.00000024682	0.07000	0.000047	0.000	0.00000000086
13013AA	10 RAW-FRESH OR NFS	20.000	P 0.088656	0.177	0.00000163127	0.23000	0.001020	0.002	0.000000001877
	10 RAW-FRESH OR NFS	20.000	P 0.010078	0.020	0.00000018544	0.07000	0.000035	0.000	0.00000000064
13014AA	DANDELION	20.000	P 0.023702	0.047	0.00000043612	0.07000	0.000047	0.000	0.00000000086
13015AA	ENDIVE (CURLY AND ESCAROLE)	20.000	P 0.000020	0.000	0.00000000037	0.07000	0.000036	0.000	0.00000000066
	10 RAW-FRESH OR NFS	20.000	P 0.000020	0.000	0.00000000037	20.00000	0.000020	0.000	0.00000000037
13017AA	CRESS (GARDEN/FIELD)	20.000	P 0.184016	0.368	0.00000338589	0.23000	0.002116	0.004	0.000000003893
13020AA	LETTUCE-UNSPECIFIED	20.000	P 0.073358	0.147	0.00000134979	0.02000	0.000024	0.000	0.00000000044
13022AA	10 RAW-FRESH OR NFS	20.000	P 0.073358	0.147	0.00000134979	0.02000	0.000045	0.000	0.00000000083
	21 COOKED-NFS	20.000	P 0.073358	0.147	0.00000134979	0.02000	0.000004	0.000	0.00000000007
13023AA	53 COOKED-CANNED-BOILED	20.000	P 0.075370	0.151	0.00000138681	0.01000	0.000004	0.000	0.00000000007
	10 RAW-FRESH OR NFS	20.000	P 0.075370	0.151	0.00000138681	0.01000	0.000001	0.000	0.00000000002
	21 COOKED-NFS	20.000	P 0.075370	0.151	0.00000138681	0.01000	0.000019	0.000	0.00000000035
	31 COOKED-FRESH OR CANNED	20.000	P 0.075370	0.151	0.00000138681	0.01000	0.000013	0.000	0.00000000024
13024AA	62 COOKED-FRESH OR FROZEN-BAKED	20.000	P 0.870620	1.741	0.00001601941	0.21000	0.001558	0.003	0.00000002867
	10 RAW-FRESH OR NFS	20.000	P 0.870620	1.741	0.00001601941	0.21000	0.001345	0.003	0.00000002475
	21 COOKED-NFS	20.000	P 0.870620	1.741	0.00001601941	0.21000	0.006238	0.012	0.00000011478
13025AA	31 COOKED-FRESH OR CANNED	20.000	P 0.033830	0.068	0.00000062247	0.07000	0.000005	0.000	0.00000000009
	SWISS CHARD	20.000	P 0.033830	0.068	0.00000062247	0.07000	0.000107	0.000	0.00000000197
	10 RAW-FRESH OR NFS	20.000	P 0.033830	0.068	0.00000062247	0.07000	0.000006	0.000	0.00000000011
	31 COOKED-FRESH OR CANNED	20.000	P 0.033830	0.068	0.00000062247	0.07000	0.000006	0.000	0.00000000011
13039AA	63 COOKED-FRESH OR FROZEN-BOILED	20.000	P 0.000020	0.000	0.00000000037	20.00000	0.000020	0.000	0.00000000037
	CRESS/UPLAND	20.000	P 0.000020	0.000	0.00000000037	20.00000	0.000020	0.000	0.00000000037
13045AA	00 NOT SPECIFIED (NO CONSUMPTION)	20.000	P 4.245606	8.491	0.00007811915	0.23000	0.047901	0.096	0.000000088138
	LETTUCE-HEAD VARIETIES	20.000	P 4.245606	8.491	0.00007811915	0.23000	0.000923	0.002	0.000000001698
	10 RAW-FRESH OR NFS	20.000	P 4.245606	8.491	0.00007811915	0.23000	0.000923	0.002	0.000000001698
	21 COOKED-NFS	20.000	P 4.245606	8.491	0.00007811915	0.23000	0.000923	0.002	0.000000001698

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Table 4.

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 06/29/94

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STATUS

CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Permethrin Caswell #6528B CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat NOEL= 5,0000 mg/kg LEL= 100.00 ppm 25,0000 mg/kg 500.00 ppm ONCO: C(q)(RED NOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	ADI UF -->100 OPP Rfd= 0.050000 EPA Rfd= 0.050000 q*: 0.01840	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.

COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES

FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	TYPE	TMRC (UG/KG/DAY)	%RFD	TMRC ONCO RISK	ANTICIPATED RESIDUE (PPM)	ARC (UG/KG/DAY)	%RFD	ARC ONCO RISK
CROP GROUP TOTALS FOR LEAFY VEGETABLES (EXCL. BRASSICAE):										
		1.000	P	0.049129	11.847	0.00010899233	0.063972		0.128	0.00000117708
13005AA	BROCCOLI 21 COOKED-NFS 31 COOKED-FRESH OR CANNED 63 COOKED-FRESH OR FROZEN-BOILED	1.000	P	0.049129	0.098	0.00000090397	0.01000 0.01000 0.01000	0.000034 0.000405 0.000052	0.000 0.001 0.000	0.00000000063 0.00000000745 0.00000000096
13006AA	BRUSSEL SPROUTS 21 COOKED-NFS 23 COOKED-FRESH-BOILED	1.000	P	0.006848	0.014	0.00000012600	0.01000 0.01000	0.000011 0.000057	0.000 0.000	0.00000000020 0.00000000105
13007AA	CABBAGE-GREEN AND RED 10 RAW-FRESH OR NFS 11 RAW-FRESH-PICKLED, CORNED, OR CURED 21 COOKED-NFS	6.000	P	0.561841	1.124	0.00001033787	0.03000 0.03000 0.03000	0.001153 0.000356 0.001300	0.002 0.001 0.003	0.000000002122 0.00000000655 0.00000002392
13008AA	CAULIFLOWER 10 RAW-FRESH OR NFS 21 COOKED-NFS	1.000	P	0.015837	0.032	0.00000029140	0.01000 0.01000	0.000009 0.000149	0.000 0.000	0.00000000017 0.00000000274
13009AA	COLLARDS 51 COOKED-CANNED 63 COOKED-FRESH OR FROZEN-BOILED	20.000	P	0.377932	0.756	0.00000695395	0.15000 0.15000	0.000034 0.002801	0.000 0.000	0.00000000063 0.00000005154
13010AA	CABBAGE-CHINESE/CELERY (INC. BOK CHOY) 10 RAW-FRESH OR NFS 21 COOKED-NFS	6.000	P	0.027379	0.055	0.00000050377	0.03000 0.03000	0.000007 0.000130	0.000 0.000	0.00000000013 0.00000000239
CROP GROUP TOTALS FOR BRASSICA (COLE) LEAFY VEGETABLES:										
		0.050	P	0.000000	2.078	0.00001911697	0.00250	0.000000	0.000	0.00000000000
15029AA	SOYBEANS-SPROUTED SEEDS 00 NOT SPECIFIED (NO CONSUMPTION)	0.050	P	0.016108	0.032	0.00000029639	0.00250	0.000805	0.002	0.00000001481
270100A	SOYBEANS-OIL 18 PROCESSED OIL	0.050	P	0.000026	0.000	0.00000000048	0.00250	0.000001	0.000	0.000000000002
28023AA	SOYBEANS-UNSPECIFIED 21 COOKED-NFS	0.050	P	0.000045	0.000	0.000000000083	0.00250 0.00250	0.000001 0.000000	0.000 0.000	0.000000000002 0.000000000000
28023AB	SOYBEANS-MATURE/SEEDS DRY 10 RAW-FRESH OR NFS 21 COOKED-NFS	0.050	P	0.000146	0.000	0.000000000269	0.00250 0.00250	0.000002 0.000004	0.000 0.000	0.000000000004 0.000000000007
28023WA	SOYBEANS-FLOUR/FULL FAT 21 COOKED-NFS 22 COOKED-FRESH-BAKED	0.050	P	0.000146	0.000	0.000000000269	0.00250 0.00250	0.000002 0.000004	0.000 0.000	0.000000000004 0.000000000007

DATE: 06/29/94

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

STATUS

DATA GAPS/COMMENTS

REFERENCE DOSES

EFFECTS

STUDY TYPE

CHEMICAL INFORMATION

Permethrin
Caswell #65288
CAS No. 52645-53-1
A.I. CODE: 109701
CFR No. 180.378

2yr feeding- rat
NOEL= 5.0000 mg/kg
LEL= 25.0000 mg/kg
500.00 ppm
ONCO: C(q)(HED NOTE)

Increased liver weights.

AD1 UF -->100
OPP RfD= 0.050000
EPA RfD= 0.050000

No data gaps.

HED complete 09/12/86
EPA verified 10/28/86
WHO last reviewed 1987;
(ADI extended to 25:75
mixture).
On IRIS.

COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES

FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	TYPE	TMRC (UG/KG/DAY)	%RFD	TMRC ONCO RISK	ANTICIPATED RESIDUE (PPM)		ARC (UG/KG/DAY)	%RFD	ARC ONCO RISK
							TMRC	ONCO RISK			
28023WB	31 COOKED-FRESH OR CANNED SOYBEANS-FLOUR/LOW FAT	0.050	P	0.000048	0.000	0.000000000088	0.00250	0.000001	0.000000000002	0.000	0.000000000004
28023WC	21 COOKED-NFS SOYBEANS-FLOUR/DEFATTED	0.050	P	0.000623	0.001	0.00000001146	0.00250	0.000002	0.000000000004	0.000	0.000000000004
	10 RAW-FRESH OR NFS						0.00250	0.000013	0.000000000024	0.000	0.000000000015
	21 COOKED-NFS						0.00250	0.000008	0.000000000015	0.000	0.000000000013
	21 COOKED-FRESH-BAKED						0.00250	0.000007	0.000000000013	0.000	0.000000000013
	51 COOKED-CANNED						0.00250	0.000007	0.000000000013	0.000	0.000000000013
	53 COOKED-CANNED-BOILED						0.00250	0.000007	0.000000000013	0.000	0.000000000013
CROP GROUP TOTALS FOR LEGUME VEGETABLES:		1.000	P	0.016996	0.034	0.00000031273	1.00000	0.000849	0.000000000020	0.000	0.000000000020
11001AA	EGGPLANT	1.000	P	0.006186	0.012	0.00000011382	1.00000	0.000011	0.00000010054	0.011	0.00000010054
	10 RAW-FRESH OR NFS						1.00000	0.005464	0.00000001308	0.001	0.00000001308
	25 COOKED-FRESH-FRIED						1.00000	0.000711	0.000000000125	0.000	0.000000000125
11003AA	PEPPERS (SWEET/GARDEN)	1.000	P	0.021552	0.043	0.00000039656	0.01000	0.000068	0.00000000270	0.000	0.00000000270
	10 RAW-FRESH OR NFS						0.01000	0.000147	0.000000004622	0.005	0.000000004622
	21 COOKED-NFS						0.01000	0.002512	0.00000003562	0.004	0.00000003562
11005AA	TOMATOES-WHOLE	2.000	P	0.984033	1.968	0.00001810621	0.01000	0.001936	0.00000000868	0.001	0.00000000868
	10 RAW-FRESH OR NFS						0.01000	0.000472	0.000000020831	0.023	0.000000020831
	21 COOKED-NFS						0.01000	0.011321	0.000000000000	0.000	0.000000000000
	31 COOKED-FRESH OR CANNED						0.01000	0.000000	0.000000000000	0.000	0.000000000000
CROP GROUP TOTALS FOR FRUITING VEGETABLES (EXCL. CUCURBITS):		3.000	P	0.000003	0.000	0.000000000006	0.01000	0.000000	0.000000000000	0.000	0.000000000000
10002AA	CANTALOUPE-UNSPECIFIED	3.000	P	0.133266	0.267	0.00000245209	0.01000	0.000442	0.000000000013	0.001	0.000000000013
	00 NOT SPECIFIED (NO CONSUMPTION)						0.01000	0.000002	0.000000000004	0.000	0.000000000004
10002AB	CANTALOUPE-PULP	3.000	P	0.002311	0.005	0.00000004252	0.01000	0.000008	0.000000000015	0.000	0.000000000015
	10 RAW-FRESH OR NFS						0.01000	0.000000	0.000000000000	0.000	0.000000000000
	21 COOKED-NFS						0.01000	0.000000	0.000000000000	0.000	0.000000000000
10003AA	CASABAS	3.000	P	0.000003	0.000	0.000000000006	0.01000	0.000000	0.000000000000	0.000	0.000000000000
	10 RAW-FRESH OR NFS						0.01000	0.000000	0.000000000000	0.000	0.000000000000
10004AA	CRENSHAW	3.000	P	0.055088	0.110	0.00000101362	0.01000	0.000184	0.000000000033	0.000	0.000000000033
	00 NOT SPECIFIED (NO CONSUMPTION)						0.01000	0.000000	0.000000000000	0.000	0.000000000000
10005AA	HONEYDEW MELONS	3.000	P	0.000003	0.000	0.000000000006	0.01000	0.000000	0.000000000000	0.000	0.000000000000
	10 RAW-FRESH OR NFS						0.01000	0.000000	0.000000000000	0.000	0.000000000000
10007AA	PERSION MELONS	3.000	P	0.229516	0.459	0.00000422309	0.01000	0.000764	0.000000000140	0.002	0.000000000140
	00 NOT SPECIFIED (NO CONSUMPTION)						0.01000	0.000000	0.000000000000	0.000	0.000000000000
10008AA	WATERMELON	3.000	P	0.000000	0.000	0.000000000000	0.01000	0.000000	0.000000000000	0.000	0.000000000000
	10 RAW-FRESH OR NFS						0.01000	0.000000	0.000000000000	0.000	0.000000000000

Table 4.

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			ADI	UF		
Permethrin Caswell #652BB CAS No. 52645-53-1 A.I. CODE: 109701 CFR. No. 180.378	2yr feeding- rat NOEL= 5,0000 mg/kg 100.00 ppm LEL= 25,0000 mg/kg 500.00 ppm ONCO: C(q)(HED NOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	OPP RfD= 0.050000 EPA RfD= 0.050000	-->100	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.

COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES

FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)		TMRC TYPE (UG/KG/DAY)	TMRC ONCO RISK	ANTICIPATED RESIDUE (PPM)	ARC (UG/KG/DAY)	ARC ONCO RISK
		%RFD	%RFD					
10010AA	CUCUMBERS	3.000	P	0.216246	0.432	0.01000	0.000001	0.00000000002
	21 COOKED-NFS							
	10 RAW-FRESH OR NFS				0.00000397893			
10011AA	PUMPKIN	3.000	P	0.013255	0.027	0.01000	0.000023	0.00000000042
	21 COOKED-NFS							
	22 COOKED-FRESH-BAKED							
	62 COOKED-FRESH OR FROZEN-BAKED							
10013AA	SQUASH-SUMMER	3.000	P	0.094944	0.190	0.01000	0.010421	0.0000019175
	10 RAW-FRESH OR NFS							
	21 COOKED-NFS							
10014AA	SQUASH-WINTER	3.000	P	0.097325	0.195	0.01000	0.000013	0.00000000024
	10 RAW-FRESH OR NFS							
	21 COOKED-NFS							
	31 COOKED-FRESH OR CANNED							
10017AA	BITTER MELON	3.000	P	0.000070	0.000	0.01000	0.000000	0.00000000000
	21 COOKED-NFS							
10020AA	TOWELGOURD	3.000	P	0.000003	0.000	0.01000	0.000000	0.00000000000
	00 NOT SPECIFIED (NO CONSUMPTION)							
CROP GROUP TOTALS FOR FRUITING VEGETABLES (CUCURBITS):				0.842033	1.684	0.01000	0.016016	0.0000029469

04001AA	APPLES-FRESH	0.050	P	0.022836	0.046	0.01000	0.003074	0.00000005656
	10 RAW-FRESH OR NFS							
	21 COOKED-NFS							
	31 COOKED-FRESH OR CANNED							
	62 COOKED-FRESH OR FROZEN-BAKED							
04001DA	APPLES-DRIED	0.050	P	0.000083	0.000	0.01000	0.000008	0.00000000015
	10 RAW-FRESH OR NFS							
	22 COOKED-FRESH-BAKED							
	62 COOKED-FRESH OR FROZEN-BAKED							
04001JA	APPLES-JUICE	0.050	P	0.016624	0.033	0.01000	0.002563	0.00000004716
	15 RAW-FRESH OR CANNED							
	31 COOKED-FRESH OR CANNED							
04003AA	PEARS-FRESH	3.000	P	0.367420	0.735	0.01000	0.000527	0.00000000970
	10 RAW-FRESH OR NFS							
	31 COOKED-FRESH OR CANNED							
	51 COOKED-CANNED							
	62 COOKED-FRESH OR FROZEN-BAKED							
04003DA	PEARS-DRIED	3.000	P	0.000627	0.001	0.01000	0.000003	0.00000000006
	10 RAW-FRESH OR NFS							

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Table 4.

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TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

CHEMICAL INFORMATION		STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Permethrin	Caswell #6528B CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat NOEL= 5.0000 mg/kg 100.00 ppm LEL= 25.0000 mg/kg 500.00 ppm ONCO: C(q)(HED NOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	ADI UF -->100 OPP RfD= 0.050000 EPA RfD= 0.050000 Q*: 0.01840	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.

COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES

FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	TYPE	TMRC (UG/KG/DAY)	%RFD	TMRC ONCO RISK	ANTICIPATED RESIDUE (PPM)	ARC (UG/KG/DAY)	%RFD	ARC ONCO RISK
CROP GROUP TOTALS FOR POME FRUITS:										
	21 COOKED-NFS			0.407590	0.815	0.00000749966	0.01000	0.000000	0.000	0.00000000000
CROP GROUP TOTALS FOR STONE FRUITS:										
05002AA	CHERRIES-FRESH 10 RAW-FRESH OR NFS 21 COOKED-NFS 31 COOKED-FRESH OR CANNED 62 COOKED-FRESH OR FROZEN-BAKED	3.000	P	0.096526	0.193	0.00000177608	0.01000	0.000074	0.000	0.00000000136
05002DA	CHERRIES-DRIED 00 NOT SPECIFIED (NO CONSUMPTION)	3.000	P	0.000012	0.000	0.00000000022	0.01000	0.000000	0.000	0.00000000000
05002JA	CHERRIES-JUICE 15 RAW-FRESH OR CANNED 21 COOKED-NFS	3.000	P	0.015336	0.031	0.00000028218	0.01000	0.000047	0.000	0.00000000086
05004AA	PEACHES-FRESH 10 RAW-FRESH OR NFS 21 COOKED-NFS 31 COOKED-FRESH OR CANNED 51 COOKED-CANNED	5.000	P	1.076958	2.154	0.00001981603	0.01000	0.001005	0.002	0.00000001849
05004DA	PEACHES-DRIED 10 RAW-FRESH OR NFS 21 COOKED-NFS	5.000	P	0.001736	0.003	0.000000003194	0.01000	0.000002	0.000	0.00000000004
CROP GROUP TOTALS FOR STONE FRUITS:										
				1.190568	2.381	0.00002190645	0.01000	0.002530	0.005	0.000000004655
01006AA	RASPBERRIES 10 RAW-FRESH OR NFS 15 RAW-FRESH OR CANNED 31 COOKED-FRESH OR CANNED 62 COOKED-FRESH OR FROZEN-BAKED 70 RAW-FROZEN	1.000	A	0.002866	0.006	0.00000005273	1.00000	0.001725	0.003	0.00000003174
CROP GROUP TOTALS FOR SMALL FRUITS AND BERRIES:										
				0.002866	0.006	0.00000005273	1.00000	0.001725	0.003	0.00000003174
15004AA	CORN/POP 21 COOKED-NFS	0.050	P	0.000339	0.001	0.00000000624	0.03000	0.000203	0.000	0.000000000374
15005AA	CORN/SWEET 10 RAW-FRESH OR NFS 21 COOKED-NFS 31 COOKED-FRESH OR CANNED	0.100	P	0.023671	0.047	0.000000043555	0.00600	0.000001	0.000	0.00000000002
24002EA	CORN/GRAIN-ENDOSPERM 10 RAW-FRESH OR NFS	0.050	P	0.008270	0.017	0.00000015217	0.00600	0.001196	0.002	0.000000002201
							0.00600	0.000224	0.000	0.000000000412
							0.00100	0.000001	0.000	0.000000000002

Table 4.

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 06/29/94

STATUS

CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Permethrin Caswell #6528B CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat NOEL= 5.0000 mg/kg 100.00 ppm LEL= 25.0000 mg/kg 500.00 ppm ONCO: C(q)(HEP VOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	ADI UF -->100 OPP RFD= 0.050000 EPA RFD= 0.050000 Q*: 0.01840	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.

COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES

FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	EFFECTS TYPE	TMRC (UG/KG/DAY)	%RFD	TMRC ONCO RISK	ANTICIPATED RESIDUE (PPM)	ARC (UG/KG/DAY)	%RFD	ARC ONCO RISK
24002HA	CORN/GRAIN-BRAN	0.050	P	0.000000	0.000	0.000000000000	0.00100	0.000022	0.000	0.00000000040
24002SA	CORN SUGAR	0.050	P	0.007287	0.015	0.00000013408	0.00100	0.000123	0.000	0.00000000226
24007AA	WHEAT-ROUGH	0.050	N	0.007031	0.014	0.00000012937	0.00100	0.000020	0.000	0.00000000037
24007MA	WHEAT-FLOUR	0.050	N	0.062862	0.126	0.00000115666	0.05000	0.000000	0.000	0.00000000000
270020A	CORN/GRAIN-OIL	0.050	P	0.001140	0.002	0.00000002098	0.05000	0.035090	0.000	0.00000000000
CROP GROUP TOTALS FOR CEREAL GRAINS:										
03001AA	ALMONDS	0.050	P	0.000140	0.000	0.00000000258	0.00500	0.000007	0.000	0.00000000013
03005AA	FILBERTS/HAZELNUTS	0.050	P	0.000020	0.000	0.00000000037	0.00500	0.000005	0.000	0.00000000009
03009AA	WALNUTS	0.050	P	0.000241	0.000	0.00000000443	0.00500	0.000003	0.000	0.00000000006
CROP GROUP TOTALS FOR CEREAL GRAINS:										
0.111248 0.222 0.00000204696 0.072497 0.145 0.00000133394										

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Table 4.

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

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CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS	
			ADI	UF		%RFD	ARC
Permethrin Cashell #652BB CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat NOEL= 5.0000 mg/kg 100.00 ppm LEL= 25.0000 mg/kg 500.00 ppm ONCO: C(q)(HED NOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	OPP Rfd= 0.050000 EPA Rfd= 0.050000	-->100	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.	

COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES

FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	EFFECTS TYPE (UG/KG/DAY)	TMRC	%RFD	TMRC ONCO RISK	ANTICIPATED			
							RESIDUE (PPM)	ARC (UG/KG/DAY)	%RFD	ARC ONCO RISK
CROP GROUP TOTALS FOR TREE NUTS:										
08022AA	HORSERADISH 11 RAW-FRESH-PICKLED, CORNED, OR CURED	1.000	P	0.000077	0.000	0.000000000142	0.05000	0.000002	0.000	0.000000000004
CROP GROUP TOTALS FOR HERBS AND SPICES:										
53001BA	BEEF-MEAT BYPRODUCTS 21 COOKED-NFS	2.000	P	0.035324	0.071	0.000000064996	0.00030	0.000005	0.000	0.000000000009
53001BB	BEEF(ORGAN MEATS)-OTHER 26 COOKED-FRESH-PICKLED, CORNED, OR CURED 21 COOKED-NFS 51 COOKED-CANNED	2.000	P	0.012069	0.024	0.00000022207	0.00030	0.000000	0.000	0.000000000000
53001DA	BEEF-DRIED 21 COOKED-NFS	0.250	P	0.000633	0.001	0.00000001165	0.00030	0.000002	0.000	0.000000000004
53001FA	BEEF(BONELESS)-FAT (BEEF TALLOW) 10 RAW-FRESH OR NFS	3.000	P	1.116227	2.232	0.00002053858	0.00030	0.000000	0.000	0.000000000000
53001KA	BEEF(ORGAN MEATS)-KIDNEY 21 COOKED-NFS	2.000	P	0.000960	0.002	0.00000001766	0.00020	0.000000	0.000	0.000000000000
53001LA	BEEF(ORGAN MEATS)-LIVER 25 COOKED-FRESH OR CANNED	2.000	P	0.041396	0.083	0.00000076169	0.00030	0.000006	0.000	0.000000000011
53001MA	BEEF(BONELESS)-LEAN (W/O REMOVEABLE FAT) 10 RAW-FRESH OR NFS	0.250	P	0.290498	0.581	0.000000534516	0.00030	0.000000	0.000	0.000000000000
53002BA	GOAT-NEAT BYPRODUCTS 00 NOT SPECIFIED (NO CONSUMPTION)	2.000	P	0.000002	0.000	0.000000000004	0.00030	0.000000	0.000	0.000000000000
53002BB	GOAT(ORGAN MEATS)-OTHER 00 NOT SPECIFIED (NO CONSUMPTION)	2.000	P	0.000002	0.000	0.000000000004	0.00030	0.000000	0.000	0.000000000000
53002FA	GOAT(BONELESS)-FAT 23 COOKED-FRESH-BOILED	3.000	P	0.000119	0.000	0.000000000219	0.00300	0.000000	0.000	0.000000000000

Table 4.

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

CHEMICAL INFORMATION		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
Permethrin	Caswell #65288	2yr feeding- rat	Increased liver weights.	AD1 UF -->100	No data gaps.	HED complete 09/12/86					
	CAS No. 52645-53-1	NOEL= 5.0000 mg/kg	Evidence of carcinogenicity in mice (liver, lung) negative in rat.	OPP Rfd= 0.050000		EPA verified 10/28/86					
	A.I. CODE: 109701	100.00 ppm		EPA Rfd= 0.050000		WHO last reviewed 1987;					
	CFR No. 180.378	LEL= 25.0000 mg/kg		q*: 0.01840		(ADI extended to 25:75 mixture).					
		500.00 ppm				On IRIS.					
		ONCO: C(g)(HED NOTE)									

COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES

FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	EFFECTS TYPE	TMRC (UG/KG/DAY)	%RFD	TMRC ONCO RISK	ANTICIPATED		
							RESIDUE (PPM)	ARC (UG/KG/DAY)	ARC ONCO RISK
53002KA	25 COOKED-FRESH-FRIED GOAT(ORGAN MEATS)-KIDNEY	2.000	P	0.000002	0.000	0.000000000004	0.00300	0.000000	0.000000000000
53002LA	00 NOT SPECIFIED (NO CONSUMPTION) GOAT(ORGAN MEATS)-LIVER	2.000	P	0.000002	0.000	0.000000000004	0.00020	0.000000	0.000000000000
53002MA	00 NOT SPECIFIED (NO CONSUMPTION) GOAT(BONELESS)-LEAN (W/O REMOVEABLE FAT)	0.250	P	0.000047	0.000	0.000000000086	0.00030	0.000000	0.000000000000
53003AA	23 COOKED-FRESH-BOILED HORSE	3.000	P	0.000003	0.000	0.000000000006	0.00030	0.000000	0.000000000000
53005BA	00 NOT SPECIFIED (NO CONSUMPTION) SHEEP-MEAT BYPRODUCTS	2.000	P	0.000100	0.000	0.000000000184	0.00030	0.000000	0.000000000000
53005BB	21 COOKED-NFS SHEEP(ORGAN MEATS)-OTHER	2.000	P	0.000040	0.000	0.000000000074	0.00030	0.000000	0.000000000000
53005FA	21 COOKED-NFS SHEEP(BONELESS)-FAT	3.000	P	0.012890	0.026	0.00000023718	0.00300	0.000013	0.000000000024
53005KA	21 COOKED-NFS SHEEP(ORGAN MEATS)-KIDNEY	2.000	P	0.000016	0.000	0.000000000029	0.00020	0.000000	0.000000000000
53005LA	21 COOKED-NFS SHEEP(ORGAN MEATS)-LIVER	2.000	P	0.000002	0.000	0.000000000004	0.00030	0.000000	0.000000000000
53005MA	00 NOT SPECIFIED (NO CONSUMPTION) SHEEP(BONELESS)-LEAN (W/O REMOVEABLE FAT)	0.250	P	0.003121	0.006	0.00000005743	0.00030	0.000003	0.000000000006
53006BA	21 COOKED-NFS PORK-MEAT BYPRODUCTS	3.000	P	0.075238	0.150	0.00000138438	0.00030	0.000000	0.000000000000
53006BB	21 COOKED-NFS PORK(ORGAN MEATS)-OTHER	3.000	P	0.011549	0.023	0.00000021250	0.00030	0.000000	0.000000000000
53006FA	26 COOKED-FRESH-PICKLED,CORNERD,OR CURED PORK(BONELESS)-FAT (INCLUDING LARD)	3.000	P	0.624607	1.249	0.00001149277	0.00030	0.000001	0.000000000002
53006KA	10 RAW-FRESH OR NFS PORK(ORGAN MEATS)-KIDNEY	3.000	P	0.000032	0.000	0.000000000059	0.00030	0.000000	0.000000000000
53006LA	21 COOKED-NFS PORK(ORGAN MEATS)-LIVER	3.000	P	0.014458	0.029	0.00000026603	0.00030	0.000001	0.000000000002
53006MA	25 COOKED-FRESH-FRIED PORK(BONELESS)-LEAN (W/O REMOVEABLE FAT)	0.250	P	0.097812	0.196	0.00000179974	0.00030	0.000000	0.000000000000
	21 COOKED-NFS						0.00030	0.000054	0.000000000099

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Table 4.

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

CHEMICAL INFORMATION		STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Permethrin Caswell #65288 CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat NOEL= 5.0000 mg/kg 100.00 ppm LEL= 25.0000 mg/kg 500.00 ppm ONCO: C(g)(HED NOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	ADI UF -->100 OPP RfD= 0.050000 EPA RfD= 0.050000 q*: 0.01840	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.	

COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES

FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	TYPE	TMRC (UG/KG/DAY)	%RFD	TMRC ONCO RISK	ANTICIPATED RESIDUE (PPH)	ARC (UG/KG/DAY)	%RFD	ARC ONCO RISK
CROP GROUP TOTALS FOR RED MEAT:										
55008BA	TURKEY-BYPRODUCTS	0.150	P	0.000059	0.000	0.00000000109	0.00030	0.000014	0.000	0.00000000026
	21 COOKED-NFS						0.00030	0.000049	0.000	0.00000000090
55008BLA	TURKEY-GIBLETS (LIVER)	0.250	P	0.000013	0.000	0.00000000024	0.00001	0.000000	0.000	0.00000000000
	21 COOKED-NFS						0.00001	0.000000	0.000	0.00000000000
55008BMA	TURKEY-FRESH-FRIED	0.050	P	0.000399	0.001	0.000000000734	0.00001	0.000000	0.000	0.00000000000
	25 COOKED-FRESH-FRIED						0.00001	0.000000	0.000	0.00000000000
	31 COOKED-FRESH OR CANNED						0.00001	0.000000	0.000	0.00000000000
55008BMB	TURKEY-FLESH(W/O SKIN & W/O BONES)	0.150	P	0.002408	0.005	0.000000004431	0.00001	0.000000	0.000	0.00000000000
	21 COOKED-NFS						0.00001	0.000000	0.000	0.00000000000
55008BMC	TURKEY-FRESH-FRIED	0.050	P	0.000005	0.000	0.000000000009	0.00001	0.000000	0.000	0.00000000000
	25 COOKED-FRESH-FRIED						0.00001	0.000000	0.000	0.00000000000
55013BA	TURKEY-UNSPECIFIED	0.250	P	0.000000	0.000	0.000000000000	0.00001	0.000000	0.000	0.00000000000
	21 COOKED-NFS						0.00001	0.000000	0.000	0.00000000000
55013BLA	POULTRY/OTHER-BYPRODUCTS	0.250	P	0.000000	0.000	0.000000000107	0.00001	0.000000	0.000	0.00000000000
	00 NOT SPECIFIED (NO CONSUMPTION)						0.00001	0.000000	0.000	0.00000000000
55013BLA	POULTRY/OTHER-GIBLETS (LIVER)	0.250	P	0.000058	0.001	0.000000000495	0.00001	0.000000	0.000	0.00000000000
	25 COOKED-FRESH-FRIED						0.00001	0.000000	0.000	0.00000000000
55013MA	POULTRY/OTHER-FLESH (+SKIN & W/O BONES)	0.050	P	0.000269	0.000	0.000000000000	0.00001	0.000000	0.000	0.00000000000
	21 COOKED-NFS						0.00001	0.000000	0.000	0.00000000000
55015BA	CHICKEN-BYPRODUCTS	0.250	P	0.000000	0.000	0.000000000000	0.00001	0.000000	0.000	0.00000000000
	00 NOT SPECIFIED (NO CONSUMPTION)						0.00001	0.000000	0.000	0.00000000000
55015LA	CHICKEN-GIBLETS(LIVER)	0.250	P	0.001266	0.003	0.000000002329	0.00001	0.000000	0.000	0.00000000000
	21 COOKED-NFS						0.00001	0.000000	0.000	0.00000000000
55015MA	CHICKEN-FRESH-FRIED	0.050	P	0.003007	0.006	0.000000005533	0.00001	0.000000	0.000	0.00000000000
	25 COOKED-FRESH-FRIED						0.00001	0.000000	0.000	0.00000000000
	26 COOKED-FRESH-PICKLED, CORNED, OR CURED						0.00001	0.000000	0.000	0.00000000000
	21 COOKED-NFS						0.00001	0.000000	0.000	0.00000000000
	22 COOKED-FRESH-BAKED						0.00001	0.000000	0.000	0.00000000000
	25 COOKED-FRESH-FRIED						0.00001	0.000000	0.000	0.00000000000
	31 COOKED-FRESH OR CANNED						0.00001	0.000000	0.000	0.00000000000
	53 COOKED-CANNED-BOILED						0.00001	0.000000	0.000	0.00000000000
55015MB	CHICKEN-FLESH(+SKIN & W/O BONES)	0.050	P	0.018966	0.038	0.000000034897	0.00001	0.000001	0.000	0.00000000002
	21 COOKED-NFS						0.00001	0.000001	0.000	0.00000000002
	25 COOKED-FRESH-FRIED						0.00001	0.000001	0.000	0.00000000002

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Table 4.

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 06/29/94

CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Permethrin Caswell #65288 CAS No. 52645-53-1 A.I. CODE: 109701 CFR No. 180.378	2yr feeding- rat NOEL= 5.0000 mg/kg LEL= 100.00 ppm 25.0000 mg/kg 500.00 ppm ONCO: C(g)(HED NOTE)	Increased liver weights. Evidence of carcinogenicity in mice (liver, lung) negative in rat.	ADI UF -->100 OPP RfD= 0.050000 EPA RfD= 0.050000 q*: 0.01840	No data gaps.	HED complete 09/12/86 EPA verified 10/28/86 WHO last reviewed 1987; (ADI extended to 25:75 mixture). On IRIS.

COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES

FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	TMRC TYPE (UG/KG/DAY)	TMRC ONCO RISK	%RFD	ANTICIPATED RESIDUE (PPM)	ARC (UG/KG/DAY)	%RFD	ONCO RISK
CROP GROUP TOTALS FOR POULTRY:									
50000DB	MILK-NON-FAT SOLIDS	0.250	P	0.225834	0.452	0.00000048668	0.000002	0.000	0.00000000004
	10 RAW-FRESH OR NFS								
	21 COOKED-NFS								
50000FA	MILK-FAT SOLIDS	6.250	P	2.685749	5.371	0.00004941778			
	10 RAW-FRESH OR NFS								
	21 COOKED-NFS								
50000SA	MILK SUGAR (LACTOSE)	0.250	P	0.009357	0.019	0.00000017217			
	21 COOKED-NFS								
	51 COOKED-CANNED								
55014AA	EGGS-WHOLE	1.000	P	0.564502	1.129	0.00001038684			
	10 RAW-FRESH OR NFS								
	21 COOKED-NFS								
	22 COOKED-FRESH-BAKED								
	23 COOKED-FRESH-BOILED								
	25 COOKED-FRESH-FRIED								
55014AB	EGGS-WHITE ONLY	1.000	P	0.009204	0.018	0.00000016935			
	10 RAW-FRESH OR NFS								
	21 COOKED-NFS								
	22 COOKED-FRESH-BAKED								
	62 COOKED-FRESH OR FROZEN-BAKED								
	81 COOKED-FROZEN								
55014AC	EGGS-YOLK ONLY	1.000	P	0.006632	0.013	0.00000012203			
	10 RAW-FRESH OR NFS								
	21 COOKED-NFS								
	25 COOKED-FRESH-FRIED								
	31 COOKED-FRESH OR CANNED								
CROP GROUP TOTALS FOR DAIRY PRODUCTS:									
				3.501278	7.003	0.00006442352	0.011656	0.023	0.00000021447

GRAND TOTALS FOR U.S. POPULATION - 48 STATES

0.243242 0.486 0.00000447565

TOLERANCE TYPE: N=NEW; A=PENDING; P=PUBLISHED
 TMRC=THEORETICAL MAXIMUM RESIDUE CONTRIBUTION
 ARC = ANTICIPATED RESIDUE CONTRIBUTION
 RFD = REFERENCE DOSE

Table 5: Permethrin Acute Dietary Analysis

Published tolerances and wheat grain at 0.05 ppm
 NOEL of concern is 25 mg/kg/day.
 RDV = 0.25

1 DETAILED ACUTE ANALYSIS INCLUDING AR'S: ALL STATISTICS BASED ON USERS' DAILY CONSUMPTION 11:33 Thursday, June 16, 1994 57

 *NAME: PERMETHRIN
 *CASWELL NO: 6528B CFR NO: CFR180.378 A 00000.0500 000100.000 000100 Chronic Rat Systemic Minimum
 *CAS NO: 52645-53-1 SHAUGHNESSY NO: 109701 B 00004.0000 008000.000 000100 Terata Rabbit Systemic Minimum
 *STATUS CODES: C 00000.7140 000500.000 000100 Chron-onco Mouse Systemic Blank
 *RDV INFO: The LD value used in this analysis is 0.25 MG/KG OF BODY WEIGHT/DAY
 *FILE INFO: No Tolerance Data Are Used--Without User Modifications.
 ***** AR DATA: No User Modifications*****

U.S. POP.--48 STATES

ESTIMATED % OF POTENTIAL		MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY	
PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	
0	0.00	0.00	
99.77	0.017060	6.82	
ANTICIPATED RESIDUES:		MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY	
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	
0	1	1.2	1.4
0	2	1.6	1.8
0	3	2.0	2.4
0	4	2.4	3.0
0	5	2.8	3.6
0	6	3.2	4.2
0	7	3.6	4.8
0	8	4.0	5.4
0	9	4.4	6.0
0	10	4.8	6.6
0	15	6.0	8.4
0	20	8.0	11.2

Mean MOE = 25/0.017060 = 1465
 High end MOE = 25/(0.6 x 0.25) = 167

INFANTS(<1 YEAR)

ESTIMATED % OF POTENTIAL		MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY	
PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	
0	0.00	0.00	
93.38	0.033949	13.58	
ANTICIPATED RESIDUES:		MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY	
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	
0	1	1.2	1.4
0	2	1.6	1.8
0	3	2.0	2.4
0	4	2.4	3.0
0	5	2.8	3.6
0	6	3.2	4.2
0	7	3.6	4.8
0	8	4.0	5.4
0	9	4.4	6.0
0	10	4.8	6.6
0	15	6.0	8.4
0	20	8.0	11.2

Mean MOE = 25/0.033949 = 736
 High end MOE = 25/(1 x 0.25) = 100

CHILDREN(1-6 YRS)

ESTIMATED % OF POTENTIAL		MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY	
PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	
0	0.00	0.00	
99.91	0.028181	11.27	
ANTICIPATED RESIDUES:		MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY	
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	
0	1	1.2	1.4
0	2	1.6	1.8
0	3	2.0	2.4
0	4	2.4	3.0
0	5	2.8	3.6
0	6	3.2	4.2
0	7	3.6	4.8
0	8	4.0	5.4
0	9	4.4	6.0
0	10	4.8	6.6
0	15	6.0	8.4
0	20	8.0	11.2

Mean MOE = 25/0.028181 = 887
 High end MOE = 25/(0.8 x 0.25) = 125

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Table 5: Permethrin Acute Dietary Analysis

Published tolerances and wheat grain at 0.05 ppm

 FEMALES(13+ YRS)

ESTIMATED % OF POTENTIAL	PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY
0.00	0	0.000000	0.00	
99.82	0	0.014864	5.95	
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=				
0	.2	.4	.6	.8
	1	1.2	1.4	1.6
	2	1.8	2	3
	3	2.4	3	4
	4	3	4	5
	5	4	5	10
	10	15	15	20
	15	20	20	20

TOLERANCES: 0

ANTICIPATED RESIDUES: 100 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Mean MOE = $25 / (0.014864) = 1682$
 High end MOE = $25 / (0.4 \times 0.25) = 250$

 MALES(13+ YRS)

ESTIMATED % OF POTENTIAL	PERSON DAYS THAT ARE USER-DAYS	MG/KG BODY WEIGHT/DAY	AS PERCENT OF RDV	MEAN DAILY RESIDUE CONTRIBUTION PER USER-DAY
0.00	0	0.000000	0.00	
99.90	0	0.014319	5.73	
ESTIMATED % OF POPULATION USER-DAYS WITH RESIDUE CONTRIBUTION EXCEEDING X TIMES THE RDV, FOR X=				
0	.2	.4	.6	.8
	1	1.2	1.4	1.6
	2	1.8	2	3
	3	2.4	3	4
	4	3	4	5
	5	4	5	10
	10	15	15	20
	15	20	20	20

TOLERANCES: 0

ANTICIPATED RESIDUES: 100 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Mean MOE = $25 / (0.014319) = 1746$
 High end MOE = $25 / (0.4 \times 0.25) = 250$

10 DETAILED ACUTE ANALYSIS INCLUDING AR'S: ALL STATISTICS BASED ON USERS' DAILY CONSUMPTION
 ***** 11:33 Thursday, June 16, 1994 2 *****
 *NAME: PERMETHRIN
 *CASWELL NO: 65288 CFR NO: CFR180.378 A 00000.0500 000100.000 000100 Chronic Rat
 *CAS NO: 52645-53-1 SHAUGHNESSY NO: 109701 B 00004.0000 008000.000 000100 Terata Rabbit
 *STATUS CODES: C 00000.7140 000500.000 000100 Chron-onco Mouse
 *RDV INFO: The LD value used in this analysis is 0.25 MG/KG of BODY WEIGHT/DAY
 *FILE INFO: No Tolerance Data Are Used--Without User Modifications.
 *LISTING OF RELEVANT FOODS & FOOD FORMS, ORDERED BY MENU CATEGORY. MENU PATTERN = 1
 CHEMICAL IS ASSUMED TO BE UNIFORMLY DISTRIBUTED (WATER:OIL)

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

FOOD CODE	FOOD AND FOOD FORM DESCRIPTION	MENU PATTERN = 1	NUMBER OF CONSUMER DAYS AS PERCENT OF POTENTIAL PERSON DAYS	TOLERANCE DATA		AR DATA		DAILY ANTICIPATED RESIDUE	
				VALUE	SORC (PPM)	VALUE	REF. (EXCL. AR)	MAXIMUM RESIDUE (EXCL. AR)	DAILY RESIDUE (INCL. AR)
MENU CATEGORY 1: MEATS									
53001BA	BEEF-MEAT BYPRODUCTS								
21	COOKED-NFS		7.68			2.0000			0.427892
26	COOKED-FRESH-PICKLED, CORNED, OR CURED		0.88			2.0000			0.290240
53001BB	BEEF(ORGAN MEATS)-OTHER								
21	COOKED-NFS		7.72			2.0000			0.133236
51	COOKED-CANNED		0.22			2.0000			0.816694
53001DA	BEEF-DRIED								
21	COOKED-NFS		0.25			0.2500			0.241861
53001FA	BEEF(BONELESS)-FAT (BEEF TALLOW)								
10	RAM-FRESH OR NFS		27.74			3.0000			0.015763
21	COOKED-NFS		86.58			3.0000			0.515923
22	COOKED-FRESH-BAKED		52.96			3.0000			0.143947
23	COOKED-FRESH-BOILED		11.38			3.0000			0.875961
24	COOKED-FRESH-BROILED		18.46			3.0000			2.314064
25	COOKED-FRESH-FRIED		40.70			3.0000			0.160771
53001KA	BEEF(ORGAN MEATS)-KIDNEY								
21	COOKED-NFS		0.02			2.0000			5.425422
53001LA	BEEF(ORGAN MEATS)-LIVER								
25	COOKED-FRESH-FRIED		1.00			2.0000			4.086162
31	COOKED-FRESH OR CANNED		0.00			2.0000			12.499256
53001MA	BEEF(BONELESS)-LEAN (W/O REMOVEABLE FAT)								
10	RAM-FRESH OR NFS		0.00			0.2500			0.295850
21	COOKED-NFS		55.27			0.2500			0.314844
22	COOKED-FRESH-BAKED		4.67			0.2500			0.260013
23	COOKED-FRESH-BOILED		9.15			0.2500			0.198637
24	COOKED-FRESH-BROILED		18.46			0.2500			0.472122
53002BA	GOAT-MEAT BYPRODUCTS								
00	NOT SPECIFIED (NO CONSUMPTION)		0.00			2.0000			0.000000
53002BB	GOAT(ORGAN MEATS)-OTHER								
00	NOT SPECIFIED (NO CONSUMPTION)		0.00			2.0000			0.000000
53002FA	GOAT(BONELESS)-FAT								
23	COOKED-FRESH-BOILED		0.01			3.0000			0.941510
25	COOKED-FRESH-FRIED		0.00			3.0000			0.470459
53002KA	GOAT(ORGAN MEATS)-KIDNEY								
00	NOT SPECIFIED (NO CONSUMPTION)		0.00			2.0000			0.000000
53002LA	GOAT(ORGAN MEATS)-LIVER								
00	NOT SPECIFIED (NO CONSUMPTION)		0.00			2.0000			0.000000
53002MA	GOAT(BONELESS)-LEAN (W/O REMOVEABLE FAT)								
23	COOKED-FRESH-BOILED		0.01			0.2500			0.375062
25	COOKED-FRESH-FRIED		0.00			0.2500			0.180388
53003AA	HORSE								
00	NOT SPECIFIED (NO CONSUMPTION)		0.00			3.0000			0.000000
53005BA	SHEEP-MEAT BYPRODUCTS								
21	COOKED-NFS		0.00			2.0000			2.523664
53005BB	SHEEP(ORGAN MEATS)-OTHER								
21	COOKED-NFS		0.00			2.0000			3.162769

53005FA SHEEP(BONELESS)-FAT	0.61	3.0000	2.078826
21 COOKED-NFS			
53005KA SHEEP(ORGAN MEATS)-KIDNEY	0.00	2.0000	1.147423
21 COOKED-NFS			
53005LA SHEEP(ORGAN MEATS)-LIVER	0.00	2.0000	0.000000
00 NOT SPECIFIED (NO CONSUMPTION)			
53005MA SHEEP(BONELESS)-LEAN (W/O REMOVEABLE FAT)	0.62	0.2500	0.443826
21 COOKED-NFS	0.04	0.2500	0.675842
31 COOKED-FRESH OR CANNED			
53006BA PORK-MEAT BYPRODUCTS	8.60	3.0000	0.883115
21 COOKED-NFS			
53006BB PORK(ORGAN MEATS)-OTHER			
21 COOKED-NFS			
53006FA PORK(BONELESS)-FAT (INCLUDING LARD)	6.68	3.0000	0.159104
26 COOKED-FRESH-PICKLED,CORNEED,OR CURED	0.88	3.0000	0.084272
10 RAW-FRESH OR NFS			
21 COOKED-NFS	27.80	3.0000	0.018701
23 COOKED-FRESH-BOILED	92.99	3.0000	0.313721
25 COOKED-FRESH-FRIED	11.36	3.0000	0.609292
25 COOKED-FRESH-FRIED	40.60	3.0000	0.179359
26 COOKED-FRESH-PICKLED,CORNEED,OR CURED	24.16	3.0000	0.765001
53006KA PORK(ORGAN MEATS)-KIDNEY			
21 COOKED-NFS	0.00	3.0000	4.405286
53006LA PORK(ORGAN MEATS)-LIVER			
21 COOKED-NFS	0.91	3.0000	1.445704
25 COOKED-FRESH-FRIED	0.03	3.0000	4.702047
53006MA PORK(BONELESS)-LEAN (W/O REMOVEABLE FAT)			
21 COOKED-NFS	33.75	0.2500	0.134439
25 COOKED-FRESH-FRIED	3.16	0.2500	0.378033
26 COOKED-FRESH-PICKLED,CORNEED,OR CURED	24.22	0.2500	0.167011
55008BA TURKEY-BYPRODUCTS			
21 COOKED-NFS	0.01	0.2500	0.058504
26 COOKED-FRESH-PICKLED,CORNEED,OR CURED	0.19	0.2500	0.028041
55008LA TURKEY-GIBLETS (LIVER)			
21 COOKED-NFS	0.00	0.2500	0.358153
25 COOKED-FRESH-FRIED	0.00	0.2500	0.156686
55008MA TURKEY-FLESH(W/O SKIN, W/O BONES)			
21 COOKED-NFS	0.25	0.0500	0.096148
31 COOKED-FRESH OR CANNED	0.07	0.0500	0.129619
62 COOKED-FRESH OR FROZEN-BAKED	0.09	0.0500	0.060583
55008MB TURKEY-FLESH(+SKIN,W/O BONES)			
21 COOKED-NFS	2.41	0.0500	0.094672
25 COOKED-FRESH-FRIED	0.08	0.0500	0.189271
55008MC TURKEY-UNSPECIFIED			
21 COOKED-NFS	0.01	0.0500	0.041885
55013BA POULTRY,OTHER-BYPRODUCTS			
00 NOT SPECIFIED (NO CONSUMPTION)	0.00	0.2500	0.000000
55013LA POULTRY,OTHER-GIBLETS(LIVER)			
25 COOKED-FRESH-FRIED	0.03	0.2500	0.210043
55013MA POULTRY,OTHER-FLESH (+SKIN,W/O BONES)			
21 COOKED-NFS	0.20	0.0500	0.140532
55015BA CHICKEN-BYPRODUCTS			
00 NOT SPECIFIED (NO CONSUMPTION)	0.00	0.2500	0.000000
55015LA CHICKEN-GIBLETS(LIVER)			
21 COOKED-NFS	0.03	0.2500	0.138212
25 COOKED-FRESH-FRIED	0.27	0.2500	0.421802
26 COOKED-FRESH-PICKLED,CORNEED,OR CURED	0.31	0.2500	0.031372
55015MA CHICKEN-FLESH(W/O SKIN,W/O BONES)			
21 COOKED-NFS	2.34	0.0500	0.080541
22 COOKED-FRESH-BAKED	0.55	0.0500	0.048361
25 COOKED-FRESH-FRIED	0.19	0.0500	0.062543
31 COOKED-FRESH OR CANNED	0.76	0.0500	0.060538
53 COOKED-CANNED-BOILED	0.73	0.0500	0.030851
55015MB CHICKEN-FLESH(+SKIN,W/O BONES)			
21 COOKED-NFS	11.23	0.0500	0.091888
25 COOKED-FRESH-FRIED	7.31	0.0500	0.117715

MENU CATEGORY 3: EGGS

55014AA EGGS-WHOLE					
10 RAW-FRESH OR NFS	3.98	1.0000	0.110054		
21 COOKED-NFS	70.00	1.0000	0.445768		
22 COOKED-FRESH-BAKED	39.86	1.0000	0.152260		
23 COOKED-FRESH-BOILED	16.19	1.0000	0.917441		
25 COOKED-FRESH-FRIED	17.83	1.0000	0.035479		
55014AB EGGS-WHITE ONLY					
10 RAW-FRESH OR NFS	0.31	1.0000	0.055980		
21 COOKED-NFS	1.30	1.0000	0.103903		
22 COOKED-FRESH-BAKED	6.21	1.0000	0.219745		
62 COOKED-FRESH OR FROZEN-BAKED	0.27	1.0000	0.934000		
81 COOKED-FROZEN	0.15	1.0000	0.213454		
55014AC EGGS-YOLK ONLY					
10 RAW-FRESH OR NFS	0.38	1.0000	0.025277		
21 COOKED-NFS	7.79	1.0000	0.045743		
25 COOKED-FRESH-FRIED	5.56	1.0000	0.295566		
31 COOKED-FRESH OR CANNED	0.46	1.0000			

MENU CATEGORY 4: MILK: NON-FAT SOLIDS

50000DB MILK-NON-FAT SOLIDS					
10 RAW-FRESH OR NFS	78.77	0.2500 C	0.232497		
21 COOKED-NFS	90.38	0.2500 C	0.041042		
51 COOKED-CANNED	3.51	0.2500 C	0.234136		
50000SA MILK SUGAR (LACTOSE)					
21 COOKED-NFS	0.01	0.2500	0.026014		
51 COOKED-CANNED	0.56	0.2500	1.728510		

MENU CATEGORY 5: MILK: FAT SOLIDS

50000FA MILK-FAT SOLIDS					
10 RAW-FRESH OR NFS	81.63	6.2500 C	2.612997		
21 COOKED-NFS	90.30	6.2500 C	0.631612		
51 COOKED-CANNED	3.51	6.2500 C	0.233000		

MENU CATEGORY 6: GRAINS(EXCL. RICE), SOYBEANS, VEG. OILS

15004AA CORN, POP					
21 COOKED-NFS	2.35	0.0500	0.014728		
24002EA CORN, GRAIN-ENDOSPERM					
10 RAW-FRESH OR NFS	0.17	0.0500	0.018589		
21 COOKED-NFS	20.63	0.0500	0.005315		
22 COOKED-FRESH-BAKED	20.54	0.0500	0.029980		
23 COOKED-FRESH-BOILED	2.99	0.0500	0.033931		
24002HA CORN, GRAIN-BRAN					
00 NOT SPECIFIED (NO CONSUMPTION)	0.00	0.0500	0.000000		
24007AA WHEAT-ROUGH					
10 RAW-FRESH OR NFS	0.00	0.0500	0.022238		
21 COOKED-NFS	2.34	0.0500	0.019631		
22 COOKED-FRESH-BAKED	16.06	0.0500	0.026700		
23 COOKED-FRESH-BOILED	5.92	0.0500	0.039029		
24007GA WHEAT-GERM					
10 RAW-FRESH OR NFS	0.00	0.0500	0.005225		
22 COOKED-FRESH-BAKED	1.70	0.0500	0.002353		
24007HA WHEAT-BRAN					
10 RAW-FRESH OR NFS	0.08	0.0500	0.004729		
21 COOKED-NFS	0.30	0.0500	0.002679		
22 COOKED-FRESH-BAKED	4.64	0.0500	0.012954		
24007NA WHEAT-FLOUR					
10 RAW-FRESH OR NFS	0.21	0.0500	0.008237		
21 COOKED-NFS	76.91	0.0500	0.045996		
22 COOKED-FRESH-BAKED	64.96	0.0500	0.035868		
25 COOKED-FRESH-FRIED	24.25	0.0500	0.019244		
270020A CORN, GRAIN-OIL					
18 PROCESSED OIL	96.73	0.0500	0.001186		

31

270030A COTTONSEED-OIL	96.70	0.5000	0.010594
18 PROCESSED OIL			
27003WA COTTONSEED-MEAL	1.13	0.5000	0.005184
18 PROCESSED OIL			
270100A SOYBEANS-OIL	97.39	0.0500	0.016645
18 PROCESSED OIL			
28023AA SOYBEANS-UNSPECIFIED	0.56	0.0500	0.004560
21 COOKED-NFS			
10 RAW-FRESH OR NFS	0.14	0.0500	0.010218
21 COOKED-NFS	0.02	0.0500	0.034002
23 COOKED-FRESH-BOILED	0.02	0.0500	0.023726
25 COOKED-FRESH-FRIED	0.22	0.0500	0.005814
31 COOKED-FRESH OR CANNED	0.04	0.0500	0.015325
28023WA SOYBEANS-FLOUR, FULL FAT	1.65	0.0500	0.002844
21 COOKED-NFS	2.11	0.0500	0.003443
22 COOKED-FRESH-BAKED	4.70	0.0500	0.000633
31 COOKED-FRESH OR CANNED			
28023WB SOYBEANS-FLOUR, LOW FAT	0.94	0.0500	0.005251
21 COOKED-NFS			
28023WC SOYBEANS-FLOUR, DEFATTED	0.31	0.0500	0.010607
10 RAW-FRESH OR NFS	1.85	0.0500	0.002162
21 COOKED-NFS	3.69	0.0500	0.007224
22 COOKED-FRESH-BAKED	0.22	0.0500	0.069907
51 COOKED-CANNED	3.73	0.0500	0.003568
53 COOKED-CANNED-BOILED			

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

14013AA POTATOES(WHITE)-WHOLE	1.59	0.0500	0.141780
10 RAW-FRESH OR NFS	7.99	0.0500	0.093948
21 COOKED-NFS	4.93	0.0500	0.147118
22 COOKED-FRESH-BAKED			
14013AB POTATOES(WHITE)-UNSPECIFIED	0.63	0.0500	0.000672
22 COOKED-FRESH-BAKED			
14013AC POTATOES(WHITE)-PEELED	17.81	0.0500	0.020253
21 COOKED-NFS	2.40	0.0500	0.091201
22 COOKED-FRESH-BAKED	15.31	0.0500	0.141860
23 COOKED-FRESH-BOILED	15.32	0.0500	0.076910
25 COOKED-FRESH-FRIED			
14013DA POTATOES(WHITE)-DRY	0.07	0.0500	0.270456
10 RAW-FRESH OR NFS	0.44	0.0500	0.056184
31 COOKED-FRESH OR CANNED			
14013HA POTATOES(WHITE)-PEEL ONLY	0.00	0.0500	0.028640
22 COOKED-FRESH-BAKED			
14019AA TURNIPS-ROOTS	0.04	1.0000	1.388924
10 RAW-FRESH OR NFS	0.39	1.0000	1.878977
21 COOKED-NFS			

MENU CATEGORY 8: TOMATOES

11005AA TOMATOES-WHOLE	24.82	2.0000	2.019073
10 RAW-FRESH OR NFS	12.52	2.0000	3.147109
21 COOKED-NFS	7.28	2.0000	1.319912
31 COOKED-FRESH OR CANNED			

MENU CATEGORY 9: OTHER VEGETABLES, INCL. BRASSICA

10010AA CUCUMBERS	3.84	3.0000	3.042060
10 RAW-FRESH OR NFS	4.24	3.0000	2.234826
11 RAW-FRESH-PICKLED,CORNED,OR CURED	3.90	3.0000	0.180560
21 COOKED-NFS			
10011AA PUMPKIN	0.01	3.0000	7.801534
21 COOKED-NFS	0.22	3.0000	0.789366
22 COOKED-FRESH-BAKED	0.43	3.0000	2.411659
62 COOKED-FRESH OR FROZEN-BAKED			
10013AA SQUASH-SUMMER			

10 RAW-FRESH OR NFS	0.07	3.0000	6.208505
21 COOKED-NFS	1.39	3.0000	6.403085
10014AA SQUASH-WINTER			
10 RAW-FRESH OR NFS	0.00	3.0000	5.640913
21 COOKED-NFS	1.00	3.0000	8.463731
31 COOKED-FRESH OR CANNED	0.07	3.0000	17.990602
10017AA BITTER MELON			
21 COOKED-NFS	0.00	3.0000	3.531824
10020AA TOMELGOURD			
00 NOT SPECIFIED (NO CONSUMPTION)	0.00	3.0000	0.000000
11001AA EGGPLANT			
10 RAW-FRESH OR NFS	0.00	1.0000	0.734214
21 COOKED-NFS	0.31	1.0000	1.775549
25 COOKED-FRESH-FRIED	0.04	1.0000	1.582662
11003AA PEPPERS, SWEET, GARDEN			
10 RAW-FRESH OR NFS	2.31	1.0000	0.296709
21 COOKED-NFS	8.57	1.0000	0.173772
13002AA CELERY			
10 RAW-FRESH OR NFS	20.18	5.0000	1.184686
21 COOKED-NFS	4.94	5.0000	1.329097
13003AA CHICORY (FRENCH OR BELGIAN ENDIVE)			
10 RAW-FRESH OR NFS	0.24	20.0000	5.564583
13005AA BROCCOLI			
21 COOKED-NFS	0.41	1.0000	0.871573
31 COOKED-FRESH OR CANNED	2.05	1.0000	2.004654
63 COOKED-FRESH OR FROZEN-BOILED	0.24	1.0000	2.265643
13006AA BRUSSEL SPROUTS			
21 COOKED-NFS	0.07	1.0000	1.751860
23 COOKED-FRESH-BOILED	0.32	1.0000	1.855017
13007AA CABBAGE-GREEN AND RED			
10 RAW-FRESH OR NFS	4.09	6.0000	5.701807
11 RAW-FRESH-PICKLED, CORNED, OR CURED	0.81	6.0000	8.751134
21 COOKED-NFS	1.94	6.0000	13.583687
13008AA CAULIFLOWER			
10 RAW-FRESH OR NFS	0.07	1.0000	1.376612
21 COOKED-NFS	0.94	1.0000	1.577508
13009AA COLLARDS			
51 COOKED-CANNED	0.01	20.0000	37.507630
63 COOKED-FRESH OR FROZEN-BOILED	0.60	20.0000	61.243803
13010AA CABBAGE-CHINESE/CELERY, INC. BOK CHOY			
10 RAW-FRESH OR NFS	0.02	6.0000	6.638998
21 COOKED-NFS	0.35	6.0000	7.436292
13013AA LETTUCE-LEAFY VARIETIES			
10 RAW-FRESH OR NFS	1.02	20.0000	8.562070
13014AA DANDELION			
63 COOKED-FRESH OR FROZEN-BOILED	0.02	20.0000	43.697717
13015AA ENDIVE, CURLY AND ESCAROLE			
10 RAW-FRESH OR NFS	0.24	20.0000	5.564583
21 COOKED-NFS	0.06	20.0000	16.936710
13016AA FENNEL			
00 NOT SPECIFIED (NO CONSUMPTION)	0.00	5.0000	0.000000
13017AA CRESS, GARDEN, FIELD			
00 NOT SPECIFIED (NO CONSUMPTION)	0.00	20.0000	0.000000
13018AA ARTICHOKE-GLOBE			
21 COOKED-NFS	0.13	10.0000	23.437049
13020AA LETTUCE-UNSPECIFIED			
10 RAW-FRESH OR NFS	3.42	20.0000	5.377914
13022AA PARSLEY			
10 RAW-FRESH OR NFS	3.02	20.0000	0.803163
21 COOKED-NFS	4.66	20.0000	0.990859
53 COOKED-CANNED-BOILED	0.70	20.0000	0.625231
13023AA RHUBARB			
10 RAW-FRESH OR NFS	0.02	20.0000	40.362459
21 COOKED-NFS	0.01	20.0000	29.640021
31 COOKED-FRESH OR CANNED	0.09	20.0000	44.146887
62 COOKED-FRESH OR FROZEN-BAKED	0.12	20.0000	22.725882
13024AA SPINACH			

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10 RAW-FRESH OR NFS	0.45	20.0000	33.118536
21 COOKED-NFS	2.18	20.0000	6.105316
31 COOKED-FRESH OR CANNED	1.24	20.0000	46.412455
13025AA SWISS CHARD	0.01	20.0000	32.708426
10 RAW-FRESH OR NFS	0.08	20.0000	35.805742
31 COOKED-FRESH OR CANNED	0.00	20.0000	43.651298
63 COOKED-FRESH OR FROZEN-BOILED			
13026AA TURNIPS-TOPS	0.19	20.0000	45.965658
10 RAW-FRESH OR NFS	0.19	20.0000	35.378544
21 COOKED-NFS	0.30	20.0000	45.569793
31 COOKED-FRESH OR CANNED			
13027AA WATERCRESS	0.04	5.0000	3.123454
10 RAW-FRESH OR NFS	0.00	5.0000	10.822431
21 COOKED-NFS			
13039AA CRESS,UPLAND	0.00	20.0000	0.000000
00 NOT SPECIFIED (NO CONSUMPTION)			
13045AA LETTUCE-HEAD VARIETIES	29.14	20.0000	14.268664
10 RAW-FRESH OR NFS	3.36	20.0000	2.409104
21 COOKED-NFS			
14007AA GARLIC	0.42	0.1000	0.000728
10 RAW-FRESH OR NFS	5.62	0.1000	0.000859
21 COOKED-NFS	3.73	0.1000	0.000698
32 COOKED-FRESH OR CANNED-BAKED			
14011AA ONIONS-DRY-BULB (CIPOLLINI)	6.40	0.1000	0.028961
10 RAW-FRESH OR NFS	33.88	0.1000	0.020975
21 COOKED-NFS	5.23	0.1000	0.020049
22 COOKED-FRESH-BAKED	7.78	0.1000	0.008354
31 COOKED-FRESH OR CANNED			
15005AA CORN,SWEET	0.03	0.1000	0.034713
10 RAW-FRESH OR NFS	11.48	0.1000	0.175410
21 COOKED-NFS	1.67	0.1000	0.227972
31 COOKED-FRESH OR CANNED			
15029AA SOYBEANS-SPROUTED SEEDS	0.00	0.0500	0.000000
00 NOT SPECIFIED (NO CONSUMPTION)			
16002AA ASPARAGUS	0.67	1.0000	1.768418
21 COOKED-NFS	0.09	1.0000	1.647499
23 COOKED-FRESH-BOILED			
16003AA MUSHROOMS	0.15	6.0000	3.668642
10 RAW-FRESH OR NFS	2.70	6.0000	3.389642
21 COOKED-NFS	0.90	6.0000	2.564495
31 COOKED-FRESH OR CANNED	0.69	6.0000	1.307878
53 COOKED-CANNED-BOILED			
MENU CATEGORY 10: FRUITS			
04001AA APPLES-FRESH	9.58	0.0500	0.161178
10 RAW-FRESH OR NFS	0.86	0.0500	0.039979
21 COOKED-NFS	4.21	0.0500	0.144933
31 COOKED-FRESH OR CANNED	2.24	0.0500	0.053562
62 COOKED-FRESH OR FROZEN-BAKED			
04001DA APPLES-DRIED	0.02	0.0500	0.186444
10 RAW-FRESH OR NFS	0.01	0.0500	0.175180
22 COOKED-FRESH-BAKED	0.05	0.0500	0.049838
62 COOKED-FRESH OR FROZEN-BAKED			
04001JA APPLES-JUICE	2.32	0.0500	0.552518
15 RAW-FRESH OR CANNED	15.91	0.0500	0.023382
31 COOKED-FRESH OR CANNED			
04003AA PEARS-FRESH	1.66	3.0000	9.607410
10 RAW-FRESH OR NFS	3.45	3.0000	4.104407
31 COOKED-FRESH OR CANNED	0.24	3.0000	28.605052
51 COOKED-CANNED	0.02	3.0000	4.053318
62 COOKED-FRESH OR FROZEN-BAKED			
04003DA PEARS-DRIED	0.01	3.0000	6.647387
10 RAW-FRESH OR NFS	0.00	3.0000	7.919604
21 COOKED-NFS			
05002AA CHERRIES-FRESH	0.32	3.0000	6.427147
10 RAW-FRESH OR NFS			

21 COOKED-NFS	0.68	3.0000	2.003863
31 COOKED-FRESH OR CANNED	6.51	3.0000	0.591578
62 COOKED-FRESH OR FROZEN-BAKED	0.60	3.0000	3.808446
05002DA CHERRIES-DRIED	0.00	3.0000	0.000000
00 NOT SPECIFIED (NO CONSUMPTION)			
05002JA CHERRIES-JUICE	0.05	3.0000	28.475429
15 RAW-FRESH OR CANNED	0.18	3.0000	0.755919
21 COOKED-NFS			
05004AA PEACHES-FRESH	3.81	5.0000	13.038116
10 RAW-FRESH OR NFS	12.14	5.0000	0.408324
21 COOKED-NFS	4.70	5.0000	8.652896
31 COOKED-FRESH OR CANNED	0.23	5.0000	56.747780
51 COOKED-CANNED			
05004DA PEACHES-DRIED	0.00	5.0000	57.425995
10 RAW-FRESH OR NFS	0.01	5.0000	16.463402
21 COOKED-NFS			
06001AA AVOCADOS	0.79	1.0000	1.470017
10 RAW-FRESH OR NFS			
06010AA PAPAYAS-UNSPECIFIED	0.00	1.0000	0.000000
00 NOT SPECIFIED (NO CONSUMPTION)			
06010AB PAPAYAS-PULP	0.05	1.0000	2.509893
10 RAW-FRESH OR NFS	0.00	1.0000	1.068399
51 COOKED-CANNED			
06010DA PAPAYAS-DRIED	3.69	1.0000	0.047303
10 RAW-FRESH OR NFS			
06010JA PAPAYAS-JUICE	0.05	1.0000	8.551508
10 RAW-FRESH OR NFS			
06018AA KIWI	0.00	2.0000	3.318647
10 RAW-FRESH OR NFS			
10002AA CANTALOUPE-UNSPECIFIED	0.00	3.0000	0.000000
00 NOT SPECIFIED (NO CONSUMPTION)			
10002AB CANTALOUPE-PULP	1.45	3.0000	9.235860
10 RAW-FRESH OR NFS	0.01	3.0000	9.631765
21 COOKED-NFS			
10003AA CASABAS	0.02	3.0000	10.402608
10 RAW-FRESH OR NFS			
10004AA CRENSHAW	0.00	3.0000	0.000000
00 NOT SPECIFIED (NO CONSUMPTION)			
10005AA HONEYDEW MELONS	0.38	3.0000	14.875697
10 RAW-FRESH OR NFS			
10007AA PERSTON MELONS	0.00	3.0000	0.000000
00 NOT SPECIFIED (NO CONSUMPTION)			
10008AA WATERMELON	1.06	3.0000	21.711673
10 RAW-FRESH OR NFS	0.10	3.0000	0.275551
21 COOKED-NFS			

MENU CATEGORY 11: NUTS AND SEEDS

03001AA ALMONDS			
10 RAW-FRESH OR NFS	0.56	0.0500	0.012000
21 COOKED-NFS	0.29	0.0500	0.016738
22 COOKED-FRESH-BAKED	1.22	0.0500	0.002267
03005AA FILBERTS, HAZELNUTS			
10 RAW-FRESH OR NFS	0.37	0.0500	0.004847
21 COOKED-NFS	0.02	0.0500	0.006827
22 COOKED-FRESH-BAKED	0.07	0.0500	0.001507
03009AA WALNUTS			
10 RAW-FRESH OR NFS	0.80	0.0500	0.009184
21 COOKED-NFS	0.04	0.0500	0.004893
22 COOKED-FRESH-BAKED	7.39	0.0500	0.002315
03011AA PISTACHIO NUTS			
10 RAW-FRESH OR NFS	0.03	0.1000	0.083337

MENU CATEGORY 12: SUGARS

24002SA	CORN SUGAR								
	10 RAM-FRESH OR NFS	5.04						0.005744	
	21 COOKED-NFS	49.09						0.012947	
	22 COOKED-FRESH-BAKED	16.27						0.004248	

MENU CATEGORY 13: MISCELLANEOUS FOODS

08022AA	HORSERADISH								
	11 RAM-FRESH-PICKLED, CORNED, OR CURED	0.11					1.0000	0.069900	