



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

MAY 11 1988

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

Subject: Updated Addendum to the Chemistry Chapter for the Dimethoate
Registration Standard: Tolerance Assessment System Tolerance
Reassessment.

To: Amy Rispin, Ph.D.
Science Integration Staff
Hazard Evaluation Division
-and-
D. Welch
Registration Division

From: Charles Frick *c.frick 5/6/88*
Tolerance Assessment Program
Residue Chemistry Branch, HED

Thru: Karl Arne, Ph.D. *KArne*
Branch Senior Scientist
Residue Chemistry Branch, HED

In conjunction with the Dimethoate Registration Standard, an updated Tolerance Assessment System (TAS) tolerance reassessment has been conducted. This analysis incorporates changes in toxicity parameters (NOEL and RFD) and policy change in the use of data estimating percent of crops treated with pesticide.

This analysis is based on the presumption that tolerance levels of Dimethoate are present on all treated crops. Data to establish a better estimate of dietary exposure (anticipated residues) is not available to RCB at this time but will be requested.

Discussion- Updated Dimethoate Tolerance Reassessment.

1. In the tolerance reassessment previously conducted by TAS (memo. 10/16/87), the Reference Dose Value (RFD) was based on a No Effect Level (NOEL) of 0.2 mg/kg in a human study measuring cholinestrase inhibition. Using a safety factor of 10 resulted in an RFD for Dimethoate of 0.02 mg/kg/day. The Toxicology Branch RFD Committee, (3/4/88) and the Agency RFD Committee (3/23/88), have established a NOEL of 0.05 mg/kg for Dimethoate. This NOEL is based on brain cholinestrase inhibition in a two-year rat study, and applying a safety factor of 300 arrive at a RFD of 0.0002 mg/kg/day for Dimethoate. This tolerance reassessment has used this lower RFD value in calculating theoretical dietary exposure and its relationship to the RFD of this chemical.

2. The food uses evaluated were tolerances published in 40 CFR 180.204. Percent of crop treated data were also incorporated into the dietary exposure analysis. In the tolerance reassessment previously conducted by TAS (memo. 10/16/87), some of the values for percent of crop treated with Dimethoate were less than 10%. These data were provided to TAS in the form of a Preliminary Quantitative Usage Analysis (PQUA), provided by the Benefits and Use Division (BUD). It should be noted that the quantity of pesticides used on crops that are grown on only a few acres and the quantity of infrequently used pesticides on more important crops are both difficult to ascertain. Because of the stochastic nature of the estimates for these situations, TAS did not use a value of less than 10% crop treated in this analysis, which resulted in a higher TMRC for Dimethoate.

3. Residue levels of Dimethoate that would actually be present on foods after being processed, washed, peeled, cooked, etc., (anticipated residues or ARC) have not been used in this analysis as no ARC data have been made available to the TAS program. It should be noted that in a report of the Joint Meeting on Pesticides Residues Rome, 24 September - 3 October 1984, sponsored jointly by FAO and WHO, states that data exists demonstrating a significant reduction in Dimethoate residues resulting from processing, domestic preparation, etc. RCB will request these data as well as additional data to better estimate residues in food consumed in an addendum to the Residue Chemistry Chapter of the Dimethoate FRSTR.

4. Exposure Analysis based on Published Tolerances and an Assumption of a 100% Crop Treated.

The TAS Routine Chronic Analysis estimates exposure based on average consumption, for the U.S. population and each of 22 population subgroups. In this case the Theoretical Maximum Residue Contribution (TMRC) for the U.S. population was calculated to be 0.012758 mg/kg/day, corresponding to 6,378% of the RFD. The most highly exposed subgroups were non-nursing infants (TMRC = 0.036126 mg/kg/day, or 18,062% of the RFD) and children 1-6 years (TMRC = 0.030311 mg/kg/day, or 15,155% of the RFD).

5. Exposure Analysis based on Published Tolerances and adjusted for Percent of Crop Treated.

Based on tolerances published in 40 CFR 180.204 and factored by percent of crop treated, the exposure for the U.S. population was calculated as 0.001489 mg/kg/day, corresponding to 744% of the RFD. For non-nursing infants the exposure was reduced to 0.003816 mg/kg/day (1,907% of the RFD) and for children 1-6 years of age the exposure was reduced to 0.003345 mg/kg/day, (1,673% of the RFD).

6. If Toxicology Branch considers an Acute Dietary Exposure Analysis necessary, an appropriate RFD value for acute toxicity should be provided and the TAS program will conduct the analysis.

cc

Registration Standard File
Circ.
TAS File
C. Frick (RCB)
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PMSD

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 04/18/88

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CHEMICAL INFORMATION	STUDY TYPE	EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
		2yr feeding- rat	Brain CNE inhibition.	PADI 300	Chronic feeding- dog	TOX complete 3/06/87.			
Dimethoate									
Caswell #358	NOEL=	0.0500 mg/kg		OPP RfD= 0.000200	Teratology- rabbit	EPA verified 3/18/87.			
CAS No. 60-51-5		1.00 ppm	No evidence of oncogeni-	EPA RfD= 0.000200		TOX reassess 3/04/88.			
A.I. CODE: 035001	LET=	0.2500 mg/kg	city in mice, rat study	WHO RfD 0.010000		EPA verified 3/23/88.			
CFR No. 180.204		5.00 ppm	inadequate.	Type: ADI		WHO last reviewed 1987.			
	ONCO: Negative- 1 species					On IRIS.			
EFFECT OF ANTICIPATED RESIDUES									
TOTAL TMRC (MG/KG BODY WEIGHT/DAY)		NEW TMRC AS PERCENT OF RFD		DIFFERENCE AS PERCENT OF RFD		EFFECT OF ANTICIPATED RESIDUES ARC (MG/KG/DAY)		RfD	
POPULATION SUBGROUP		CURRENT TMRC*	NEW TMRC**						
U.S. POPULATION - 48 STATES									
		0.012758	0.012758	6378.942000	0.000000	0.001489	744.264500		
U.S. POPULATION - SPRING SEASON									
		0.012279	0.012279	6139.586500	0.000000	0.001447	723.715000		
U.S. POPULATION - SUMMER SEASON									
		0.012286	0.012286	6143.226500	0.000000	0.001451	725.360000		
U.S. POPULATION - FALL SEASON									
		0.013126	0.013126	6562.794500	0.000000	0.001520	759.830500		
U.S. POPULATION - WINTER SEASON									
		0.013278	0.013278	6639.028500	0.000000	0.001536	768.196500		
NORTHEAST REGION									
		0.014451	0.014451	7225.453500	0.000000	0.001673	836.277500		
NORTH CENTRAL REGION									
		0.012432	0.012432	6216.142000	0.000000	0.001456	728.062500		
SOUTHERN REGION									
		0.011185	0.011185	5592.551500	0.000000	0.001294	646.908500		
WESTERN REGION									
		0.013592	0.013592	6796.188000	0.000000	0.001626	812.833000		
HISPANICS									
		0.015384	0.015384	7692.070500	0.000000	0.001786	892.918000		
NON-HISPANIC WHITES									
		0.012596	0.012596	6297.764500	0.000000	0.001481	740.312500		
NON-HISPANIC BLACKS									
		0.012110	0.012110	6054.993000	0.000000	0.001364	682.139000		
NON-HISPANIC OTHERS									
		0.015664	0.015664	7831.951000	0.000000	0.001796	898.206000		
NURSING INFANTS (< 1 YEAR OLD)									
		0.021726	0.021726	10862.998500	0.000000	0.002236	1117.796500		
NON-NURSING INFANTS (< 1 YEAR OLD)									
		0.036126	0.036126	18062.968500	0.000000	0.003816	1907.956000		
FEMALES (13+ YEARS, PREGNANT)									
		0.010222	0.010222	5111.017500	0.000000	0.001210	604.913000		
FEMALES 13+ YEARS, NURSING									
		0.011224	0.011224	5611.752500	0.000000	0.001362	681.045000		
CHILDREN (1-6 YEARS OLD)									
		0.030311	0.030311	15155.257500	0.000000	0.003345	1672.494000		
CHILDREN (7-12 YEARS OLD)									
		0.018303	0.018303	9151.737000	0.000000	0.002091	1045.558500		
MALES (13-19 YEARS OLD)									
		0.011075	0.011075	5537.680000	0.000000	0.001297	648.497000		
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)									
		0.010173	0.010173	5086.596000	0.000000	0.001202	601.010500		
MALES (20 YEARS AND OLDER)									
		0.008645	0.008645	4322.732500	0.000000	0.001051	525.660000		
FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)									
		0.009697	0.009697	4848.614500	0.000000	0.001177	588.567500		

*Current TMRC does not include new or pending tolerances.

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

TABLE 1

Contribution of Selected Commodities to Dimethoate Exposure
(Analysis based on tolerances adjusted for % of crop treated)

<u>Commodity</u>	<u>U.S. Average</u>	<u>Non-nursing Infants <1 yr</u>	<u>Children 1-6 yrs</u>
Citrus	242.2% ^a (32.5%) ^b	504.1% (26.4%)	658.0% (39.3%)
Tomatoes	145.5% (19.5%)	97.1% (5.1%)	280.9% (16.8%)
Pome Fruits	91.4% (12.3%)	962.8% (50.5%)	298.4% (17.8%)
Lettuce	79.1% (10.6%)	1.2% (0.1%)	62.3% (3.7%)
Legumes	55.4% (7.4%)	156.6% (8.2%)	108.5% (6.5%)
Grapes	23.2% (3.1%)	21.9% (1.1%)	67.6% (4.0%)
Red Meat	22.3% (3.0%)	21.5% (1.1%)	40.8% (2.4%)
Cole Crops	21.4% (2.9%)	6.5% (0.3%)	26.5% (1.6%)
Misc.	63.8% (8.6%)	136.3% (7.1%)	129.5% (7.7%)
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Total	744.3% (100.0%)	1908.0% (100.0%)	1672.5% (100.0%)

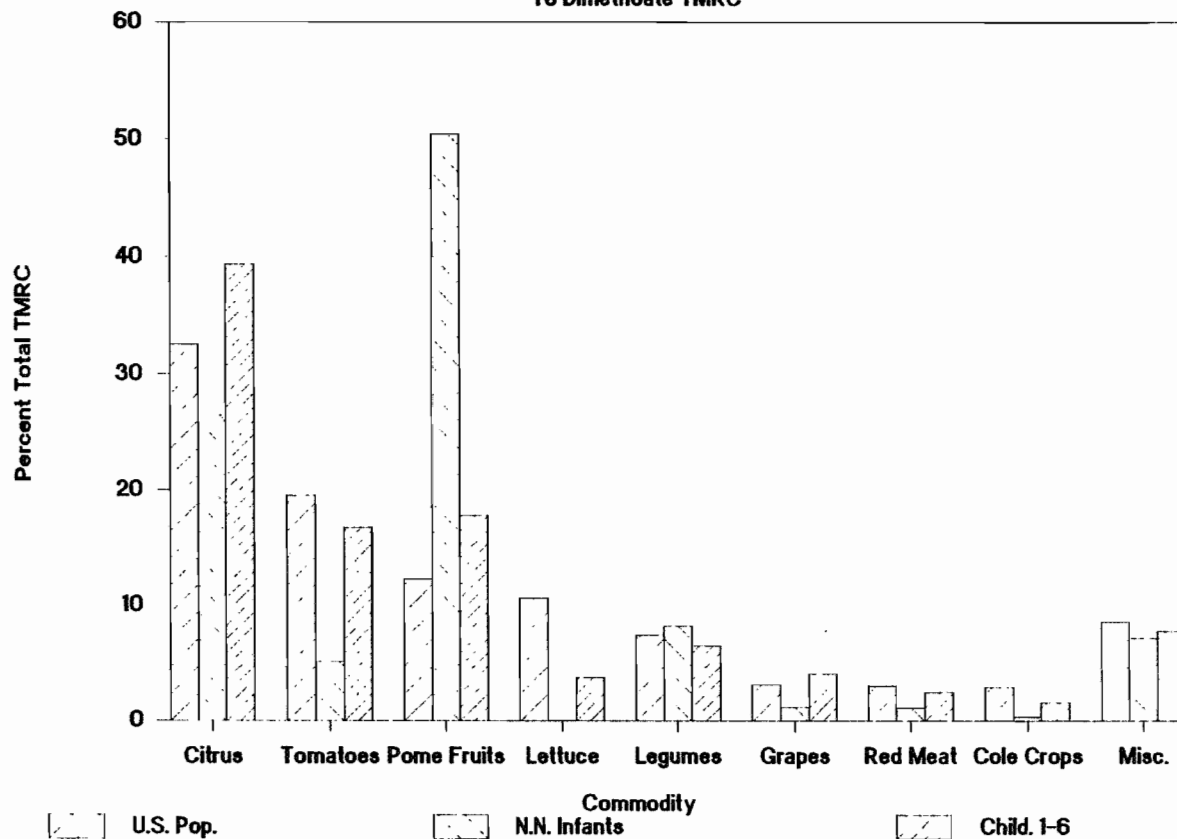
^aCommodity contribution to exposure expressed as percent of the (Provisional) Acceptable Daily Intake (PADI).

^bCommodity contribution to exposure expressed as percent of the total residue contribution (% of the ARC).

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Commodity Contribution of Selected RACs

To Dimethoate TMRC



DATE: 04/18/88

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 358

CHEMICAL		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)			
	Dimethoate	2yr feeding- rat		Brain ChE inhibition.		PADI 300		Chronic feeding- dog	TOX complete 3/06/87.		
	Caswell #358	NOEL= 0.0500 mg/kg				OPP RfD= 0.000200		Teratology- rabbit	EPA verified 3/18/87.		
	CAS No. 60-51-5	1.00 ppm		No evidence of oncogeni-		EPA RfD= 0.000200			TOX reassess 3/04/88.		
	A.I. CODE: 035001	LEL= 0.2500 mg/kg		city in mice, rat study					EPA verified 3/23/88.		
	CFR No. 180.204	5.00 ppm		inadequate.		WHO RfD 0.010000			WHO last reviewed 1987.		
		ONCO: Negative- 1 species				Type: ADI			On IRIS.		
04001AA	APPLES-FRESH	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000			
04001AA	APPLES-FRESH	31 COOKED-FRESH OR CANNED	385	P 2.000000	2.000000		10.00	0.200000			
04001AA	APPLES-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	385	P 2.000000	2.000000		10.00	0.200000			
04001DA	APPLES-DRIED	10 RAW-FRESH OR NFS	385	P 2.000000	2.000000		10.00	0.200000			
04001DA	APPLES-DRIED	22 COOKED-FRESH-BAKED	385	P 2.000000	2.000000		10.00	0.200000			
04001DA	APPLES-DRIED	62 COOKED-FRESH OR FROZEN-BAKED	385	P 2.000000	2.000000		10.00	0.200000			
04001JA	APPLES-JUICE	15 RAW-FRESH OR CANNED	385	P 2.000000	2.000000		10.00	0.200000			
04001JA	APPLES-JUICE	31 COOKED-FRESH OR CANNED	385	P 2.000000	2.000000		10.00	0.200000			
04003AA	PEARS-FRESH	10 RAW-FRESH OR NFS	385	P 2.000000	2.000000		10.00	0.200000			
04003AA	PEARS-FRESH	31 COOKED-FRESH OR CANNED	385	P 2.000000	2.000000		10.00	0.200000			
04003AA	PEARS-FRESH	51 COOKED-CANNED	385	P 2.000000	2.000000		10.00	0.200000			
04003AA	PEARS-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	385	P 2.000000	2.000000		10.00	0.200000			
04003DA	PEARS-DRIED	10 RAW-FRESH OR NFS	385	P 2.000000	2.000000		10.00	0.200000			
04003DA	PEARS-DRIED	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000			
05002AA	CHERRIES-FRESH	10 RAW-FRESH OR NFS	7E1949	P 2.000000	2.000000		10.00	0.200000			
05002AA	CHERRIES-FRESH	21 COOKED-NFS	7E1949	P 2.000000	2.000000		10.00	0.200000			
05002AA	CHERRIES-FRESH	31 COOKED-FRESH OR CANNED	7E1949	P 2.000000	2.000000		10.00	0.200000			
05002AA	CHERRIES-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	7E1949	P 2.000000	2.000000		10.00	0.200000			
05002DA	CHERRIES-DRIED	00 NOT SPECIFIED (NO CONSUMPTION)	7E1949	P 2.000000	2.000000		10.00	0.200000			
05002JA	CHERRIES-JUICE	15 RAW-FRESH OR CANNED	7E1949	P 2.000000	2.000000		10.00	0.200000			
05002JA	CHERRIES-JUICE	21 COOKED-NFS	7E1949	P 2.000000	2.000000		10.00	0.200000			
08048DA	PAPRIKA	00 NOT SPECIFIED (NO CONSUMPTION)	385	P 2.000000	2.000000		10.00	0.200000			
10002AA	CANTALOUPE-UNSP	00 NOT SPECIFIED (NO CONSUMPTION)	7F0578	P 1.000000	1.000000		10.00	0.100000			
10002AB	CANTALOUPE-PULP	10 RAW-FRESH OR NFS	7F0578	P 1.000000	1.000000		10.00	0.100000			
10002AB	CANTALOUPE-PULP	21 COOKED-NFS	7F0578	P 1.000000	1.000000		10.00	0.100000			
10003AA	CASABAS	10 RAW-FRESH OR NFS	7F0578	P 1.000000	1.000000		10.00	0.100000			
10004AA	CRENSHAW	00 NOT SPECIFIED (NO CONSUMPTION)	7F0578	P 1.000000	1.000000		10.00	0.100000			
10005AA	HONEYDEW MELONS	10 RAW-FRESH OR NFS	7F0578	P 1.000000	1.000000		10.00	0.100000			
10007AA	PERSION MELONS	00 NOT SPECIFIED (NO CONSUMPTION)	7F0578	P 1.000000	1.000000		10.00	0.100000			
10008AA	WATERMELON	10 RAW-FRESH OR NFS	7F0578	P 1.000000	1.000000		10.00	0.100000			
10008AA	WATERMELON	21 COOKED-NFS	7F0578	P 1.000000	1.000000		10.00	0.100000			
11003AA	PEPPERS, SWEET	10 RAW-FRESH OR NFS	385	P 2.000000	2.000000		10.00	0.200000			
11003AA	PEPPERS, SWEET	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000			
11003AB	CHILI PEPPERS	00 NOT SPECIFIED (NO CONSUMPTION)	385	P 2.000000	2.000000		10.00	0.200000			
11003AD	PEPPERS-OTHER	10 RAW-FRESH OR NFS	385	P 2.000000	2.000000		10.00	0.200000			
11003AD	PEPPERS-OTHER	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000			
11003AD	PEPPERS-OTHER	51 COOKED-CANNED	385	P 2.000000	2.000000		10.00	0.200000			
11004AA	PIMIENTOS	10 RAW-FRESH OR NFS	385	P 2.000000	2.000000		10.00	0.200000			
11004AA	PIMIENTOS	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000			
11004AA	PIMIENTOS	31 COOKED-FRESH OR CANNED	385	P 2.000000	2.000000		10.00	0.200000			

DATE: 04/18/88

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 358

CHEMICAL			STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)				
Dimethoate Caswell #358 CAS No. 60-51-5 A.I. CODE: 035001 CFR No. 180.204	2yr feeding- rat	Brain ChE inhibition.										
	NOEL=	0.0500 mg/kg										
	1.00 ppm											
	LEL=	0.2500 mg/kg	No evidence of oncogeni-									
	5.00 ppm	city in mice, rat study										
	ONCO: Negative- 1 species	inadequate.										

CHEMICAL	STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
	Dimethoate	2yr feeding- rat	Brain ChE inhibition.		PADI	300	Chronic feeding- dog		TOX complete 3/06/87.	
Caswell #358		NOEL= 0.0500 mg/kg			OPP RfD= 0.000200		Teratology- rabbit		EPA verified 3/18/87.	
CAS No. 60-51-5		1.00 ppm			EPA RfD= 0.000200				TOX reassess 3/04/88.	
A.I. CODE: 035001		LEL= 0.2500 mg/kg	No evidence of oncogeni-						EPA verified 3/23/88.	
CFR No. 180.204		5.00 ppm	city in mice, rat study		WHO RfD 0.010000				WHO last reviewed 1987.	
		ONCO: Negative- 1 species	inadequate.		Type: ADI				On IRIS.	

FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
13025AA	SWISS CHARD	31 COOKED-FRESH OR CANNED	385	P 2.000000	2.000000		10.00	0.200000
13025AA	SWISS CHARD	63 COOKED-FRESH OR FROZEN-BOILED	385	P 2.000000	2.000000		10.00	0.200000
13026AA	TURNIPS-TOPS	10 RAW-FRESH OR NFS	385	P 2.000000	2.000000		10.00	0.200000
13026AA	TURNIPS-TOPS	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000
13026AA	TURNIPS-TOPS	31 COOKED-FRESH OR CANNED	385	P 2.000000	2.000000		10.00	0.200000
13045AA	LETTUCE-HEAD	10 RAW-FRESH OR NFS	385	P 2.000000	2.000000		35.00	0.700000
13045AA	LETTUCE-HEAD	21 COOKED-NFS	385	P 2.000000	2.000000		35.00	0.700000
14013AA	POTATO(WH)-WHOLE	10 RAW-FRESH OR NFS	7F0578	P 0.200000	0.200000		10.00	0.020000
14013AA	POTATO(WH)-WHOLE	21 COOKED-NFS	7F0578	P 0.200000	0.200000		10.00	0.020000
14013AA	POTATO(WH)-WHOLE	22 COOKED-FRESH-BAKED	7F0578	P 0.200000	0.200000		10.00	0.020000
14013AB	POTATO(WH)-UNSP	22 COOKED-FRESH-BAKED	7F0578	P 0.200000	0.200000		10.00	0.020000
14013AC	POTATO(WH)-PULP	21 COOKED-NFS	7F0578	P 0.200000	0.200000		10.00	0.020000
14013AC	POTATO(WH)-PULP	22 COOKED-FRESH-BAKED	7F0578	P 0.200000	0.200000		10.00	0.020000
14013AC	POTATO(WH)-PULP	23 COOKED-FRESH-BOILED	7F0578	P 0.200000	0.200000		10.00	0.020000
14013AC	POTATO(WH)-PULP	25 COOKED-FRESH-FRIED	7F0578	P 0.200000	0.200000		10.00	0.020000
14013DA	POTATO(WH)-DRY	10 RAW-FRESH OR NFS	7F0578	P 0.200000	0.200000		10.00	0.020000
14013DA	POTATO(WH)-DRY	31 COOKED-FRESH OR CANNED	7F0578	P 0.200000	0.200000		10.00	0.020000
14013HA	POTATO(WH)-PEEL	22 COOKED-FRESH-BAKED	7F0578	P 0.200000	0.200000		10.00	0.020000
14019AA	TURNIPS-ROOTS	10 RAW-FRESH OR NFS	385	P 2.000000	2.000000		10.00	0.200000
14019AA	TURNIPS-ROOTS	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000
15001AA	BEANS-DRY-GRT NO	00 NOT SPECIFIED (NO CONSUMPTION)	385	P 2.000000	2.000000		10.00	0.200000
15001AB	BEANS-DRY-KIDNEY	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000
15001AB	BEANS-DRY-KIDNEY	31 COOKED-FRESH OR CANNED	385	P 2.000000	2.000000		10.00	0.200000
15001AC	BEANS-DRY-LIMA	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000
15001AD	BEANS-DRY-NAVY	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000
15001AD	BEANS-DRY-NAVY	31 COOKED-FRESH OR CANNED	385	P 2.000000	2.000000		10.00	0.200000
15001AE	BEANS-DRY-OTHER	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000
15001AE	BEANS-DRY-OTHER	25 COOKED-FRESH-FRIED	385	P 2.000000	2.000000		10.00	0.200000
15001AE	BEANS-DRY-OTHER	31 COOKED-FRESH OR CANNED	385	P 2.000000	2.000000		10.00	0.200000
15001AF	BEANS-DRY-PINTO	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000
15002AA	BEANS-SUCC-LIMA	10 RAW-FRESH OR NFS	385	P 2.000000	2.000000		10.00	0.200000
15002AA	BEANS-SUCC-LIMA	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000
15003AA	BEANS-SUCC-GREEN	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000
15007AA	PEAS DRY-GARDEN	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000
15007AA	PEAS DRY-GARDEN	31 COOKED-FRESH OR CANNED	385	P 2.000000	2.000000		10.00	0.200000
15009AA	PEAS SUCC-GARDEN	21 COOKED-NFS	385	P 2.000000	2.000000		10.00	0.200000
15009AA	PEAS SUCC-GARDEN	31 COOKED-FRESH OR CANNED	385	P 2.000000	2.000000		10.00	0.200000
15011AA	LENTILES-WHOLE	31 COOKED-FRESH OR CANNED	3E2890	P 2.000000	2.000000		10.00	0.200000
15011AB	LENTILES-SPLIT	21 COOKED-NFS	3E2890	P 2.000000	2.000000		10.00	0.200000
15013AA	MUNG BEANS	10 RAW-FRESH OR NFS	385	P 2.000000	2.000000		10.00	0.200000

CHEMICAL			STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)				
		2yr feeding- rat	Brain ChE inhibition.									
	Dimethoate	NOEL=										
	Caswell #358	0.0500 mg/kg										
	CAS No. 60-51-5	1.00 ppm										
	A.I. CODE: 035001	LEL=										
		0.2500 mg/kg										
		5.00 ppm										
	CFR No. 180.204	ONCO: Negative- 1 species										

CHEMICAL		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)	STATUS		
Dimethoate	2yr feeding- rat	Brain ChE inhibition.	PADI 300	Chronic feeding- dog	TOX complete 3/06/87.						
Caswell #358	NOEL= 0.0500 mg/kg		OPP RfD= 0.000200	Teratology- rabbit	EPA verified 3/18/87.						
CAS No. 60-51-5	1.00 ppm	No evidence of oncogeni-	EPA RfD= 0.000200		TOX reassess 3/04/88.						
A.I. CODE: 035001	LEL= 0.2500 mg/kg	city in mice, rat study	WHO RfD 0.010000		EPA verified 3/23/88.						
CFR No. 180.204	5.00 ppm	inadequate.	Type: ADI		WHO last reviewed 1987.						
	ONCO: Negative- 1 species				On IRIS.						
FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)			
28023AB	SOYBEANS-DRY	25 COOKED-FRESH-FRIED	5F1642	P 0.050000	0.050000		10.00	0.005000			
28023AB	SOYBEANS-DRY	31 COOKED-FRESH OR CANNED	5F1642	P 0.050000	0.050000		10.00	0.005000			
28023WA	SOY-FL, FULL FAT	21 COOKED-NFS	5F1642	P 0.050000	0.050000		10.00	0.005000			
28023WA	SOY-FL, FULL FAT	22 COOKED-FRESH-BAKED	5F1642	P 0.050000	0.050000		10.00	0.005000			
28023WA	SOY-FL, FULL FAT	31 COOKED-FRESH OR CANNED	5F1642	P 0.050000	0.050000		10.00	0.005000			
28023WB	SOY-FL, LOW FAT	21 COOKED-NFS	5F1642	P 0.050000	0.050000		10.00	0.005000			
28023WC	SOY-FL, DEFAT	10 RAW-FRESH OR NFS	5F1642	P 0.050000	0.050000		10.00	0.005000			
28023WC	SOY-FL, DEFAT	21 COOKED-NFS	5F1642	P 0.050000	0.050000		10.00	0.005000			
28023WC	SOY-FL, DEFAT	22 COOKED-FRESH-BAKED	5F1642	P 0.050000	0.050000		10.00	0.005000			
28023WC	SOY-FL, DEFAT	51 COOKED-CANNED	5F1642	P 0.050000	0.050000		10.00	0.005000			
28023WC	SOY-FL, DEFAT	53 COOKED-CANNED-BOILED	5F1642	P 0.050000	0.050000		10.00	0.005000			
43058AA	WINE AND SHERRY	10 RAW-FRESH OR NFS	3F1301	P 1.000000	1.000000		15.00	0.150000			
43058AA	WINE AND SHERRY	21 COOKED-NFS	3F1301	P 1.000000	1.000000		15.00	0.150000			
50000DB	MILK-NON-FAT SOL	10 RAW-FRESH OR NFS	8F0661	P 0.020000	0.020000		100.00	0.002000			
50000DB	MILK-NON-FAT SOL	21 COOKED-NFS	8F0661	P 0.020000	0.020000		100.00	0.002000			
50000DB	MILK-NON-FAT SOL	51 COOKED-CANNED	8F0661	P 0.020000	0.020000		100.00	0.002000			
50000FA	MILK-FAT SOLIDS	10 RAW-FRESH OR NFS	8F0661	P 0.020000	0.020000		100.00	0.002000			
50000FA	MILK-FAT SOLIDS	21 COOKED-NFS	8F0661	P 0.020000	0.020000		100.00	0.002000			
50000FA	MILK-FAT SOLIDS	51 COOKED-CANNED	8F0661	P 0.020000	0.020000		100.00	0.002000			
50000SA	MILK SUG (LACT)	21 COOKED-NFS	8F0661	P 0.020000	0.020000		100.00	0.002000			
50000SA	MILK SUG (LACT)	51 COOKED-CANNED	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001BA	BEEF-MEAT BYP	21 COOKED-NFS	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001BA	BEEF-MEAT BYP	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001BB	BEEF-OTH ORGN	21 COOKED-NFS	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001BB	BEEF-OTH ORGN	51 COOKED-CANNED	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001DA	BEEF-DRIED	21 COOKED-NFS	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001FA	BEEF-FAT	10 RAW-FRESH OR NFS	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001FA	BEEF-FAT	21 COOKED-NFS	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001FA	BEEF-FAT	22 COOKED-FRESH-BAKED	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001FA	BEEF-FAT	23 COOKED-FRESH-BOILED	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001FA	BEEF-FAT	24 COOKED-FRESH-BOILED	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001FA	BEEF-FAT	25 COOKED-FRESH-FRIED	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001KA	BEEF-KIDNEY	21 COOKED-NFS	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001LA	BEEF-LIVER	25 COOKED-FRESH-FRIED	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001LA	BEEF-LIVER	31 COOKED-FRESH OR CANNED	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001MA	BEEF-LEAN	10 RAW-FRESH OR NFS	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001MA	BEEF-LEAN	21 COOKED-NFS	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001MA	BEEF-LEAN	22 COOKED-FRESH-BAKED	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001MA	BEEF-LEAN	23 COOKED-FRESH-BOILED	8F0661	P 0.020000	0.020000		100.00	0.002000			
53001MA	BEEF-LEAN	24 COOKED-FRESH-BROILED	8F0661	P 0.020000	0.020000		100.00	0.002000			

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ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 358

CHEMICAL	STUDY TYPE	EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS
		2yr feeding- rat	Brain CHE inhibition.	PADI	300	Chronic feeding- dog	Teratology- rabbit	
Dimethoate	NOEL=	0.0500 mg/kg		OPP RfD=	0.000200			TOX complete 3/06/87.
Caswell #358	1.00 ppm			EPA RfD=	0.000200			EPA verified 3/18/87.
CAS No. 60-51-5	LEL=	0.2500 mg/kg	No evidence of oncogeni-					TOX reassess 3/04/88.
A.I. CODE: 035001		5.00 ppm	city in mice, rat study					EPA verified 3/23/88.
CFR No. 180.204	ONCO: Negative- 1 species		inadequate.	WHO RfD	0.010000			WHO last reviewed 1987.
				Type: ADI				On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
53002BA	GOAT-MEAT BYP	00 NOT SPECIFIED (NO CONSUMPTION)	OF0867	P 0.020000	0.020000		100.00	0.020000
53002BB	GOAT-OTH ORGAN	00 NOT SPECIFIED (NO CONSUMPTION)	OF0867	P 0.020000	0.020000		100.00	0.020000
53002FA	GOAT-FAT	23 COOKED-FRESH-BOILED	OF0867	P 0.020000	0.020000		100.00	0.020000
53002FA	GOAT-FAT	25 COOKED-FRESH-FRIED	OF0867	P 0.020000	0.020000		100.00	0.020000
53002KA	GOAT-KIDNEY	00 NOT SPECIFIED (NO CONSUMPTION)	OF0867	P 0.020000	0.020000		100.00	0.020000
53002LA	GOAT-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)	OF0867	P 0.020000	0.020000		100.00	0.020000
53002MA	GOAT-LEAN	23 COOKED-FRESH-BOILED	OF0867	P 0.020000	0.020000		100.00	0.020000
53002MA	GOAT-LEAN	25 COOKED-FRESH-FRIED	OF0867	P 0.020000	0.020000		100.00	0.020000
53003AA	HORSE	00 NOT SPECIFIED (NO CONSUMPTION)	OF0867	P 0.020000	0.020000		100.00	0.020000
53005BA	SHEEP-MEAT BYP	21 COOKED-NFS	OF0867	P 0.020000	0.020000		100.00	0.020000
53005BB	SHEEP-OTH ORGAN	21 COOKED-NFS	OF0867	P 0.020000	0.020000		100.00	0.020000
53005FA	SHEEP-FAT	21 COOKED-NFS	OF0867	P 0.020000	0.020000		100.00	0.020000
53005KA	SHEEP-KIDNEY	21 COOKED-NFS	OF0867	P 0.020000	0.020000		100.00	0.020000
53005LA	SHEEP-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)	OF0867	P 0.020000	0.020000		100.00	0.020000
53005MA	SHEEP-LEAN	21 COOKED-NFS	OF0867	P 0.020000	0.020000		100.00	0.020000
53005MA	SHEEP-LEAN	31 COOKED-FRESH OR CANNED	OF0867	P 0.020000	0.020000		100.00	0.020000
53006BA	PORK-MEAT BYP	21 COOKED-NFS	OF0867	P 0.020000	0.020000		100.00	0.020000
53006BB	PORK-OTH ORGAN	21 COOKED-NFS	OF0867	P 0.020000	0.020000		100.00	0.020000
53006BB	PORK-OTH ORGAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	OF0867	P 0.020000	0.020000		100.00	0.020000
53006FA	PORK-FAT	10 RAW-FRESH OR NFS	OF0867	P 0.020000	0.020000		100.00	0.020000
53006FA	PORK-FAT	21 COOKED-NFS	OF0867	P 0.020000	0.020000		100.00	0.020000
53006FA	PORK-FAT	23 COOKED-FRESH-BOILED	OF0867	P 0.020000	0.020000		100.00	0.020000
53006FA	PORK-FAT	25 COOKED-FRESH-FRIED	OF0867	P 0.020000	0.020000		100.00	0.020000
53006FA	PORK-FAT	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	OF0867	P 0.020000	0.020000		100.00	0.020000
53006KA	PORK-KIDNEY	21 COOKED-NFS	OF0867	P 0.020000	0.020000		100.00	0.020000
53006LA	PORK-LIVER	21 COOKED-NFS	OF0867	P 0.020000	0.020000		100.00	0.020000
53006LA	PORK-LIVER	25 COOKED-FRESH-FRIED	OF0867	P 0.020000	0.020000		100.00	0.020000
53006MA	PORK-LEAN	21 COOKED-NFS	OF0867	P 0.020000	0.020000		100.00	0.020000
53006MA	PORK-LEAN	25 COOKED-FRESH-FRIED	OF0867	P 0.020000	0.020000		100.00	0.020000
53006MA	PORK-LEAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	OF0867	P 0.020000	0.020000		100.00	0.020000
53008BA	TURKEY-BYP	21 COOKED-NFS	OF0928	P 0.020000	0.020000		100.00	0.020000
53008BA	TURKEY-BYP	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	OF0928	P 0.020000	0.020000		100.00	0.020000
53008LA	TURKEY ORGAN	21 COOKED-NFS	OF0928	P 0.020000	0.020000		100.00	0.020000
53008LA	TURKEY ORGAN	25 COOKED-FRESH-FRIED	OF0928	P 0.020000	0.020000		100.00	0.020000
53008MA	TURKEY W/O SKIN	21 COOKED-NFS	OF0928	P 0.020000	0.020000		100.00	0.020000
53008MA	TURKEY W/O SKIN	31 COOKED-FRESH OR CANNED	OF0928	P 0.020000	0.020000		100.00	0.020000
53008MA	TURKEY W/O SKIN	62 COOKED-FRESH OR FROZEN-BAKED	OF0928	P 0.020000	0.020000		100.00	0.020000
53008MB	TURKEY+SKIN	21 COOKED-NFS	OF0928	P 0.020000	0.020000		100.00	0.020000
53008MB	TURKEY+SKIN	25 COOKED-FRESH-FRIED	OF0928	P 0.020000	0.020000		100.00	0.020000
53008MC	TURKEY-UNSPEC	21 COOKED-NFS	OF0928	P 0.020000	0.020000		100.00	0.020000

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DATE: 04/18/88

CHEMICAL		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TIS RUN (ppm)			
	Dimethoate	2yr feeding- rat	Brain ChE inhibition.		300	Chronic feeding- dog					
	Caswell #358	NOEL= 0.0500 mg/kg			OPP Rfd= 0.000200	Teratology- rabbit					TOX complete 3/06/87.
	CAS No. 60-51-5	1.00 ppm	No evidence of oncogeni-		EPA Rfd= 0.000200						EPA verified 3/18/87.
	A.I. CODE: 035001	LEL= 0.2500 mg/kg	city in mice, rat study								TOX reassess 3/04/88.
	CFR No. 180.204	5.00 ppm	inadequate.		WHO Rfd 0.010000						EPA verified 3/23/88.
		ONCO: Negative- 1 species			Type: ADI						WHO last reviewed 1987.
											On IRIS.
555013BA	POULTRY, OTH-BYP	00 NOT SPECIFIED (NO CONSUMPTION)	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
5550131A	POULTRY, ORGAN	25 COOKED-FRESH-FRIED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555013VA	POULTRY, OTHER	21 COOKED-NFS	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AA	EGGS-WHOLE	10 RAW-FRESH OR NFS	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AA	EGGS-WHOLE	21 COOKED-NFS	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AA	EGGS-WHOLE	22 COOKED-FRESH-BAKED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AA	EGGS-WHOLE	23 COOKED-FRESH-BOILED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AA	EGGS-WHOLE	25 COOKED-FRESH-FRIED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AB	EGGS-WHITE ONLY	10 RAW-FRESH OR NFS	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AB	EGGS-WHITE ONLY	21 COOKED-NFS	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AB	EGGS-WHITE ONLY	22 COOKED-FRESH-BAKED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AB	EGGS-WHITE ONLY	62 COOKED-FRESH OR FROZEN-BAKED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AB	EGGS-WHITE ONLY	81 COOKED-FROZEN	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AC	EGGS-YOLK ONLY	10 RAW-FRESH OR NFS	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AC	EGGS-YOLK ONLY	21 COOKED-NFS	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AC	EGGS-YOLK ONLY	25 COOKED-FRESH-FRIED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555014AC	EGGS-YOLK ONLY	31 COOKED-FRESH OR CANNED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555015BA	CHICKEN-BYP	00 NOT SPECIFIED (NO CONSUMPTION)	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
5550151A	CHICKEN-ORGAN	21 COOKED-NFS	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
5550151A	CHICKEN-ORGAN	25 COOKED-FRESH-FRIED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
5550151A	CHICKEN-ORGAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555015WA	CHICKEN-W/O SKIN	21 COOKED-NFS	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555015WA	CHICKEN-W/O SKIN	22 COOKED-FRESH-BAKED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555015WA	CHICKEN-W/O SKIN	25 COOKED-FRESH-FRIED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555015WA	CHICKEN-W/O SKIN	31 COOKED-FRESH OR CANNED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555015WA	CHICKEN-W/O SKIN	53 COOKED-CANNED-BOILED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555015WB	CHICKEN+SKIN	21 COOKED-NFS	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000
555015WB	CHICKEN+SKIN	25 COOKED-FRESH-FRIED	OF0928	P 0.020000	0.020000		100.00	0.020000			0.020000

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TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 04/18/88

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CHEMICAL INFORMATION		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
Dimethoate		2yr feeding- rat		Brain ChE inhibition.		PADI 300		Chronic feeding- dog		TOX complete 3/06/87.	
Caswell #358		NOEL= 0.0500 mg/kg				OPP RfD= 0.000200		Teratology- rabbit		EPA verified 3/18/87.	
CAS No. 60-51-5		1.00 ppm		No evidence of oncogeni-		EPA RfD= 0.000200				TOX reassess 3/04/88.	
A.I. CODE: 035001		LEL= 0.2500 mg/kg		city in mice, rat study						EPA verified 3/23/88.	
CFR No. 180.204		5.00 ppm		inadequate.		WHO RfD 0.010000				WHO last reviewed 1987.	
		ONCO: Negative- 1 species				Type: ADI				On IRIS.	

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

FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)		TMRC TYPE (UG/KG/DAY)		ANTICIPATED RESIDUE (PPM)		ARC (UG/KG/DAY)		%RFD
13016AA	FENNEL	2.000000	P	0.000442	0.221000	0.200000	0.000000	0.000000	0.000000	0.000000
	00 NOT SPECIFIED (NO CONSUMPTION)									
270030A	COTTONSEED-OIL	0.100000	P	0.002041	1.020500	0.010000	0.000204	0.102000	0.102000	0.000000
	18 PROCESSED OIL									
27003WA	COTTONSEED-MEAL	0.100000	P	0.000012	0.006000	0.010000	0.000001	0.000500	0.000500	0.000000
	18 PROCESSED OIL									
27008AA	SAFFLOWER-SEED	0.100000	P	0.000000	0.000000	0.010000	0.000000	0.000000	0.000000	0.000000
	00 NOT SPECIFIED (NO CONSUMPTION)									
270080A	SAFFLOWER-OIL	0.100000	P	0.000157	0.078500	0.010000	0.000016	0.008000	0.008000	0.000000
	18 PROCESSED OIL									
43058AA	WINE AND SHERRY	1.000000	P	0.084196	42.098000	0.150000	0.012480	6.240000	6.240000	0.075000
	10 RAW-FRESH OR NFS									
	21 COOKED-NFS					0.150000	0.000150	0.075000	0.075000	0.000000
CROP GROUP TOTALS FOR UNSPECIFIED:					0.086848	43.424000	0.012851	6.425500	6.425500	

14013AA	POTATOES(WHITE)-WHOLE	0.200000	P	0.068012	34.006000	0.020000	0.000911	0.455500	0.455500	
	10 RAW-FRESH OR NFS					0.020000	0.002998	1.499000	1.499000	
	21 COOKED-NFS					0.020000	0.002893	1.446500	1.446500	
	22 COOKED-FRESH-BAKED									
14013AB	POTATOES(WHITE)-UNSPECIFIED	0.200000	P	0.000016	0.008000	0.020000	0.000002	0.001000	0.001000	
	22 COOKED-FRESH-BAKED									
14013AC	POTATOES(WHITE)-PEELED	0.200000	P	0.156851	78.425500	0.020000	0.001443	0.721500	0.721500	
	21 COOKED-NFS					0.020000	0.000854	0.427000	0.427000	
	22 COOKED-FRESH-BAKED					0.020000	0.008667	4.33500	4.33500	
	23 COOKED-FRESH-BOILED					0.020000	0.004721	2.360500	2.360500	
	25 COOKED-FRESH-FRIED									
14013DA	POTATOES(WHITE)-DRY	0.200000	P	0.001689	0.844500	0.020000	0.000073	0.036500	0.036500	
	10 RAW-FRESH OR NFS					0.020000	0.000096	0.048000	0.048000	
	31 COOKED-FRESH OR CANNED									
14013HA	POTATOES(WHITE)-PEEL ONLY	0.200000	P	0.000004	0.002000	0.020000	0.000000	0.000000	0.000000	
	22 COOKED-FRESH-BAKED									
14019AA	TURNIPS-ROOTS	2.000000	P	0.016478	8.239000	0.200000	0.000105	0.052500	0.052500	
	10 RAW-FRESH OR NFS					0.200000	0.001543	0.771500	0.771500	
	21 COOKED-NFS									
CROP GROUP TOTALS FOR ROOT AND TUBER VEGETABLES:					0.243050	121.525000	0.024306	12.153000	12.153000	

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