



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

DEC 22 1987

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Captan - Dietary Exposure and Oncogenic Risk
Assessment.

FROM: Susan L. Stanton
Tolerance Assessment Program
HED/RCB (TS-769C)

Susan L. Stanton 12/21/87

THRU: Karl Arne, Ph.D. *K. Arne*
Branch Senior Scientist
HED/RCB (TS-769C)

TO: Valerie Bael
Special Review Branch
Registration Division (TS-767C)

and

Eugene Wilson, PM Team 23
Fungicide-Herbicide Branch
Registration Division (TS-767C)

Action Requested

Provide an estimate of exposure and oncogenic risk for Captan using anticipated residues and percent of crop treated data where applicable.

Discussion

1. The reference dose (PADI) used in the analysis was 0.013 mg/kg body wt/day, based on a NOEL of 12.5 mg/kg body wt/day obtained in 1-generation and 3-generation rat reproduction studies, with an uncertainty factor of 1000. The additional uncertainty factor of 10 results from outstanding data gaps. This value has been verified by the Toxicology Branch ADI Committee (3/07/86).

In addition, this compound has been identified as an oncogen in rats and mice, and has been classified as a Category B2 oncogen by the Toxicology Branch Peer Review Committee. The upper bound potency estimate (Q*) obtained in this study was $2.3 \times 10^{-3} \text{ (mg/kg/day)}^{-1}$ (personal communication, R. Levy).

2. The Tolerance Assessment System (TAS) Program conducted a Routine Chronic analysis and oncogenic risk assessment using percent of crop treated data provided by the Benefits and Use Division (memo Pelletier to Bradley, 7-8-87) and anticipated residues as discussed in the Dec. 14, 1987 memo from Nan Gray to Valerie Bael and Eugene Wilson. In general, where sufficient FDA monitoring data existed, the analysis used the average residue from the maximum year without correction for percent of crop treated. These data include only residues of Captan, per se, and not any of the known plant metabolites, which are not determined by the method used by FDA. The estimates of exposure based on these data are therefore somewhat underestimated. It is not likely that residues for the metabolites would make a significant difference in these estimates, as available metabolism and residue data suggest that captan is a majority of the residue in RACs.

In the absence of sufficient FDA monitoring data, TAS used the average residue from field trials with the percent of crop treated included in the calculation.

3. The food uses evaluated were those published in 40 CFR 180.103 and 21 CFR 193.40, except as explained below.

Residue data have not been submitted in support of many of the existing uses for Captan. In the absence of data, RCB is recommending cancellation of these uses and revocation of the tolerances in the Registration Standard. Since these uses will soon be eliminated, they were not included in the present analysis. Uses to be cancelled include avocados, beans, blackberries, blueberries, broccoli, Brussels sprouts, cabbage, carrots, cauliflower, collards, cottonseed, cranberries, dewberries, eggplant, garlic, kale, leeks, mangos, mustard greens, onions, peas, peppers, pineapples, pumpkins, raspberries, rhubarb, rutabagas, shallots, taro, turnips, and watermelons.

The analysis also included anticipated residues for meat and milk resulting from treated feed items (raisin waste and almond hulls). In this case, no adjustment was made to account for percent of animals receiving treated feed.

A complete listing of tolerance, anticipated residue, and percent of crop treated data used in the analysis is appended in Table 1.

4. Evaluation of Exposure Relative to the PADI: The TAS Routine Chronic Analysis estimates exposure, based on per capita consumption, for the U.S. population and each of 22 population subgroups. In this case the Anticipated Residue Contribution (ARC) for the U.S. population was calculated to be 0.001728 mg/kg body wt/day, corresponding to 13% of the PADI. The two most highly exposed subgroups were non-nursing infants (0.009743 mg/kg body wt/day or 75% of the PADI) and children, aged 1 to 6 years (0.004447 mg/kg body wt/day or 34% of the PADI). A summary of the analysis is provided in the attached Table 2.

It should be noted that approximately 60% (for the U.S. Population) to 67% (for non-nursing infants) of the exposure is due to residues in milk. The TAS analysis assumes that all dairy cows would receive treated feed. Since raisin waste and almond hulls are relatively minor feed items, it is unlikely that this would be true. Therefore, these calculations represent an overestimate of exposure, particularly in the case of non-nursing infants, for whom milk constitutes a major portion of their diet.

5. Calculation of Oncogenic Risk: Risk was calculated only for the U.S. population average, in accordance with current HED policy. This value was calculated by the relationship:

$$\begin{aligned}\text{Risk} &= \text{Exposure} \times Q^* \\ &= \text{ARC} \times Q^* \\ &= 0.001728 \times (2.3 \times 10^{-3}) = 3.9 \times 10^{-6}\end{aligned}$$

The breakdown of risk by food group for the overall U.S. Population is as follows:

<u>COMMODITY</u>	<u>ARC</u> <u>UG/KG/DAY</u>	<u>RISK</u> <u>x 10⁻⁶</u>
Milk ^b	1.053391	2.4
Stone Fruit ^a	0.301456	0.69
Strawberries ^a	0.118010	0.27
Red Meat ^b	0.111589	0.26
Grapes/Raisins ^a	0.062485	0.14
Leafy Veggies ^a	0.047115	0.11
Pome Fruit ^a	0.026178	0.060
Curcubits ^b	0.004632	0.011
Tomatoes ^a	0.002907	0.0067
Citrus Fruit ^b	0.000466	0.0011
Almonds ^b	0.000165	0.0004

$$\text{Total Risk} = 3.9 \times 10^{-6}$$

^aanalysis based on average monitoring data (Max. year).

^banalysis based on average field trial residues corrected for percent of crop treated.

For the reasons stated above, this risk analysis overestimates risk from residues in milk and meat. Adjusting milk and meat residues to account for the percent of animals receiving treated feed would likely reduce the risk estimate significantly.

However, approximately one-third of the exposure and oncogenic risk is from other dietary sources, and nearly all of this remaining exposure is from crops for which average monitoring data were used in the calculations (see preceding page table). Therefore, further manipulation of the data is unlikely to result in significantly lower estimates of dietary exposure and oncogenic risk from these crops.

cc. TAS File
Reading File
circ.
Nan Gray (RCB)
Captan SF
Tox Branch

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 159

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)			
Captan	Caswell #159	Reproduction: rat	Decreased pup body wts.		PADI 1000	Chronic feeding- dog		TOX complete 3/07/86.			
CAS No. 133-06-2	NOEL= 12.5000 mg/kg		ADI based on results of 1-gen. and 3-gen. reproduction studies. Evi-		OPP Rfd= 0.013000			ORD verified 3/26/86.			
A.I. CODE: 081301	250.00 ppm		dence of oncogenicity in rats and mice.		EPA Rfd= 0.013000			WHO last reviewed 1984.			
CFR No. 180.103	500.00 ppm				WHO Rfd 0.100000						
	OMCO: Class B2 (TOX NOTE)				Type: ADI						
01014AA	GRAPES-FRESH	10 RAW-FRESH OR NFS	15	P 50.00000	0.370000	MONITORING	100.00	0.370000			
01014AA	GRAPES-FRESH	21 COOKED-NFS	15	P 50.00000	0.370000	MONITORING	100.00	0.370000			
01014AA	GRAPES-FRESH	31 COOKED-FRESH OR CANNED	15	P 50.00000	0.370000	MONITORING	100.00	0.370000			
01014DA	GRAPES-RAISINS	10 RAW-FRESH OR NFS	15	P 50.00000	0.370000C	MONITORING	100.00	0.370000			
01014DA	GRAPES-RAISINS	21 COOKED-NFS	15	P 50.00000	0.370000C	MONITORING	100.00	0.370000			
01014DA	GRAPES-RAISINS	22 COOKED-FRESH-BAKED	15	P 50.00000	0.370000C	MONITORING	100.00	0.370000			
01014JA	GRAPES-JUICE	10 RAW-FRESH OR NFS	15	P 50.00000	0.370000	MONITORING	100.00	0.370000			
01014JA	GRAPES-JUICE	15 RAW-FRESH OR CANNED	15	P 50.00000	0.370000	MONITORING	100.00	0.370000			
01014JA	GRAPES-JUICE	21 COOKED-NFS	15	P 50.00000	0.370000	MONITORING	100.00	0.370000			
01016AA	STRAWBERRIES	10 RAW-FRESH OR NFS	15	P 25.00000	3.400000	MONITORING	100.00	3.400000			
01016AA	STRAWBERRIES	21 COOKED-NFS	15	P 25.00000	3.400000	MONITORING	100.00	3.400000			
01016AA	STRAWBERRIES	70 RAW-FROZEN	15	P 25.00000	3.400000	MONITORING	100.00	3.400000			
02002AA	GRAPEFRUIT-UNSP	00 NOT SPECIFIED (NO CONSUMPTION)	15	P 25.00000	3.400000	AVE. RESIDUE	1.00	0.034000			
02002AB	GRAPEFRUIT-PULP	10 RAW-FRESH OR NFS	15	P 25.00000	0.100000	AVE. RESIDUE	1.00	0.001000			
02002AB	GRAPEFRUIT-PULP	21 COOKED-NFS	15	P 25.00000	0.100000	AVE. RESIDUE	1.00	0.001000			
02002JA	GRAPEFRUIT-JUICE	15 RAW-FRESH OR CANNED	15	P 25.00000	0.000000	AVE. RESIDUE	1.00	0.000000			
02002JA	GRAPEFRUIT-JUICE	31 COOKED-FRESH OR CANNED	15	P 25.00000	0.000000	AVE. RESIDUE	1.00	0.000000			
02004AA	LEMONS-UNSPEC	10 RAW-FRESH OR NFS	15	P 25.00000	6.300000	AVE. RESIDUE	1.00	0.063000			
02004AA	LEMONS-UNSPEC	22 COOKED-FRESH-BAKED	15	P 25.00000	6.300000	AVE. RESIDUE	1.00	0.063000			
02004AB	LEMONS-PULP	10 RAW-FRESH OR NFS	15	P 25.00000	0.100000	AVE. RESIDUE	1.00	0.001000			
02004AB	LEMONS-PULP	31 COOKED-FRESH OR CANNED	15	P 25.00000	0.100000	AVE. RESIDUE	1.00	0.001000			
02004HA	LEMONS-PEEL	10 RAW-FRESH OR NFS	15	P 25.00000	6.300000	AVE. RESIDUE	1.00	0.063000			
02004HA	LEMONS-PEEL	21 COOKED-NFS	15	P 25.00000	6.300000	AVE. RESIDUE	1.00	0.063000			
02004JA	LEMONS-JUICE	10 RAW-FRESH OR NFS	15	P 25.00000	0.200000	AVE. RESIDUE	1.00	0.002000			
02004JA	LEMONS-JUICE	15 RAW-FRESH OR CANNED	15	P 25.00000	0.200000	AVE. RESIDUE	1.00	0.002000			
02004JA	LEMONS-JUICE	31 COOKED-NFS	15	P 25.00000	0.200000	AVE. RESIDUE	1.00	0.002000			
02004JA	LEMONS-JUICE	31 COOKED-FRESH OR CANNED	15	P 25.00000	0.200000	AVE. RESIDUE	1.00	0.002000			
02005AA	LINES-UNSPEC	00 NOT SPECIFIED (NO CONSUMPTION)	15	P 25.00000	0.200000	AVE. RESIDUE	1.00	0.002000			
02005AB	LINES-PULP	10 RAW-FRESH OR NFS	15	P 25.00000	6.300000	AVE. RESIDUE	1.00	0.063000			
02005HA	LINES-PEEL	21 COOKED-NFS	15	P 25.00000	0.100000	AVE. RESIDUE	1.00	0.001000			
02005JA	LINES-JUICE	10 RAW-FRESH OR NFS	15	P 25.00000	6.300000	AVE. RESIDUE	1.00	0.063000			
02005JA	LINES-JUICE	15 RAW-FRESH OR CANNED	15	P 25.00000	0.200000	AVE. RESIDUE	1.00	0.002000			
02005JA	LINES-JUICE	31 COOKED-FRESH OR CANNED	15	P 25.00000	0.200000	AVE. RESIDUE	1.00	0.002000			
02006AA	ORANGES-UNSPEC	00 NOT SPECIFIED (NO CONSUMPTION)	15	P 25.00000	0.200000	AVE. RESIDUE	1.00	0.002000			
02006AB	ORANGES-PULP	10 RAW-FRESH OR NFS	15	P 25.00000	1.100000	AVE. RESIDUE	1.00	0.011000			
02006AB	ORANGES-PULP	21 COOKED-NFS	15	P 25.00000	0.100000	AVE. RESIDUE	1.00	0.001000			
02006HA	ORANGES-PEEL	21 COOKED-NFS	15	P 25.00000	0.100000	AVE. RESIDUE	1.00	0.001000			
02006HA	ORANGES-PEEL	22 COOKED-FRESH-BAKED	15	P 25.00000	1.100000	AVE. RESIDUE	1.00	0.011000			
02006HA	ORANGES-PEEL	31 COOKED-FRESH OR CANNED	15	P 25.00000	1.100000	AVE. RESIDUE	1.00	0.011000			
02006JA	ORANGES-JUICE	15 RAW-FRESH OR CANNED	15	P 25.00000	0.000000	AVE. RESIDUE	1.00	0.000000			

Table 1 (CONT.)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 159

DATE: 12/21/87

PAGE: 2

CHEMICAL		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
Captain Caswell #159 CAS No. 133-06-2 A.I. CODE: 081301 CFR No. 180.103		Reproduction- rat NOEL= 12.5000 mg/kg 250.00 ppm LEL= 25.0000 mg/kg 500.00 ppm ONCO: Class B2 (TOX NOTE)		Decreased pup body wts. ADI based on results of 1-gen. and 3-gen. repro- duction studies. Evi- dence of oncogenicity in rats and mice.		PADI 1000 OPP Rfd= 0.013000 EPA Rfd= 0.013000 WHO Rfd 0.100000 Type: ADI		Chronic feeding- dog		TOX complete 3/07/86. ORD verified 3/26/86. WHO last reviewed 1984.	
FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)			
02006JA	ORANGES-JUICE	31 COOKED-FRESH OR CANNED	15	P 25.00000	0.000000	AVE. RESIDUE	1.00	0.000000			
02007AA	TANGELOS	10 RAW-FRESH OR NFS	15	P 25.00000	0.100000	AVE. RESIDUE	1.00	0.001000			
02008AA	TANGERINES	10 RAW-FRESH OR NFS	15	P 25.00000	0.100000	AVE. RESIDUE	1.00	0.001000			
02008JA	TANGERINE- JUICE	15 RAW-FRESH OR CANNED	15	P 25.00000	0.200000	AVE. RESIDUE	1.00	0.002000			
03001AA	ALMONDS	10 RAW-FRESH OR NFS	15	P 2.000000	0.100000	AVE. RESIDUE	59.00	0.059000			
03001AA	ALMONDS	21 COOKED-NFS	15	P 2.000000	0.100000	AVE. RESIDUE	59.00	0.059000			
03001AA	ALMONDS	22 COOKED-FRESH-BAKED	15	P 2.000000	0.100000	AVE. RESIDUE	59.00	0.059000			
04001AA	APPLES-FRESH	10 RAW-FRESH OR NFS	15	P 25.00000	0.030000	MONITORING	100.00	0.030000			
04001AA	APPLES-FRESH	21 COOKED-NFS	15	P 25.00000	0.030000	MONITORING	100.00	0.030000			
04001AA	APPLES-FRESH	31 COOKED-FRESH OR CANNED	15	P 25.00000	0.030000	MONITORING	100.00	0.030000			
04001AA	APPLES-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	15	P 25.00000	0.030000	MONITORING	100.00	0.030000			
04001DA	APPLES-DRIED	10 RAW-FRESH OR NFS	15	P 25.00000	0.030000	MONITORING	100.00	0.030000			
04001DA	APPLES-DRIED	22 COOKED-FRESH-BAKED	15	P 25.00000	0.030000	MONITORING	100.00	0.030000			
04001DA	APPLES-DRIED	62 COOKED-FRESH OR FROZEN-BAKED	15	P 25.00000	0.030000	MONITORING	100.00	0.030000			
04001JA	APPLES-JUICE	15 RAW-FRESH OR CANNED	15	P 25.00000	0.030000	MONITORING	100.00	0.030000			
04001JA	APPLES-JUICE	31 COOKED-FRESH OR CANNED	15	P 25.00000	0.030000	MONITORING	100.00	0.030000			
04002AA	CRABAPPLES	00 NOT SPECIFIED (NO CONSUMPTION)	15	P 25.00000	0.030000	MONITORING	100.00	0.030000			
04003AA	PEARS-FRESH	10 RAW-FRESH OR NFS	15	P 25.00000	0.020000	MONITORING	100.00	0.020000			
04003AA	PEARS-FRESH	31 COOKED-FRESH OR CANNED	15	P 25.00000	0.020000	MONITORING	100.00	0.020000			
04003AA	PEARS-FRESH	51 COOKED-CANNED	15	P 25.00000	0.020000	MONITORING	100.00	0.020000			
04003AA	PEARS-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	15	P 25.00000	0.020000	MONITORING	100.00	0.020000			
04003DA	PEARS-DRIED	10 RAW-FRESH OR NFS	15	P 25.00000	0.020000	MONITORING	100.00	0.020000			
04003DA	PEARS-DRIED	21 COOKED-NFS	15	P 25.00000	0.020000	MONITORING	100.00	0.020000			
04004AA	QUINCES	00 NOT SPECIFIED (NO CONSUMPTION)	15	P 25.00000	0.030000	MONITORING	100.00	0.030000			
05001AA	APRICOTS-FRESH	10 RAW-FRESH OR NFS	15	P 50.00000	1.200000	MONITORING	100.00	1.200000			
05001AA	APRICOTS-FRESH	21 COOKED-NFS	15	P 50.00000	1.200000	MONITORING	100.00	1.200000			
05001AA	APRICOTS-FRESH	31 COOKED-FRESH OR CANNED	15	P 50.00000	1.200000	MONITORING	100.00	1.200000			
05001DA	APRICOTS-DRIED	10 RAW-FRESH OR NFS	15	P 50.00000	1.200000	MONITORING	100.00	1.200000			
05001DA	APRICOTS-DRIED	22 COOKED-FRESH-BAKED	15	P 50.00000	1.200000	MONITORING	100.00	1.200000			
05002AA	CHERRIES-FRESH	10 RAW-FRESH OR NFS	15	P 100.00000	0.570000	MONITORING	100.00	0.570000			
05002AA	CHERRIES-FRESH	21 COOKED-NFS	15	P 100.00000	0.570000	MONITORING	100.00	0.570000			
05002AA	CHERRIES-FRESH	31 COOKED-FRESH OR CANNED	15	P 100.00000	0.570000	MONITORING	100.00	0.570000			
05002AA	CHERRIES-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	15	P 100.00000	0.570000	MONITORING	100.00	0.570000			
05002DA	CHERRIES-DRIED	00 NOT SPECIFIED (NO CONSUMPTION)	15	P 100.00000	0.570000	MONITORING	100.00	0.570000			
05002JA	CHERRIES-JUICE	15 RAW-FRESH OR CANNED	15	P 100.00000	0.570000	MONITORING	100.00	0.570000			
05002JA	CHERRIES-JUICE	21 COOKED-NFS	15	P 100.00000	0.570000	MONITORING	100.00	0.570000			
05003AA	NECTARINES	10 RAW-FRESH OR NFS	15	P 50.00000	3.600000	AVE. RESIDUE	61.00	2.196000			
05004AA	PEACHES-FRESH	10 RAW-FRESH OR NFS	15	P 50.00000	0.230000	MONITORING	100.00	0.230000			
05004AA	PEACHES-FRESH	21 COOKED-NFS	15	P 50.00000	0.230000	MONITORING	100.00	0.230000			
05004AA	PEACHES-FRESH	31 COOKED-FRESH OR CANNED	15	P 50.00000	0.230000	MONITORING	100.00	0.230000			

Table 1 (CONT.)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 159

PAGE: 3

DATE: 12/21/87

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)			
Captan		Reproduction- rat	Decreased pup body wts.		PADI 1000		Chronic feeding- dog		TOX complete 3/07/86.		
CAS No. 133-06-2		NOEL= 12.5000 mg/kg	ADI based on results of		OPP Rfd= 0.013000				ORD verified 3/26/86.		
A.I. CODE: 081301		LEL= 25.0000 ppm	1-gen. and 3-gen. repro-		EPA Rfd= 0.013000				WHO last reviewed 1984.		
CFR No. 180.103		500.00 ppm	duction studies. Evi-		WHO Rfd 0.100000						
		ONCO: Class B2 (TOX NOTE)	dence of oncogenicity in		Type: ADI						
			rats and mice.								
05004AA	PEACHES-FRESH	51 COOKED-CANNED	15	P 50.00000	0.230000	MONITORING	100.00	0.230000			
05004DA	PEACHES-DRIED	10 RAW-FRESH OR NFS	15	P 50.00000	0.230000	MONITORING	100.00	0.230000			
05004DA	PEACHES-DRIED	21 COOKED-NFS	15	P 50.00000	0.230000	MONITORING	100.00	0.230000			
05005AA	PLUMS-FRESH	10 RAW-FRESH OR NFS	15	P 100.00000	4.300000	AVE. RESIDUE	60.00	2.580000			
05005AA	PLUMS-FRESH	31 COOKED-FRESH OR CANNED	15	P 100.00000	4.300000	AVE. RESIDUE	60.00	2.580000			
05005DA	PLUMS-PRUNES	10 RAW-FRESH OR NFS	15	P 100.00000	4.300000	AVE. RESIDUE	60.00	2.580000			
05005DA	PLUMS-PRUNES	21 COOKED-NFS	15	P 100.00000	4.300000	AVE. RESIDUE	60.00	2.580000			
05005DA	PLUMS-PRUNES	31 COOKED-FRESH OR CANNED	15	P 100.00000	4.300000	AVE. RESIDUE	60.00	2.580000			
05005JA	PRUNE-JUICE	10 RAW-FRESH OR NFS	15	P 100.00000	4.300000	AVE. RESIDUE	60.00	2.580000			
05005JA	PRUNE-JUICE	62 COOKED-FRESH OR FROZEN-BAKED	15	P 100.00000	4.300000	AVE. RESIDUE	60.00	2.580000			
10002AA	CANTALOUPE-UNSP	00 NOT SPECIFIED (NO CONSUMPTION)	15	P 25.00000	0.100000	AVE. RESIDUE	40.00	0.040000			
10002AB	CANTALOUPE-PULP	10 RAW-FRESH OR NFS	15	P 25.00000	0.100000	AVE. RESIDUE	40.00	0.040000			
10002AB	CANTALOUPE-PULP	21 COOKED-NFS	15	P 25.00000	0.100000	AVE. RESIDUE	40.00	0.040000			
10005AA	HONEYDEW MELONS	10 RAW-FRESH OR NFS	15	P 25.00000	0.100000	AVE. RESIDUE	40.00	0.040000			
10010AA	CUCUMBERS	10 RAW-FRESH OR NFS	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
10010AA	CUCUMBERS	11 RAW-FRESH-PICKLED, CORNED, OR CURED	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
10010AA	CUCUMBERS	21 COOKED-NFS	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
10013AA	SQUASH-SUMMER	10 RAW-FRESH OR NFS	15	P 25.00000	0.600000	AVE. RESIDUE	40.00	0.002000			
10013AA	SQUASH-SUMMER	21 COOKED-NFS	15	P 25.00000	0.030000	AVE. RESIDUE	40.00	0.240000			
10014AA	SQUASH-WINTER	10 RAW-FRESH OR NFS	15	P 25.00000	0.100000	AVE. RESIDUE	40.00	0.012000			
10014AA	SQUASH-WINTER	21 COOKED-NFS	15	P 25.00000	0.100000	AVE. RESIDUE	40.00	0.040000			
10014AA	SQUASH-WINTER	31 COOKED-FRESH OR CANNED	15	P 25.00000	0.100000	AVE. RESIDUE	40.00	0.040000			
1005AA	TOMATOES-WHOLE	10 RAW-FRESH OR NFS	15	P 25.00000	0.002000	MONITORING	100.00	0.040000			
1005AA	TOMATOES-WHOLE	21 COOKED-NFS	15	P 25.00000	0.002000	MONITORING	100.00	0.040000			
1005AA	TOMATOES-WHOLE	31 COOKED-FRESH OR CANNED	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
1005JA	TOMATOES-JUICE	10 RAW-FRESH OR NFS	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
1005JA	TOMATOES-JUICE	21 COOKED-NFS	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
1005JA	TOMATOES-PUREE	10 RAW-FRESH OR NFS	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
1005RA	TOMATOES-PUREE	21 COOKED-NFS	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
1005RA	TOMATOES-PUREE	31 COOKED-FRESH OR CANNED	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
1005RA	TOMATOES-PUREE	32 COOKED-FRESH OR CANNED-BAKED	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
1005TA	TOMATOES-PASTE	51 COOKED-CANNED	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
1005TA	TOMATOES-PASTE	22 COOKED-FRESH-BAKED	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
1005TA	TOMATOES-PASTE	31 COOKED-FRESH OR CANNED	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
1005UA	TOMATOES-CATSUP	21 COOKED-NFS	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
1001AA	BETS-TOPS	31 COOKED-FRESH OR CANNED	15	P 25.00000	0.002000	MONITORING	100.00	0.002000			
1001AA	BETS-TOPS	63 COOKED-FRESH OR FROZEN-BOILED	15	P 100.00000	0.000000	AVE. RESIDUE	20.00	0.000000			
1002AA	CELERY	10 RAW-FRESH OR NFS	15	P 50.00000	0.000000	AVE. RESIDUE	20.00	0.000000			
1002AA	CELERY	21 COOKED-NFS	15	P 50.00000	0.013000	MONITORING	100.00	0.013000			
1002AA	CELERY		15	P 50.00000	0.013000	MONITORING	100.00	0.013000			

Table 1 (CONT.)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 159

DATE: 12/21/87

PAGE: 4

CHEMICAL		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
Captain Caswell #159 CAS No. 133-06-2 A.I. CODE: 081301 CFR No. 180.103		Reproduction- rat NOEL= 12.5000 mg/kg 250.00 ppm LEL= 25.0000 mg/kg 500.00 ppm OMCO: Class B2 (TOX NOTE)		Decreased pup body wts. ADI based on results of 1-gen. and 3-gen. repro- duction studies. Evi- dence of oncogenicity in rats and mice.		PADI 1000 OPP Rfd= 0.013000 EPA Rfd= 0.013000 WHO Rfd 0.100000 Type: ADI		Chronic feeding- dog		TOX complete 3/07/86. ORD verified 3/26/86. WHO last reviewed 1984.	
FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)			
13013AA	LETTUCE-LEAFY	10 RAW-FRESH OR NFS	15	P 100.00000	0.180000	MONITORING	100.00	0.180000			
13016AA	FENNEL	00 NOT SPECIFIED (NO CONSUMPTION)	15	P 50.00000	0.013000	MONITORING	100.00	0.013000			
13020AA	LETTUCE-UNSPEC	10 RAW-FRESH OR NFS	15	P 100.00000	0.180000	MONITORING	100.00	0.180000			
13024AA	SPINACH	10 RAW-FRESH OR NFS	15	P 100.00000	0.130000	MONITORING	100.00	0.130000			
13024AA	SPINACH	21 COOKED-FRS	15	P 100.00000	0.130000	MONITORING	100.00	0.130000			
13024AA	SPINACH	31 COOKED-FRESH OR CANNED	15	P 100.00000	0.130000	MONITORING	100.00	0.130000			
13045AA	LETTUCE-HEAD	10 RAW-FRESH OR NFS	15	P 100.00000	0.180000	MONITORING	100.00	0.180000			
13045AA	LETTUCE-HEAD	21 COOKED-FRS	15	P 100.00000	0.180000	MONITORING	100.00	0.180000			
14001AA	BETTS-ROOTS	10 RAW-FRESH OR NFS	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
14001AA	BETTS-ROOTS	21 COOKED-FRS	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
14001AA	BETTS-ROOTS	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
14001AA	BETTS-ROOTS	31 COOKED-FRESH OR CANNED	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
14013AA	POTATO(WH)-WHOLE	10 RAW-FRESH OR NFS	15	P 25.000000	0.000000	AVE. RESIDUE	1.00	0.000000			
14013AA	POTATO(WH)-WHOLE	21 COOKED-FRS	15	P 25.000000	0.000000	AVE. RESIDUE	1.00	0.000000			
14013AA	POTATO(WH)-WHOLE	22 COOKED-FRESH-BAKED	15	P 25.000000	0.000000	AVE. RESIDUE	1.00	0.000000			
14013AB	POTATO(WH)-UNSPEC	22 COOKED-FRESH-BAKED	15	P 25.000000	0.000000	AVE. RESIDUE	1.00	0.000000			
14013AC	POTATO(WH)-PULP	21 COOKED-FRS	15	P 25.000000	0.000000	AVE. RESIDUE	1.00	0.000000			
14013AC	POTATO(WH)-PULP	22 COOKED-FRESH-BAKED	15	P 25.000000	0.000000	AVE. RESIDUE	1.00	0.000000			
14013AC	POTATO(WH)-PULP	23 COOKED-FRESH-BOILED	15	P 25.000000	0.000000	AVE. RESIDUE	1.00	0.000000			
14013AC	POTATO(WH)-PULP	25 COOKED-FRESH-FRIED	15	P 25.000000	0.000000	AVE. RESIDUE	1.00	0.000000			
14013DA	POTATO(WH)-DRY	10 RAW-FRESH OR NFS	15	P 25.000000	0.000000	AVE. RESIDUE	1.00	0.000000			
14013DA	POTATO(WH)-DRY	31 COOKED-FRESH OR CANNED	15	P 25.000000	0.000000	AVE. RESIDUE	1.00	0.000000			
14013HA	POTATO(WH)-PEEL	22 COOKED-FRESH-BAKED	15	P 25.000000	0.000000	AVE. RESIDUE	1.00	0.000000			
15005AA	CORN, SWEET	10 RAW-FRESH OR NFS	15	P 2.0000000	0.000000	AVE. RESIDUE	75.00	0.000000			
15005AA	CORN, SWEET	21 COOKED-FRS	15	P 2.0000000	0.000000	AVE. RESIDUE	75.00	0.000000			
15005AA	CORN, SWEET	31 COOKED-FRESH OR CANNED	15	P 2.0000000	0.000000	AVE. RESIDUE	75.00	0.000000			
15029AA	SOYBEAN-SPROUTED	00 NOT SPECIFIED (NO CONSUMPTION)	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
27010AA	SOYBEANS-OIL	18 PROCESSED OIL	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023AA	SOYBEANS-UNSPEC	21 COOKED-FRS	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023AB	SOYBEANS-DRY	10 RAW-FRESH OR NFS	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023AB	SOYBEANS-DRY	21 COOKED-FRS	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023AB	SOYBEANS-DRY	23 COOKED-FRESH-BOILED	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023AB	SOYBEANS-DRY	25 COOKED-FRESH-FRIED	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023AB	SOYBEANS-DRY	31 COOKED-FRESH OR CANNED	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023WA	SOY-FL, FULL FAT	FAT 21 COOKED-FRS	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023WA	SOY-FL, FULL FAT	FAT 22 COOKED-FRESH-BAKED	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023WA	SOY-FL, FULL FAT	FAT 31 COOKED-FRESH OR CANNED	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023WB	SOY-FL, LOW FAT	FAT 21 COOKED-FRS	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023WC	SOY-FL, DEFAT	FAT 10 RAW-FRESH OR NFS	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023WC	SOY-FL, DEFAT	FAT 21 COOKED-FRS	15	P 2.0000000	0.000000	AVE. RESIDUE	20.00	0.000000			

Table 1 (CONT.)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 159

PAGE: 5

DATE: 12/21/87

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)			
	Captan	Reproduction- rat	ADL based on results of 1-gen. and 3-gen. reproduction studies. Evidence of oncogenicity in rats and mice.	PAOI 1000	OPP Rfd= 0.013000	Chronic feeding- dog		TOX complete 3/07/86. ORD verified 3/26/86. WHO last reviewed 1984.			
	CAS No. 133-06-2	NOEL= 12.5000 mg/kg			EPA Rfd= 0.013000						
	A.I. CODE: 081301	LEL= 25.0000 mg/kg			WHO Rfd 0.100000						
	CFR No. 180.103	500.00 ppm			Type: ADI						
		OMCD: Class B2 (TOX NOTE)									
28023WC	SOY-FL,DEFAT	22 COOKED-FRESH-BAKED	15	P 2.000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023WC	SOY-FL,DEFAT	51 COOKED-CANNED	15	P 2.000000	0.000000	AVE. RESIDUE	20.00	0.000000			
28023WC	SOY-FL,DEFAT	53 COOKED-CANNED-BOILED	15	P 2.000000	0.000000	AVE. RESIDUE	20.00	0.000000			
50000DB	MILK-NON-FAT SOL	10 RAW-FRESH OR NFS		M 0.100000	0.100000		100.00	0.100000			
50000DB	MILK-NON-FAT SOL	21 COOKED-NFS		M 0.100000	0.100000		100.00	0.100000			
50000DB	MILK-NON-FAT SOL	51 COOKED-CANNED		M 0.100000	0.100000		100.00	0.100000			
50000FA	MILK-FAT SOLIDS	10 RAW-FRESH OR NFS		M 0.100000	0.100000		100.00	0.100000			
50000FA	MILK-FAT SOLIDS	21 COOKED-NFS		M 0.100000	0.100000		100.00	0.100000			
50000FA	MILK-FAT SOLIDS	51 COOKED-CANNED		M 0.100000	0.100000		100.00	0.100000			
50000SA	MILK-SUG (LACT)	21 COOKED-NFS		M 0.100000	0.100000		100.00	0.100000			
50000SA	MILK-SUG (LACT)	51 COOKED-CANNED		M 0.100000	0.100000		100.00	0.100000			
53001BA	BEEF-MEAT BYP	21 COOKED-NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001BA	BEEF-MEAT BYP	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001BB	BEEF-OTH ORGAN	21 COOKED-NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001BB	BEEF-OTH ORGAN	51 COOKED-CANNED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001DA	BEEF-DRIED	21 COOKED-NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001FA	BEEF-FAT	10 RAW-FRESH OR NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001FA	BEEF-FAT	21 COOKED-NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001FA	BEEF-FAT	22 COOKED-FRESH-BAKED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001FA	BEEF-FAT	23 COOKED-FRESH-BOILED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001FA	BEEF-FAT	24 COOKED-FRESH-BROILED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001FA	BEEF-FAT	25 COOKED-FRESH-FRIED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001KA	BEEF-KIDNEY	21 COOKED-NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001LA	BEEF-LIVER	25 COOKED-FRESH-FRIED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001LA	BEEF-LIVER	31 COOKED-FRESH OR CANNED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001HA	BEEF-LEAN	10 RAW-FRESH OR NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001HA	BEEF-LEAN	21 COOKED-NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001HA	BEEF-LEAN	22 COOKED-FRESH-BAKED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001HA	BEEF-LEAN	23 COOKED-FRESH-BOILED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001HA	BEEF-LEAN	24 COOKED-FRESH-BROILED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53001HA	BEEF-LEAN	25 COOKED-FRESH-FRIED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53002BA	GOAT-MEAT BYP	00 NOT SPECIFIED (NO CONSUMPTION)		M 0.050000	0.050000		100.00	0.050000			
53002BA	GOAT-MEAT BYP	00 NOT SPECIFIED (NO CONSUMPTION)		M 0.050000	0.050000		100.00	0.050000			
53002FA	GOAT-FAT	23 COOKED-FRESH-BOILED		M 0.050000	0.050000		100.00	0.050000			
53002FA	GOAT-FAT	25 COOKED-FRESH-FRIED		M 0.050000	0.050000		100.00	0.050000			
53002KA	GOAT-KIDNEY	00 NOT SPECIFIED (NO CONSUMPTION)		M 0.050000	0.050000		100.00	0.050000			
53002LA	GOAT-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)		M 0.050000	0.050000		100.00	0.050000			
53002HA	GOAT-LEAN	23 COOKED-FRESH-BOILED		M 0.050000	0.050000		100.00	0.050000			
53002HA	GOAT-LEAN	25 COOKED-FRESH-FRIED		M 0.050000	0.050000		100.00	0.050000			
53003AA	HORSE	00 NOT SPECIFIED (NO CONSUMPTION)		M 0.050000	0.050000		100.00	0.050000			
53005BA	SHEEP-MEAT BYP	21 COOKED-NFS		M 0.050000	0.050000		100.00	0.050000			

Table 1 (CON'T.)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 159

DATE: 12/21/87

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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)			
	Captan	Reproduction- rat		Decreased pup body wts.	PADI 1000	Chronic feeding- dog		TOX complete 3/07/86.			
	Caswell #159	NOEL= 12.5000 mg/kg		ADI based on results of	OPP Rfd= 0.013000			ORD verified 3/26/86.			
	CAS No. 133-06-2	250.00 ppm		1-gen. and 3-gen. repro-	EPA Rfd= 0.013000			WHO last reviewed 1984.			
	A.I. CODE: 081301	LEL= 25.0000 mg/kg		duction studies. Evi-	WHO Rfd 0.100000						
	CFR No. 180.103	500.00 ppm		dence of oncogenicity in	Type: ADI						
		ONCO: Class B2 (TOX NOTE)		rats and mice.							
530058B	SHEEP-OTH ORGAN	21 COOKED-NFS		N 0.050000	0.050000		100.00	0.050000			
53005FA	SHEEP-FAT	21 COOKED-NFS		N 0.050000	0.050000		100.00	0.050000			
53005KA	SHEEP-KIDNEY	21 COOKED-NFS		N 0.050000	0.050000		100.00	0.050000			
53005LA	SHEEP-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)		N 0.050000	0.050000		100.00	0.050000			
53005NA	SHEEP-LEAN	21 COOKED-NFS		N 0.050000	0.050000		100.00	0.050000			
53005HA	SHEEP-LEAN	31 COOKED-FRESH OR CANNED		N 0.050000	0.050000		100.00	0.050000			
530068A	PORK-MEAT BYP	21 COOKED-NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
530068B	PORK-OTH ORGAN	21 COOKED-NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
530068B	PORK-OTH ORGAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53006FA	PORK-FAT	10 RAW-FRESH OR NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
53006FA	PORK-FAT	21 COOKED-NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
53006FA	PORK-FAT	23 COOKED-FRESH-BOILED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53006FA	PORK-FAT	25 COOKED-FRESH-FRIED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53006FA	PORK-FAT	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53006KA	PORK-KIDNEY	21 COOKED-NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
53006LA	PORK-LIVER	21 COOKED-NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
53006LA	PORK-LIVER	25 COOKED-FRESH-FRIED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53006HA	PORK-LEAN	21 COOKED-NFS	3E13671	P 0.050000	0.050000		100.00	0.050000			
53006HA	PORK-LEAN	25 COOKED-FRESH-FRIED	3E13671	P 0.050000	0.050000		100.00	0.050000			
53006HA	PORK-LEAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	3E13671	P 0.050000	0.050000		100.00	0.050000			

Table 2

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 12/21/87

PAGE: 1

CHEMICAL INFORMATION		STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS
Captain Caswell #159 CAS No. 133-06-2 A.I. CODE: 081301 CFR No. 180.103	Reproduction- rat	12.5000	Decreased pup body wts. ADI based on results of 1-gen. and 3-gen. repro- duction studies. Evi- dence of oncogenicity in rats and mice.	PADI	1000	Chronic feeding- dog	TOX complete 3/07/86. WHO verified 3/26/86. WHO last reviewed 1984.	
	MOEL=	250.00		OPP Rfd= 0.013000				
	LEL=	25.0000		EPA Rfd= 0.013000				
	500.00	ppm		WHO Rfd 0.100000				
ONCO: Class B2 (TOX NOTE)			Type: ADI					
TOTAL THRC (MG/KG BODY WEIGHT/DAY)								
CURRENT THRC*			NEW THRC**	NEW THRC AS PERCENT OF RFD	DIFFERENCE AS PERCENT OF RFD	EFFECT OF ANTICIPATED RESIDUES ARC (MG/KG/DAY)		XRFD
POPULATION SUBGROUP								
U.S. POPULATION - 48 STATES			0.216616	0.217674	1674.416431	8.136238	0.001728	13.295338
U.S. POPULATION - SPRING SEASON			0.211278	0.212259	1632.765046	7.547900	0.001742	13.402454
U.S. POPULATION - SUMMER SEASON			0.226254	0.227293	1748.406292	7.991469	0.001885	14.501754
U.S. POPULATION - FALL SEASON			0.213984	0.215093	1654.557738	8.524008	0.001662	12.781777
U.S. POPULATION - WINTER SEASON			0.214903	0.216006	1661.581562	8.483677	0.001625	12.498469
NORTHEAST REGION			0.245498	0.246602	1896.936031	8.487685	0.001830	14.079654
NORTH CENTRAL REGION			0.217214	0.218318	1679.369662	8.489346	0.001774	13.646269
SOUTHERN REGION			0.178772	0.179681	1382.162454	6.993585	0.001422	10.940508
WESTERN REGION			0.242321	0.243508	1873.139592	9.128962	0.002056	15.813162
HISPANICS			0.250070	0.251418	1933.981185	10.362462	0.002076	15.969592
NON-HISPANIC WHITES			0.219972	0.221029	1700.224546	8.136000	0.001763	13.560300
NON-HISPANIC BLACKS			0.176882	0.177790	1367.614308	6.983815	0.001327	10.208462
NON-HISPANICS OTHER			0.234930	0.236106	1816.198938	9.043338	0.001860	14.304092
NURSING INFANTS (<1 YEAR OLD)			0.364577	0.365983	2815.254754	10.818431	0.002754	21.181385
NON-NURSING INFANTS (<1 YEAR OLD)			0.671452	0.678004	5215.412615	50.395977	0.009743	74.942900
FEMALES (13+ YEARS, PREGNANT)			0.172495	0.173247	1332.667385	5.782438	0.001322	10.172669
FEMALES 13+ YEARS, NURSING			0.199193	0.200182	1539.864654	7.609677	0.001590	12.227754
CHILDREN (1-6 YEARS OLD)			0.484941	0.488046	3754.201085	23.885208	0.004447	34.210862
CHILDREN (7-12 YEARS OLD)			0.303832	0.305725	2351.733762	14.567238	0.002717	20.900877
MALES (13-19 YEARS OLD)			0.183618	0.184786	1421.427800	8.984046	0.001634	12.566269
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)			0.172966	0.173852	1337.326031	6.816131	0.001351	10.395369
MALES (20 YEARS AND OLDER)			0.151835	0.152395	1172.265715	4.307085	0.001075	8.272192
FEMALES (20 YEARS AND OLDER)			0.170155	0.170656	1312.740538	3.854992	0.001066	8.197954

*Current THRC does not include new or pending tolerances.

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