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

JUL 5 1988

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Dietary Exposure Analysis of Maneb and Maneb Derived
Ethylenethiourea

FROM: J. Robert Tomerlin, Ph.D. *J.R. Tomerlin*
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and

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THRU: Karl Arne, Ph.D. *K. Arne*
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TO: Valerie M. Bael, EBDC Fungicide Review Manager
Special Review Branch
Registration Division (TS 767C)

and

Amy Rispin, Director, Science Integration Staff
Hazard Evaluation Division (TS 769C)

Action Requested

Provide TAS routine chronic dietary exposure analyses for maneb and maneb derived ethylenethiourea (ETU) and an oncogenic risk assessment for maneb derived ETU as part of the EBDC/ETU Special Review Process.

Discussion

1. Toxicology Endpoints: A routine chronic TAS analysis was conducted with a reference dose (PADI) of 0.005 mg/kg body weight/day, based upon a NOEL of 5.0 mg/kg body weight/day and a safety factor of 1000 from a 6 month monkey feeding study. This value has been approved (10/15/86) and later reassessed (9/28/87) by TOX Branch and verified by Agency (10/14/87) reference dose committees.

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and Maneb Derived ETU, page 2

A routine chronic TAS analysis was also conducted for mane b derived ETU using a reference dose (PADI) of 0.00008 mg/kg body weight/day, based upon an LEL (NOEL has not been established) of 0.25 mg/kg body weight/day and a safety factor of 3000 from a 2 year rat feeding study. This value was approved (9/26/88) and reassessed (10/30/87) by the TOX Branch reference dose committee. The value was originally verified (12/9/86) by the Agency reference dose committee; the Agency subsequently deferred a decision pending review of data from a monkey study (2/25/88).

Ethylenethiourea has been implicated in oncogenesis in rats and mice and has been categorized as a Class B2 oncogen (probable human carcinogen). An upper bound potency estimate (Q_1^*) of $0.14 \text{ (mg/kg/day)}^{-1}$ has been assigned to ETU (personal communication, J. Hauswirth).

2. Residue Values Used in the TAS Analyses: Maneb tolerances used in the analysis were the published tolerances from 40 CFR 180.110; no pending or new action tolerances were included in the analysis. Per cent crop treated (Pelletier and Ballard memo, 5/27/88) and anticipated residue (AR) data (Hummel memo, 6/30/88) were also used for the mane b analysis. A per cent crop treated value of 10 was used for all commodities for which the estimated per cent crop treated was less than 10 (personal communication, G. Ballard). Ten per cent of meat and milk were assumed to contain mane b residues, a figure extrapolated from residue data for animal feed commodities (Hummel memo, 6/30/88). Residue data were unavailable for some food commodities and residues from these commodities were extrapolated from similar crops having similar usage patterns. For example, mane b residues on collards were assumed to be the same as on spinach (Hummel memo, 6/30/88). A summary of the residue information used in the mane b analysis is attached as Table 1. NOTE: AR data were available for meat, milk, and poultry, for which tolerances have not been established.

Per cent crop treated (Pelletier and Ballard memo, 5/27/88) and AR data (Hummel memo, 6/30/88) were used to conduct the analysis for mane b derived ETU. A summary of the residue information used in the mane b derived ETU analysis is attached as Table 1a. NOTE: the tolerance values in Table 1a are for mane b and should be ignored. Tolerance values were included solely to allow the TAS AR analysis to execute properly.

3. Routine Chronic Analysis for Maneb: The TAS routine chronic analysis estimates the Theoretical Maximum Residue Contribution (TMRC) for the U.S. population and 22 population subgroups. The mane b TMRC, assuming mane b residues at tolerance levels and 100 per cent crop treated, for the U.S. population is 0.030265 mg/kg body weight/day, which represents 605% of the PADI. Non-nursing

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infants and children aged 1 to 6 had TMRCs of 0.1145 mg/kg body weight/day (2290% of the ADI) and 0.064401 mg/kg body weight/day (1288% of the ADI), respectively.

The analysis incorporating both AR and per cent crop treated data significantly reduced exposure to mane. The Anticipated Residue Contribution (ARC) for the U.S. population is 0.003652 mg/kg body weight/day, representing 73% of the PADI. The ARCs for non-nursing infants and children aged 1 to 6 were 0.015801 mg/kg body weight/day (316% of the ADI) and 0.006509 mg/kg body weight/day (130% of the ADI), respectively. The TMRC and ARC exposure summary for mane is attached as Table 2. The contribution of selected agricultural commodities to the total mane ARC for three population subgroups is shown in the table below.

Anticipated Residue Contributions of Selected Raw
Agricultural Commodities for Mane

	U.S. Population	Non-Nursing Infants	Children 1 to 6
Peaches	1.035544 ^a 20.7 ^b	10.016346 200.3	2.268672 45.4
Spinach	0.543267 10.9	2.304994 46.1	0.682781 13.7
Tomatoes	0.369370 7.4	0.167824 3.4	0.525871 10.5
Apples	0.348097 7.0	0.812710 16.3	0.961593 19.2
Lettuce	0.339591 6.8	0.015111 0.3	0.287229 5.7
Brassica Leafy Veggies	0.278880 5.6	0.163594 3.3	0.380194 7.6
Celery	0.237749 4.8	0.091467 1.8	0.311723 6.2
Root/Tuber Veggies	0.146938 2.9	0.743719 14.9	0.253349 5.1

Table Continued on Next Page

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and Maneb Derived ETU, page 4

Anticipated Residue Contribution ... Maneb, Continued

	U.S. Population	Non-Nursing Infants	Children 1 to 6
Apricots	0.086673 1.7	0.924857 18.5	0.256501 5.1
Milk	0.068470 1.4	0.424281 8.5	0.201115 4.0
Grapes	0.045690 ^a 0.9 ^b	0.028619 0.6	0.137249 2.7
Bulb Vegetables	0.032679 0.7	0.011851 0.2	0.053818 1.1
Cucurbits	0.024009 0.5	0.029514 0.6	0.034549 0.7
Red Meat	0.016668 0.3	0.015066 0.3	0.030917 0.6
Beans	0.011977 0.2	0.025931 0.5	0.020965 0.4
Poultry	0.006170 0.1	0.012776 0.3	0.012519 0.3
Eggs	0.004063 0.1	0.004230 0.1	0.009100 0.2
Other ^c	0.056206 1.1	0.009045 0.2	0.081593 1.6
Total	3.652041 73.0	15.801935 316.0	6.509738 130.2

^aARC in ug/kg body weight/day

^bARC expressed as per cent of the PADI

^cAlmonds, bananas, cranberries, eggplant, endive, figs,
nectarines, papaya, peppers, rhubarb, and sweet corn

4. Routine Chronic Analysis for Maneb Derived ETU: The Tas
routine chronic analysis for mane b derived ETU using ARs and per

Dietary Exposure Analysis for Maneb
and Maneb Derived ETU, page 5

cent crop treated calculated an ARC for the U.S. population of 0.000462 mg/kg body weight/day (578% of the PADI). The two most highly exposed population subgroups, non-nursing infants and children aged 1 to 6, had ARCs of 0.001845 mg/kg body weight/day (2306% of the ADI) and 0.000903 mg/kg body weight/day (1130% of the PADI), respectively. The ARC summary for mane b derived ETU is attached as Table 2a.

Oncogenic risk attributable to mane b derived ETU was calculated only for the overall U.S. population, in accordance with HED policy. Risk was estimated according to the relationship:

$$\text{Risk} = \text{Exposure} \times Q_1^*$$

where Exposure is the ARC. The ARCs of selected commodities and commodity groups with their associated oncogenic risk is shown in the table below.

Anticipated Residue Contribution of Selected Raw Agricultural Commodities and Associated Oncogenic Risk for Maneb Derived ETU

	U. S. Population	Non-Nursing Infants	Children 1 to 6	Oncogenic ^a Risk
Spinach	0.093926 ^b 117.4 ^c	0.464214 580.3	0.116723 145.9	1.3 X 10 ⁻⁵
Grapes	0.093348 116.7	0.109382 136.7	0.210641 263.3	1.3 X 10 ⁻⁵
Brassica Leafy Veggies	0.056283 70.4	0.034020 42.5	0.077438 96.8	7.9 X 10 ⁻⁶
Milk	0.052670 65.8	0.326369 408.0	0.154704 193.4	7.4 X 10 ⁻⁶
Root/Tuber Veggies.	0.037753 47.2	0.201936 252.4	0.068624 85.8	5.3 X 10 ⁻⁶
Peaches	0.033656 42.1	0.349300 436.6	0.074016 92.5	4.7 X 10 ⁻⁶

Table Continued on Next Page

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and Maneb Derived ETU, page 6

Anticipated Residue Contribution ... Maneb Derived ETU, Continued

	U. S. Population	Non-Nursing Infants	Children 1 to 6	Oncogenic ^a Risk
Apples	0.017536 21.9	0.177105 221.4	0.060081 75.1	2.5 X 10 ⁻⁶
Beans	0.016504 20.6	0.036370 45.5	0.028916 36.1	2.3 X 10 ⁻⁶
Celery	0.012330 15.4	0.016297 20.4	0.018588 23.2	1.7 X 10 ⁻⁶
Apricots	0.009311 11.6	0.099756 124.7	0.027515 34.4	1.3 X 10 ⁻⁶
Bulb Vegetables	0.008596 10.7	0.003779 4.7	0.015845 19.8	1.2 X 10 ⁻⁶
Lettuce	0.007275 ^b 9.1 ^c	0.000669 0.8	0.007830 9.8	1.0 X 10 ⁻⁶
Poultry	0.004552 5.7	0.009471 11.8	0.009274 11.6	6.4 X 10 ⁻⁷
Red Meat	0.004302 5.4	0.004592 5.7	0.007888 9.9	6.0 X 10 ⁻⁷
Tomatoes	0.004256 5.3	0.003282 4.1	0.008415 10.5	6.0 X 10 ⁻⁷
Eggs	0.003484 4.4	0.003626 4.5	0.007799 9.7	4.9 X 10 ⁻⁷
Cucurbits	0.000970 1.2	0.001841 2.3	0.001311 1.6	1.4 X 10 ⁻⁷
Other ^d	0.005317 6.6	0.003148 3.9	0.008029 10.0	7.4 X 10 ⁻⁷
Total	0.462069 577.6	1.845157 2306.4	0.903637 1129.5	6.5 X 10 ⁻⁵

^aOncogenic risk is estimated for the U.S. population only, in accordance with HED policy

^bARC in ug/kg body weight/day

^cARC expressed as per cent of the PADI

^dAlmonds, bananas, cranberries, eggplant, endive, figs, nectarines, papaya, peppers, rhubarb, and sweet corn

5. Several factors must be considered when interpreting this TAS analysis. A NOEL has not been established for mane b derived ETU. A relatively high safety factor has been applied to an LEL to arrive at a PADI. Consequently, the PADI used as the standard to which the mane b derived ETU exposure figures are compared may change if additional toxicology data are received.

Note that eleven food commodities or commodity groups have estimated oncogenic risks exceeding 1×10^{-6} . Therefore, oncogenic risk is distributed over a range of foods for which anticipated residues adjusted for per cent crop treated were taken into consideration. Of these, grapes, root and tuber vegetables, peaches, apples, celery, apricots, and bulb vegetables had estimated per cent crop treated less than 10, which was considered to be 10 in these analyses.

Exposure to mane b derived ETU was relatively high for milk, which contributed 11 per cent of the total ARC and consequently 11 per cent of the total oncogenic risk. Ten per cent of the milk was assumed to contain mane b derived ETU residues. This figure was derived from the per cent of apples treated with mane b.

Finally, the analyses were conducted assuming that mane b and mane b derived ETU residues were uniformly present in the food commodities at levels defined as the product of the anticipated residue and the per cent crop treated.

Attachments

cc: J. R. Tomerlin (RCB), S. Hummel (RCB), TAS File, Maneb SF, ETU SF, TOX, Circulation (7), RF

Table 1

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 539

DATE: 06/28/88

PAGE: 1

CHEMICAL		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
Maneb	Caswell #539	6mo feeding- monkey	Increased thyroid weight, inhibition of I-131 up-take at 3000 ppm.	PADI SF --> 1000	Chronic feeding- dog	TOX complete 10/15/86.					
	CAS No. 12427-38-2	NOEL= 5.0000 mg/kg		OPP RFD= 0.005000 <td>Chronic feeding- rat</td> <td>TOX reassess 9/28/87.</td>	Chronic feeding- rat	TOX reassess 9/28/87.					
	A.I. CODE: 014505	LEL= 15.0000 mg/kg		EPA RFD= 0.005000 <td>Reproduction</td> <td>EPA verified 10/14/87</td>	Reproduction	EPA verified 10/14/87					
	CFR No. 180.110	300.00 ppm	No adequate oncogenicity data available (see ETU).		Teratology- 2 species						
	ONCO: Undetermined.					WHO last reviewed 1980; see Mancozeb.					
FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)			
01010AA	CRANBERRIES	10 RAW-FRESH OR NFS	21	P 7.000000	0.400000		10.00	0.040000			
01010AA	CRANBERRIES	21 COOKED-NFS	21	P 7.000000	0.400000		10.00	0.040000			
01010AA	CRANBERRIES	31 COOKED-FRESH OR CANNED	21	P 7.000000	0.400000		10.00	0.040000			
01010JA	CRANBERRY-JUICE	15 RAW-FRESH OR CANNED	21	P 7.000000	0.400000		10.00	0.040000			
01010JA	CRANBERRY-JUICE	31 COOKED-FRESH OR CANNED	21	P 7.000000	0.400000		10.00	0.040000			
01014AA	GRAPES-FRESH	10 RAW-FRESH OR NFS	21	P 7.000000	7.600000		10.00	0.760000			
01014AA	GRAPES-FRESH	21 COOKED-NFS	21	P 7.000000	7.600000		10.00	0.760000			
01014AA	GRAPES-FRESH	31 COOKED-FRESH OR CANNED	21	P 7.000000	7.600000		10.00	0.760000			
01014DA	GRAPES-RAISINS	10 RAW-FRESH OR NFS	21	P 7.000000	3.100000C		10.00	0.310000			
01014DA	GRAPES-RAISINS	21 COOKED-NFS	21	P 7.000000	3.100000C		10.00	0.310000			
01014DA	GRAPES-RAISINS	22 COOKED-FRESH-BAKED	21	P 7.000000	3.100000C		10.00	0.310000			
01014JA	GRAPES-JUICE	10 RAW-FRESH OR NFS	21	P 7.000000	0.410000C		10.00	0.041000			
01014JA	GRAPES-JUICE	15 RAW-FRESH OR CANNED	21	P 7.000000	0.410000C		10.00	0.041000			
01014JA	GRAPES-JUICE	21 COOKED-NFS	21	P 7.000000	0.410000C		10.00	0.041000			
03001AA	ALMONDS	10 RAW-FRESH OR NFS	21	P 0.100000	0.440000		10.00	0.044000			
03001AA	ALMONDS	21 COOKED-NFS	21	P 0.100000	0.440000		10.00	0.044000			
03001AA	ALMONDS	22 COOKED-FRESH-BAKED	21	P 0.100000	0.440000		10.00	0.044000			
04001AA	APPLES-FRESH	10 RAW-FRESH OR NFS	2E1266	P 7.000000	9.400000		10.00	0.940000			
04001AA	APPLES-FRESH	21 COOKED-NFS	2E1266	P 7.000000	9.400000		10.00	0.940000			
04001AA	APPLES-FRESH	31 COOKED-FRESH OR CANNED	2E1266	P 7.000000	1.200000		10.00	0.120000			
04001AA	APPLES-FRESH	62 COOKED-FRESH OR FROZEN-BAKED	2E1266	P 7.000000	9.400000		10.00	0.940000			
04001DA	APPLES-DRIED	10 RAW-FRESH OR NFS	2E1266	P 7.000000	9.400000		10.00	0.940000			
04001DA	APPLES-DRIED	22 COOKED-FRESH-BAKED	2E1266	P 7.000000	9.400000		10.00	0.940000			
04001DA	APPLES-DRIED	62 COOKED-FRESH OR FROZEN-BAKED	2E1266	P 7.000000	9.400000		10.00	0.940000			
04001JA	APPLES-JUICE	15 RAW-FRESH OR CANNED	2E1266	P 7.000000	0.670000C		10.00	0.067000			
04001JA	APPLES-JUICE	31 COOKED-FRESH OR CANNED	2E1266	P 7.000000	0.670000C		10.00	0.067000			
05001AA	APRICOTS-FRESH	10 RAW-FRESH OR NFS	156	P 10.000000	24.000000		10.00	2.400000			
05001AA	APRICOTS-FRESH	21 COOKED-NFS	156	P 10.000000	24.000000		10.00	2.400000			
05001AA	APRICOTS-FRESH	31 COOKED-FRESH OR CANNED	156	P 10.000000	24.000000		10.00	2.400000			
05001DA	APRICOTS-DRIED	10 RAW-FRESH OR NFS	156	P 10.000000	24.000000		10.00	2.400000			
05001DA	APRICOTS-DRIED	22 COOKED-FRESH-BAKED	156	P 10.000000	24.000000		10.00	2.400000			
05003AA	NECTARINES	10 RAW-FRESH OR NFS	156	P 10.000000	15.000000		10.00	1.500000			
05004AA	PEACHES-FRESH	10 RAW-FRESH OR NFS	156	P 10.000000	48.000000		10.00	4.800000			
05004AA	PEACHES-FRESH	21 COOKED-NFS	156	P 10.000000	48.000000		10.00	4.800000			
05004AA	PEACHES-FRESH	31 COOKED-FRESH OR CANNED	156	P 10.000000	48.000000		10.00	4.800000			
05004AA	PEACHES-FRESH	51 COOKED-CANNED	156	P 10.000000	48.000000		10.00	4.800000			
05004DA	PEACHES-DRIED	10 RAW-FRESH OR NFS	156	P 10.000000	48.000000		10.00	4.800000			
05004DA	PEACHES-DRIED	21 COOKED-NFS	156	P 10.000000	48.000000		10.00	4.800000			
06002AA	BANANAS-UNSPEC	22 COOKED-FRESH-BAKED	2F1257	P 0.500000	0.050000		10.00	0.005000			
06002AB	BANANAS-FRESH	10 RAW-FRESH OR NFS	2F1257	P 0.500000	0.050000		10.00	0.005000			

Table 1 (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 539														DATE: 06/28/88	PAGE: 2
CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS	FOOD CODE	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)	
			IPADI	SF -->											
Maneb	6mo feeding- monkey	Increased thyroid weight, inhibition of I-131 up-take at 3000 ppm.	1000	1000	Chronic feeding- dog	TOX complete 10/15/86.									
Caswell #539	NOEL= 5.0000 mg/kg				Chronic feeding- rat	TOX reassess 9/28/87.									
CAS No. 12427-38-2	100.00 ppm				Reproduction	EPA verified 10/14/87									
A.I. CODE: 014505	LEL= 15.0000 mg/kg				Teratology- 2 species										
CFR No. 180.110	300.00 ppm	No adequate oncogenicity data available (see ETU).				WHO last reviewed 1980; see Mancozeb.									
	ONCO: Undetermined.														
06002AB	21 COOKED-NFS	2F1257	P 0.500000										10.00	0.005000	
06002AB	31 COOKED-FRESH OR CANNED	2F1257	P 0.500000										10.00	0.005000	
06002DA	10 RAW-FRESH OR NFS	2F1257	P 0.500000										10.00	0.005000	
06002DA	21 COOKED-NFS	2F1257	P 0.500000										10.00	0.005000	
06005AA	10 RAW-FRESH OR NFS	21	P 7.000000										10.00	0.095000	
06005AA	21 COOKED-NFS	21	P 7.000000										10.00	0.095000	
06005AA	22 COOKED-FRESH-BAKED	21	P 7.000000										10.00	0.095000	
06010AA	00 NOT SPECIFIED (NO CONSUMPTION)	6F0485	P 10.000000										10.00	0.280000	
06010AB	10 RAW-FRESH OR NFS	6F0485	P 10.000000										10.00	0.280000	
06010AB	51 COOKED-CANNED	6F0485	P 10.000000										10.00	0.280000	
06010DA	10 RAW-FRESH OR NFS	6F0485	P 10.000000										10.00	0.280000	
06010JA	10 RAW-FRESH OR NFS	6F0485	P 10.000000										10.00	0.280000	
06016AA	21 COOKED-NFS	2F1257	P 0.500000										10.00	0.005000	
06016AA	23 COOKED-FRESH-BOILED	2F1257	P 0.500000										10.00	0.005000	
06016AA	25 COOKED-FRESH-FRIED	2F1257	P 0.500000										10.00	0.005000	
08048DA	00 NOT SPECIFIED (NO CONSUMPTION)	21	P 7.000000										10.00	0.500000	
10002AA	00 NOT SPECIFIED (NO CONSUMPTION)	2F1256	P 4.000000										10.00	0.110000	
10002AB	10 RAW-FRESH OR NFS	2F1256	P 4.000000										10.00	0.110000	
10002AB	21 COOKED-NFS	2F1256	P 4.000000										10.00	0.110000	
10003AA	10 RAW-FRESH OR NFS	2F1256	P 4.000000										10.00	0.110000	
10004AA	00 NOT SPECIFIED (NO CONSUMPTION)	2F1256	P 4.000000										10.00	0.110000	
10005AA	10 RAW-FRESH OR NFS	2F1256	P 4.000000										10.00	0.110000	
10007AA	00 NOT SPECIFIED (NO CONSUMPTION)	2F1256	P 4.000000										10.00	0.110000	
10008AA	10 RAW-FRESH OR NFS	2F1256	P 4.000000										10.00	0.110000	
10008AA	21 COOKED-NFS	2F1256	P 4.000000										10.00	0.110000	
10010AA	10 RAW-FRESH OR NFS	2F1256	P 4.000000										10.00	0.110000	
10010AA	11 RAW-FRESH-PICKLED, CORNED, OR CURED	2F1256	P 4.000000										10.00	0.053000	
10010AA	21 COOKED-NFS	2F1256	P 4.000000										10.00	0.053000	
10011AA	21 COOKED-NFS	329	P 7.000000										10.00	0.110000	
10011AA	22 COOKED-FRESH-BAKED	329	P 7.000000										10.00	0.110000	
10011AA	62 COOKED-FRESH OR FROZEN-BAKED	329	P 7.000000										10.00	0.110000	
10013AA	10 RAW-FRESH OR NFS	2F1256	P 4.000000										10.00	0.067000	
10013AA	21 COOKED-NFS	2F1256	P 4.000000										10.00	0.067000	
10014AA	10 RAW-FRESH OR NFS	2F1256	P 4.000000										10.00	0.067000	
10014AA	21 COOKED-NFS	2F1256	P 4.000000										10.00	0.067000	
10014AA	31 COOKED-FRESH OR CANNED	2F1256	P 4.000000										10.00	0.067000	
10017AA	21 COOKED-NFS	2F1256	P 4.000000										10.00	0.067000	
10020AA	00 NOT SPECIFIED (NO CONSUMPTION)	2F1256	P 4.000000										10.00	0.067000	
11001AA	10 RAW-FRESH OR NFS	21	P 7.000000										10.00	0.430000	
11001AA	21 COOKED-NFS	21	P 7.000000										10.00	0.140000	

Table 1 (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 539										DATE: 06/28/88	PAGE: 3
FOOD CODE	FOOD	STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
		CHEMICAL	6mo feeding- monkey	NOEL=	Increased thyroid weight, inhibition of 1-131 up-take at 3000 ppm.	PADI	SF -->	Chronic feeding- dog	Chronic feeding- rat	TOX complete 10/15/86.	TOX reassess 9/28/87.
		Caswell #539	5.0000 mg/kg	100.00 ppm		OPP RfD=	0.005000			EPA verified 10/14/87	
		CAS No. 12427-38-2	15.0000 mg/kg	300.00 ppm	No adequate oncogenicity data available (see ETU).	EPA RfD=	0.005000	Reproduction	Teratology- 2 species		
		A.I. CODE: 014505								WHO last reviewed 1980; see Mancozeb.	
		CFR No. 180.110									
FOOD CODE	FOOD	TOLERANCE		PET.#	ANTICIPATED		AR TYPE	RES. VALUE USED		% CROP TREATED	IN TAS RUN (ppm)
		FOOD FORM	(ppm)		RESIDUE (ppm)						
11001AA	EGGPLANT	25 COOKED-FRESH-FRIED	21	P 7.000000	1.400000			10.00		10.00	0.140000
11003AA	PEPPERS, SWEET	10 RAW-FRESH OR NFS	21	P 7.000000	5.000000			10.00		10.00	0.500000
11003AA	PEPPERS, SWEET	21 COOKED-NFS	21	P 7.000000	5.000000			10.00		10.00	0.500000
11003AB	CHILI PEPPERS	00 NOT SPECIFIED (NO CONSUMPTION)	21	P 7.000000	5.000000			10.00		10.00	0.500000
11003AB	PEPPERS-OTHER	10 RAW-FRESH OR NFS	21	P 7.000000	5.000000			10.00		10.00	0.500000
11003AD	PEPPERS-OTHER	21 COOKED-NFS	21	P 7.000000	5.000000			10.00		10.00	0.500000
11003AD	PEPPERS-OTHER	51 COOKED-CANNED	21	P 7.000000	5.000000			10.00		10.00	0.500000
11004AA	PIMIENTOS	10 RAW-FRESH OR NFS	21	P 7.000000	5.000000			10.00		10.00	0.500000
11004AA	PIMIENTOS	21 COOKED-NFS	21	P 7.000000	5.000000			10.00		10.00	0.500000
11004AA	PIMIENTOS	31 COOKED-FRESH OR CANNED	21	P 7.000000	5.000000			10.00		10.00	0.500000
11005AA	TOMATOES-WHOLE	10 RAW-FRESH OR NFS	2F1256	P 4.000000	4.300000			20.00		20.00	0.860000
11005AA	TOMATOES-WHOLE	21 COOKED-NFS	2F1256	P 4.000000	1.400000C			20.00		20.00	0.280000
11005AA	TOMATOES-WHOLE	31 COOKED-FRESH OR CANNED	2F1256	P 4.000000	1.400000C			20.00		20.00	0.280000
11005JA	TOMATOES-JUICE	10 RAW-FRESH OR NFS	2F1256	P 4.000000	1.400000C			20.00		20.00	0.280000
11005JA	TOMATOES-JUICE	21 COOKED-NFS	2F1256	P 4.000000	1.400000C			20.00		20.00	0.280000
11005RA	TOMATOES-PUREE	10 RAW-FRESH OR NFS	2F1256	P 4.000000	1.400000C			20.00		20.00	0.280000
11005RA	TOMATOES-PUREE	21 COOKED-NFS	2F1256	P 4.000000	1.400000C			20.00		20.00	0.280000
11005RA	TOMATOES-PUREE	31 COOKED-FRESH OR CANNED	2F1256	P 4.000000	1.400000C			20.00		20.00	0.280000
11005RA	TOMATOES-PUREE	32 COOKED-FRESH OR CANNED-BAKED	2F1256	P 4.000000	1.400000C			20.00		20.00	0.280000
11005RA	TOMATOES-PUREE	51 COOKED-CANNED	2F1256	P 4.000000	1.400000C			20.00		20.00	0.280000
11005TA	TOMATOES-PASTE	21 COOKED-NFS	2F1256	P 4.000000	1.400000C			20.00		20.00	0.280000
11005TA	TOMATOES-PASTE	22 COOKED-FRESH-BAKED	2F1256	P 4.000000	1.400000C			20.00		20.00	0.280000
11005TA	TOMATOES-PASTE	31 COOKED-FRESH OR CANNED	2F1256	P 4.000000	1.400000C			20.00		20.00	0.280000
11005UA	TOMATOES-CATSUP	21 COOKED-NFS	2F1256	P 4.000000	1.400000C			20.00		20.00	0.280000
13002AA	CELERY	10 RAW-FRESH OR NFS	2F1256	P 5.000000	39.000000			10.00		10.00	3.900000
13002AA	CELERY	21 COOKED-NFS	2F1256	P 5.000000	12.000000			25.00		25.00	3.000000
13005AA	BROCCOLI	21 COOKED-NFS	183	P 10.000000	12.000000			25.00		25.00	3.000000
13005AA	BROCCOLI	31 COOKED-FRESH OR CANNED	183	P 10.000000	12.000000			25.00		25.00	3.000000
13005AA	BROCCOLI	63 COOKED-FRESH OR FROZEN-BOILED	183	P 10.000000	12.000000			25.00		25.00	3.000000
13006AA	BRUSSEL SPROUTS	21 COOKED-NFS	183	P 10.000000	12.000000			25.00		25.00	3.000000
13006AA	BRUSSEL SPROUTS	23 COOKED-FRESH-BOILED	183	P 10.000000	12.000000			25.00		25.00	3.000000
13007AA	CABBAGE	10 RAW-FRESH OR NFS	156	P 10.000000	0.510000			25.00		25.00	0.127500
13007AA	CABBAGE	11 RAW-FRESH-PICKLED, CORNED, OR CURED	156	P 10.000000	0.510000			25.00		25.00	0.127500
13007AA	CABBAGE	21 COOKED-NFS	156	P 10.000000	0.510000			25.00		25.00	0.127500
13008AA	CAULIFLOWER	10 RAW-FRESH OR NFS	183	P 10.000000	0.510000			25.00		25.00	0.127500
13008AA	CAULIFLOWER	21 COOKED-NFS	183	P 10.000000	0.510000			25.00		25.00	0.127500
13009AA	COLLARDS	51 COOKED-CANNED	156	P 10.000000	26.000000			10.00		10.00	2.600000
13009AA	COLLARDS	63 COOKED-FRESH OR FROZEN-BOILED	156	P 10.000000	26.000000			25.00		25.00	0.127500
13010AA	CABBAGE-CHINESE	10 RAW-FRESH OR NFS	156	P 10.000000	0.510000			25.00		25.00	0.127500
13010AA	CABBAGE-CHINESE	21 COOKED-NFS	156	P 10.000000	0.510000			25.00		25.00	0.127500

Table 1 (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 539

PAGE: 4

DATE: 06/28/88

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Maneb	6mo feeding- monkey	Increased thyroid weight, inhibition of I-131 up-take at 3000 ppm.	PADI SF --> 1000	Chronic feeding- dog	TOX complete 10/15/86.
Caswell #539	NOEL= 5.0000 mg/kg		OPP RfD= 0.005000	Chronic feeding- rat	TOX reassess 9/28/87.
CAS No. 12427-38-2	100.00 ppm		EPA RfD= 0.005000	Reproduction	EPA verified 10/14/87
A.I. CODE: 014505	LEL= 15.0000 mg/kg			Teratology- 2 species	
CFR No. 180.110	300.00 ppm	No adequate oncogenicity data available (see ETU).			WHO last reviewed 1980; see Mancozeb.
	ONCO: Undetermined.				

FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
13011AA	KALE	63 COOKED-FRESH OR FROZEN-BOILED	56	P 10.00000	13.000000		10.00	1.300000
13012AA	KOHLRABI	21 COOKED-NFS	183	P 10.00000	12.000000		10.00	1.200000
13013AA	LETTUCE-LEAFY	10 RAW-FRESH OR NFS	156	P 10.00000	14.000000		32.00	4.480000
13015AA	ENDIVE	10 RAW-FRESH OR NFS	156	P 10.00000	14.000000		10.00	1.400000
13015AA	ENDIVE	21 COOKED-NFS	156	P 10.00000	14.000000		10.00	1.400000
13016AA	FENNEL	00 NOT SPECIFIED (NO CONSUMPTION)	2F1256	P 5.000000	39.000000		10.00	3.900000
13020AA	LETTUCE-UNSPEC	10 RAW-FRESH OR NFS	156	P 10.00000	14.000000		32.00	4.480000
13021AA	MUSTARD GREENS	21 COOKED-NFS	156	P 10.00000	31.000000		10.00	3.100000
13021AA	MUSTARD GREENS	63 COOKED-FRESH OR FROZEN-BOILED	156	P 10.00000	31.000000		10.00	3.100000
13023AA	RHUBARB	10 RAW-FRESH OR NFS	225	P 10.00000	39.000000		10.00	3.900000
13023AA	RHUBARB	21 COOKED-NFS	225	P 10.00000	39.000000		10.00	3.900000
13023AA	RHUBARB	31 COOKED-FRESH OR CANNED	225	P 10.00000	39.000000		10.00	3.900000
13023AA	RHUBARB	62 COOKED-FRESH OR FROZEN-BAKED	225	P 10.00000	39.000000		10.00	3.900000
13024AA	SPINACH	10 RAW-FRESH OR NFS	156	P 10.00000	26.000000		48.00	12.480000
13024AA	SPINACH	21 COOKED-NFS	156	P 10.00000	26.000000		48.00	12.480000
13024AA	SPINACH	31 COOKED-FRESH OR CANNED	156	P 10.00000	26.000000		48.00	12.480000
13026AA	TURNIPS-TOPS	10 RAW-FRESH OR NFS	156	P 10.00000	29.000000		10.00	2.900000
13026AA	TURNIPS-TOPS	21 COOKED-NFS	156	P 10.00000	29.000000		10.00	2.900000
13026AA	TURNIPS-TOPS	31 COOKED-FRESH OR CANNED	156	P 10.00000	29.000000		10.00	2.900000
13045AA	LETTUCE-HEAD	10 RAW-FRESH OR NFS	156	P 10.00000	4.100000		32.00	1.312000
13045AA	LETTUCE-HEAD	21 COOKED-NFS	156	P 10.00000	4.100000		32.00	1.312000
14003AA	CARROTS	10 RAW-FRESH OR NFS	21	P 7.000000	5.000000		10.00	0.500000
14003AA	CARROTS	21 COOKED-NFS	21	P 7.000000	5.000000		10.00	0.500000
14003AA	CARROTS	23 COOKED-FRESH-BOILED	21	P 7.000000	5.000000		10.00	0.500000
14003AA	CARROTS	31 COOKED-FRESH OR CANNED	21	P 7.000000	5.000000		10.00	0.500000
14003AA	CARROTS	51 COOKED-CANNED	21	P 7.000000	5.000000		10.00	0.500000
14007AA	GARLIC	10 RAW-FRESH OR NFS	21	P 7.000000	2.900000		10.00	0.290000
14007AA	GARLIC	21 COOKED-NFS	21	P 7.000000	2.900000		10.00	0.290000
14007AA	GARLIC	32 COOKED-FRESH OR CANNED-BAKED	21	P 7.000000	2.900000		10.00	0.290000
14010AA	LEeks	31 COOKED-FRESH OR CANNED	21	P 7.000000	20.000000		10.00	2.000000
14011AA	ONIONS-DRY-BULB	10 RAW-FRESH OR NFS	21	P 7.000000	2.900000		10.00	0.290000
14011AA	ONIONS-DRY-BULB	21 COOKED-NFS	21	P 7.000000	2.900000		10.00	0.290000
14011AA	ONIONS-DRY-BULB	22 COOKED-FRESH-BAKED	21	P 7.000000	2.900000		10.00	0.290000
14011AA	ONIONS-DRY-BULB	31 COOKED-FRESH OR CANNED	21	P 7.000000	2.900000		10.00	0.290000
14011DA	ONIONS-DRIED	12 RAW-FRESH-DRIED	21	P 7.000000	2.900000		10.00	0.290000
14013AA	POTATO(MH)-WHOLE	10 RAW-FRESH OR NFS	21	P 0.100000	0.039000		10.00	0.039000
14013AA	POTATO(MH)-WHOLE	21 COOKED-NFS	21	P 0.100000	0.039000		10.00	0.039000
14013AA	POTATO(MH)-WHOLE	22 COOKED-FRESH-BAKED	21	P 0.100000	0.039000		10.00	0.039000
14013AB	POTATO(MH)-UNSP	22 COOKED-FRESH-BAKED	21	P 0.100000	0.039000		10.00	0.039000
14013AC	POTATO(MH)-PULP	21 COOKED-NFS	21	P 0.100000	0.039000		10.00	0.039000

Table 1 (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 539

PAGE: 5

DATE: 06/28/88

CHEMICAL	STUDY TYPE	EFFECTS	TOLERANCE (ppm)	PET. #	FOOD FORM	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)	STATUS
Maneb	6mo feeding- monkey	Increased thyroid weight, inhibition of I-131 up-take at 3000 ppm.	P 0.100000	21	22 COOKED-FRESH-BAKED	0.039000		10.00	0.003900	TOX complete 10/15/86.
Caswell #539	NOEL= 5.0000 mg/kg		P 0.100000	21	23 COOKED-FRESH-BOILED	0.039000		10.00	0.003900	TOX reassess 9/28/87.
CAS No. 12427-38-2	100.00 ppm		P 0.100000	21	25 COOKED-FRESH-FRIED	0.077000		10.00	0.007700	EPA verified 10/14/87
A.I. CODE: 014505	LEL= 15.0000 mg/kg		P 0.100000	21	10 RAW-FRESH OR NFS	0.077000C		10.00	0.007700	
CFR No. 180.110	300.00 ppm	No adequate oncogenicity data available (see ETU).	P 0.100000	21	31 COOKED-FRESH OR CANNED	0.077000C		10.00	0.007700	
	ONCO: Undetermined.		P 0.100000	21	22 COOKED-FRESH-BAKED	0.077000		10.00	0.007700	
			P 7.000000	21	00 NOT SPECIFIED (NO CONSUMPTION)	6.700000		10.00	0.670000	WHO last reviewed 1980; see Mancozeb.
			P 7.000000	156	10 RAW-FRESH OR NFS	6.800000		10.00	0.680000	
			P 7.000000	156	21 COOKED-NFS	6.800000		10.00	0.680000	
			P 7.000000	156	00 NOT SPECIFIED (NO CONSUMPTION)	0.180000		10.00	0.018000	
			P 7.000000	156	21 COOKED-NFS	0.180000		10.00	0.018000	
			P 7.000000	156	31 COOKED-FRESH OR CANNED	0.180000		10.00	0.018000	
			P 7.000000	156	21 COOKED-NFS	0.180000		60.00	0.180000	
			P 7.000000	156	21 COOKED-NFS	0.180000		10.00	0.018000	
			P 7.000000	156	31 COOKED-FRESH OR CANNED	0.180000		10.00	0.018000	
			P 7.000000	156	21 COOKED-NFS	0.180000		10.00	0.018000	
			P 7.000000	156	25 COOKED-FRESH-FRIED	0.180000		10.00	0.018000	
			P 7.000000	156	31 COOKED-FRESH OR CANNED	0.180000		10.00	0.018000	
			P 7.000000	156	21 COOKED-NFS	0.180000		10.00	0.018000	
			P 10.000000	156	10 RAW-FRESH OR NFS	3.100000		60.00	1.860000	
			P 10.000000	156	21 COOKED-NFS	0.220000		60.00	0.132000	
			P 10.000000	156	21 COOKED-NFS	0.220000		10.00	0.022000	
			P 10.000000	156	10 RAW-FRESH OR NFS	0.220000		10.00	0.022000	
			P 10.000000	156	21 COOKED-NFS	0.220000		10.00	0.022000	
			P 5.000000	2F1266	10 RAW-FRESH OR NFS	0.020000		12.00	0.002400	
			P 5.000000	2F1266	21 COOKED-NFS	0.020000		12.00	0.002400	
			P 5.000000	2F1266	31 COOKED-FRESH OR CANNED	0.020000		12.00	0.002400	
			P 7.000000	156	10 RAW-FRESH OR NFS	0.180000		10.00	0.018000	
			P 7.000000	156	21 COOKED-NFS	0.180000		10.00	0.018000	
			P 7.000000	156	00 NOT SPECIFIED (NO CONSUMPTION)	0.180000		10.00	0.018000	
			P 10.000000	156	00 NOT SPECIFIED (NO CONSUMPTION)	3.100000		10.00	0.310000	
			P 10.000000	156	21 COOKED-NFS	0.180000		10.00	0.018000	
			P 7.000000	156	21 COOKED-NFS	0.220000		10.00	0.022000	
			P 7.000000	156	00 NOT SPECIFIED (NO CONSUMPTION)	0.180000		10.00	0.018000	
			P 7.000000	156	21 COOKED-NFS	0.180000		10.00	0.018000	
			P 7.000000	156	00 NOT SPECIFIED (NO CONSUMPTION)	0.180000		10.00	0.018000	
			P 7.000000	156	21 COOKED-NFS	0.180000		10.00	0.018000	
			P 7.000000	156	31 COOKED-FRESH OR CANNED	0.180000		10.00	0.018000	
			P 7.000000	156	21 COOKED-NFS	0.180000		10.00	0.018000	
			P 7.000000	156	10 RAW-FRESH OR NFS	6.700000		10.00	0.670000	
			P 7.000000	21	10 RAW-FRESH OR NFS	6.700000		10.00	0.670000	

Table 1 (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 539 DATE: 06/28/88 PAGE: 6

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)			
16004AA	ONIONS-GREEN	21 COOKED-NFS	21	P 7.000000	6.700000		10.00	0.670000			
16004AA	ONIONS-GREEN	25 COOKED-FRESH-FRIED	21	P 7.000000	6.700000		10.00	0.670000			TOX complete 10/15/86.
25002SA	BET SUGAR	10 RAW-FRESH OR NFS		P 0.000000	0.200000		10.00	0.020000			TOX reassess 9/28/87.
25002SA	BET SUGAR	21 COOKED-NFS		P 0.000000	0.200000		10.00	0.020000			EPA verified 10/14/87
25002SA	BET SUGAR	22 COOKED-FRESH-BAKED		P 0.000000	0.200000		10.00	0.020000			
25002SA	BET SUGAR	31 COOKED-FRESH OR CANNED		P 0.000000	0.200000		10.00	0.020000			
26011AA	GUAR BEANS	00 NOT SPECIFIED (NO CONSUMPTION)	156	P 10.000000	0.180000		10.00	0.018000			
270010A	CASTOR BEANS	00 NOT SPECIFIED (NO CONSUMPTION)	156	P 10.000000	0.180000		10.00	0.018000			
43058AA	WINE AND SHERRY	10 RAW-FRESH OR NFS	21	P 7.000000	0.410000		10.00	0.041000			
43058AA	WINE AND SHERRY	21 COOKED-NFS	21	P 7.000000	0.410000		10.00	0.041000			
50000DB	MILK-NON-FAT SOL	10 RAW-FRESH OR NFS		P 0.000000	0.065000		10.00	0.006500			
50000DB	MILK-NON-FAT SOL	21 COOKED-NFS		P 0.000000	0.065000		10.00	0.006500			
50000DB	MILK-NON-FAT SOL	51 COOKED-CANNED		P 0.000000	0.065000		10.00	0.006500			
50000FA	MILK-FAT SOLIDS	10 RAW-FRESH OR NFS		P 0.000000	0.065000		10.00	0.006500			
50000FA	MILK-FAT SOLIDS	21 COOKED-NFS		P 0.000000	0.065000		10.00	0.006500			
50000FA	MILK-FAT SOLIDS	51 COOKED-CANNED		P 0.000000	0.065000		10.00	0.006500			
50000SA	MILK SUG (LACT)	21 COOKED-NFS		P 0.000000	0.065000		10.00	0.006500			
50000SA	MILK SUG (LACT)	51 COOKED-CANNED		P 0.000000	0.065000		10.00	0.006500			
53001BA	BEEF-MEAT BVP	21 COOKED-NFS		P 0.000000	0.180000		10.00	0.018000			
53001BA	BEEF-MEAT BVP	26 COOKED-FRESH-PICKLED, CORNED, OR CURED		P 0.000000	0.180000		10.00	0.018000			
53001BB	BEEF-OTH ORGAN	21 COOKED-NFS		P 0.000000	0.180000		10.00	0.018000			
53001BB	BEEF-OTH ORGAN	51 COOKED-CANNED		P 0.000000	0.180000		10.00	0.018000			
53001DA	BEEF-DRIED	21 COOKED-NFS		P 0.000000	0.060000		10.00	0.006000			
53001FA	BEEF-FAT	10 RAW-FRESH OR NFS		P 0.000000	0.100000		10.00	0.010000			
53001FA	BEEF-FAT	21 COOKED-NFS		P 0.000000	0.100000		10.00	0.010000			
53001FA	BEEF-FAT	22 COOKED-FRESH-BAKED		P 0.000000	0.100000		10.00	0.010000			
53001FA	BEEF-FAT	23 COOKED-FRESH-BOILED		P 0.000000	0.100000		10.00	0.010000			
53001FA	BEEF-FAT	24 COOKED-FRESH-BROILED		P 0.000000	0.100000		10.00	0.010000			
53001FA	BEEF-FAT	25 COOKED-FRESH-FRIED		P 0.000000	0.100000		10.00	0.010000			
53001KA	BEEF-KIDNEY	21 COOKED-NFS		P 0.000000	0.110000		10.00	0.011000			
53001LA	BEEF-LIVER	25 COOKED-FRESH-FRIED		P 0.000000	0.180000		10.00	0.018000			
53001LA	BEEF-LIVER	31 COOKED-FRESH OR CANNED		P 0.000000	0.180000		10.00	0.018000			
53001LA	BEEF-LEAN	10 RAW-FRESH OR NFS		P 0.000000	0.060000		10.00	0.006000			
53001NA	BEEF-LEAN	21 COOKED-NFS		P 0.000000	0.060000		10.00	0.006000			
53001NA	BEEF-LEAN	22 COOKED-FRESH-BAKED		P 0.000000	0.060000		10.00	0.006000			
53001NA	BEEF-LEAN	23 COOKED-FRESH-BOILED		P 0.000000	0.060000		10.00	0.006000			
53001NA	BEEF-LEAN	24 COOKED-FRESH-BROILED		P 0.000000	0.060000		10.00	0.006000			
53002BA	GOAT-MEAT BVP	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.000000	0.180000		10.00	0.018000			
53002BB	GOAT-OTH ORGAN	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.000000	0.180000		10.00	0.018000			
53002FA	GOAT-FAT	23 COOKED-FRESH-BOILED		P 0.000000	0.100000		10.00	0.010000			

Table 1 (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 539

DATE: 06/28/88

PAGE: 7

CHEMICAL			STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
Maneb	Caswell #539	CAS No. 12427-38-2	6mo feeding- monkey	NOEL=	Increased thyroid weight, inhibition of I-131 up-take at 3000 ppm.	OPP SF --> 10000	Chronic feeding- dog	Chronic feeding- rat	TOX complete 10/15/86.	TOX reassess 9/28/87.	EPA verified 10/14/87	
	A.I. CODE: 014505	LEI=	15.0000 mg/kg			EPA RfD= 0.005000	Reproduction	Teratology- 2 species				
	CFR No. 180.110	ONCO: Undetermined.	300.00 ppm		No adequate oncogenicity data available (see ETU).				WHO last reviewed 1980; see Mancozeb.			
FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)				
53002FA	GOAT-FAT	25 COOKED-FRESH-FRIED		P 0.000000	0.100000		10.00	0.010000				
53002KA	GOAT-KIDNEY	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.000000	0.110000		10.00	0.011000				
53002LA	GOAT-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.000000	0.180000		10.00	0.018000				
53002MA	GOAT-LEAN	23 COOKED-FRESH-BOILED		P 0.000000	0.060000		10.00	0.006000				
53002MA	GOAT-LEAN	25 COOKED-FRESH-FRIED		P 0.000000	0.060000		10.00	0.006000				
53003AA	HORSE	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.000000	0.180000		10.00	0.018000				
53005BA	SHEEP-MEAT BYP	21 COOKED-NFS		P 0.000000	0.180000		10.00	0.018000				
53005BB	SHEEP-OTH ORGAN	21 COOKED-NFS		P 0.000000	0.180000		10.00	0.018000				
53005FA	SHEEP-FAT	21 COOKED-NFS		P 0.000000	0.100000		10.00	0.010000				
53005KA	SHEEP-KIDNEY	21 COOKED-NFS		P 0.000000	0.110000		10.00	0.011000				
53005LA	SHEEP-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.000000	0.180000		10.00	0.018000				
53005MA	SHEEP-LEAN	21 COOKED-NFS		P 0.000000	0.060000		10.00	0.006000				
53005MA	SHEEP-LEAN	31 COOKED-FRESH OR CANNED		P 0.000000	0.060000		10.00	0.006000				
53006BA	PORK-MEAT BYP	21 COOKED-NFS		P 0.000000	0.180000		10.00	0.018000				
53006BB	PORK-OTH ORGAN	21 COOKED-NFS		P 0.000000	0.180000		10.00	0.018000				
53006BB	PORK-OTH ORGAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED		P 0.000000	0.180000		10.00	0.018000				
53006FA	PORK-FAT	10 RAW-FRESH OR NFS		P 0.000000	0.100000		10.00	0.010000				
53006FA	PORK-FAT	21 COOKED-NFS		P 0.000000	0.100000		10.00	0.010000				
53006FA	PORK-FAT	23 COOKED-FRESH-BOILED		P 0.000000	0.100000		10.00	0.010000				
53006FA	PORK-FAT	25 COOKED-FRESH-FRIED		P 0.000000	0.100000		10.00	0.010000				
53006FA	PORK-FAT	26 COOKED-FRESH-PICKLED, CORNED, OR CURED		P 0.000000	0.100000		10.00	0.010000				
53006KA	PORK-KIDNEY	21 COOKED-NFS		P 0.000000	0.110000		10.00	0.011000				
53006LA	PORK-LIVER	21 COOKED-NFS		P 0.000000	0.180000		10.00	0.018000				
53006LA	PORK-LIVER	25 COOKED-FRESH-FRIED		P 0.000000	0.180000		10.00	0.018000				
53006MA	PORK-LEAN	21 COOKED-NFS		P 0.000000	0.060000		10.00	0.006000				
53006MA	PORK-LEAN	25 COOKED-FRESH-FRIED		P 0.000000	0.060000		10.00	0.006000				
53006MA	PORK-LEAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED		P 0.000000	0.060000		10.00	0.006000				
53006MA	PORK-LEAN	21 COOKED-NFS		P 0.000000	0.060000		10.00	0.006000				
53006MA	PORK-LEAN	25 COOKED-FRESH-PICKLED, CORNED, OR CURED		P 0.000000	0.020000		100.00	0.020000				
53006MA	PORK-LEAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED		P 0.000000	0.020000		100.00	0.020000				
55008BA	TURKEY-BYP	21 COOKED-NFS		P 0.000000	0.020000		100.00	0.020000				
55008BA	TURKEY-BYP	26 COOKED-FRESH-PICKLED, CORNED, OR CURED		P 0.000000	0.020000		100.00	0.020000				
55008LA	TURKEY ORGAN	21 COOKED-NFS		P 0.000000	0.020000		100.00	0.020000				
55008LA	TURKEY ORGAN	25 COOKED-FRESH-FRIED		P 0.000000	0.012000		100.00	0.012000				
55008MA	TURKEY W/O SKIN	21 COOKED-NFS		P 0.000000	0.012000		100.00	0.012000				
55008MA	TURKEY W/O SKIN	31 COOKED-FRESH OR CANNED		P 0.000000	0.012000		100.00	0.012000				
55008MA	TURKEY W/O SKIN	62 COOKED-FRESH OR FROZEN-BAKED		P 0.000000	0.012000		100.00	0.012000				
55008MA	TURKEY+SKIN	21 COOKED-NFS		P 0.000000	0.012000		100.00	0.012000				
55008MA	TURKEY+SKIN	25 COOKED-FRESH-FRIED		P 0.000000	0.020000		100.00	0.020000				
55008MA	TURKEY+SKIN	21 COOKED-NFS		P 0.000000	0.020000		100.00	0.020000				
55008MA	TURKEY+SKIN	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.000000	0.020000		100.00	0.020000				
55013BA	POULTRY, OTH-BYP	25 COOKED-FRESH-FRIED		P 0.000000	0.020000		100.00	0.020000				
55013BA	POULTRY, ORGAN	21 COOKED-NFS		P 0.000000	0.020000		100.00	0.020000				
55013MA	POULTRY, OTHER	21 COOKED-NFS		P 0.000000	0.020000		100.00	0.020000				

Table 1 (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 539

DATE: 06/28/88

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CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Maneb	6mo feeding- monkey	Increased thyroid weight,	PADI SF --> 1000	Chronic feeding- dog	TOX complete 10/15/86.
Caswell #539	NOEL= 5.0000 mg/kg	inhibition of I-131 up-	OPP RfD= 0.005000	Chronic feeding- rat	TOX reassess 9/28/87.
CAS No. 12427-38-2	100.00 ppm	take at 3000 ppm.	EPA RfD= 0.005000	Reproduction	EPA verified 10/14/87
A.I. CODE: 014505	LEL= 15.0000 mg/kg	No adequate oncogenicity		Teratology- 2 species	
CFR No. 180.110	300.00 ppm	data available (see ETU).			WHO last reviewed 1980;
	ONCO: Undetermined.				see Mancozeb.

FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
55014AA	EGGS-WHOLE	10 RAW-FRESH OR NFS	P 0.000000		0.007000		100.00	0.007000
55014AA	EGGS-WHOLE	21 COOKED-NFS	P 0.000000		0.007000		100.00	0.007000
55014AA	EGGS-WHOLE	22 COOKED-FRESH-BAKED	P 0.000000		0.007000		100.00	0.007000
55014AA	EGGS-WHOLE	23 COOKED-FRESH-BOILED	P 0.000000		0.007000		100.00	0.007000
55014AA	EGGS-WHOLE	25 COOKED-FRESH-FRIED	P 0.000000		0.007000		100.00	0.007000
55014AB	EGGS-WHITE ONLY	10 RAW-FRESH OR NFS	P 0.000000		0.007000		100.00	0.007000
55014AB	EGGS-WHITE ONLY	21 COOKED-NFS	P 0.000000		0.007000		100.00	0.007000
55014AB	EGGS-WHITE ONLY	22 COOKED-FRESH-BAKED	P 0.000000		0.007000		100.00	0.007000
55014AB	EGGS-WHITE ONLY	62 COOKED-FRESH OR FROZEN-BAKED	P 0.000000		0.007000		100.00	0.007000
55014AB	EGGS-WHITE ONLY	81 COOKED-FROZEN	P 0.000000		0.007000		100.00	0.007000
55014AC	EGGS-YOLK ONLY	10 RAW-FRESH OR NFS	P 0.000000		0.007000		100.00	0.007000
55014AC	EGGS-YOLK ONLY	21 COOKED-NFS	P 0.000000		0.007000		100.00	0.007000
55014AC	EGGS-YOLK ONLY	25 COOKED-FRESH-FRIED	P 0.000000		0.007000		100.00	0.007000
55014AC	EGGS-YOLK ONLY	31 COOKED-FRESH OR CANNED	P 0.000000		0.007000		100.00	0.007000
55015BA	CHICKEN-BYP	00 NOT SPECIFIED (NO CONSUMPTION)	P 0.000000		0.020000		100.00	0.020000
55015LA	CHICKEN-ORGAN	21 COOKED-NFS	P 0.000000		0.020000		100.00	0.020000
55015LA	CHICKEN-ORGAN	25 COOKED-FRESH-FRIED	P 0.000000		0.020000		100.00	0.020000
55015LA	CHICKEN-ORGAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	P 0.000000		0.020000		100.00	0.020000
55015MA	CHICKEN-W/O SKIN	21 COOKED-NFS	P 0.000000		0.012000		100.00	0.012000
55015MA	CHICKEN-W/O SKIN	22 COOKED-FRESH-BAKED	P 0.000000		0.012000		100.00	0.012000
55015MA	CHICKEN-W/O SKIN	25 COOKED-FRESH-FRIED	P 0.000000		0.012000		100.00	0.012000
55015MA	CHICKEN-W/O SKIN	31 COOKED-FRESH OR CANNED	P 0.000000		0.012000		100.00	0.012000
55015MA	CHICKEN-W/O SKIN	53 COOKED-CANNED-BOILED	P 0.000000		0.012000		100.00	0.012000
55015MB	CHICKEN+SKIN	21 COOKED-NFS	P 0.000000		0.012000		100.00	0.012000
55015MB	CHICKEN+SKIN	25 COOKED-FRESH-FRIED	P 0.000000		0.012000		100.00	0.012000

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DATE: 06/29/88

SWELL NUMBER 443AA

ANTICIPATED RESIDUE

CHEMICAL		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
ETU from Maneb		2yr feeding- rat		Increased incidence of		IPADI	SF --33000	Reproduction		TOX complete 9/26/86.	
Caswell #443AA		NOEL= 0.0000 mg/kg		thyroid hyperplasia.		OPP RfD= 0.000080		Chronic feeding- dog		EPA verified 12/09/86.	
CAS No. 96-45-7		0.00 ppm		Evidence of oncogenicity		EPA RfD= 0.000030		UF 3000 for data gaps,		TOX reassess 10/30/87.	
A.I. CODE:		LEL= 0.2500 mg/kg		in rats (thyroid) and				lack of NOEL.		EPA deferred 2/25/88. New	
CFR No. 180.		5.00 ppm		mice (liver).				Q* calculated.		monkey study submitted.	
		ONCO: Class B2 (CAG/TOX)				Q* = 0.140000		EBDC plant metabolite.		WHO last reviewed 1986.	
FOOD CODE	FOOD	FOOD FORM		PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)		
01010AA	CRANBERRIES	10	RAW-FRESH OR NFS	21	P 7.000000	0.012000		10.00	0.001200		
01010AA	CRANBERRIES	21	COOKED-NFS	21	P 7.000000	0.012000		10.00	0.001200		
01010AA	CRANBERRIES	31	COOKED-FRESH OR CANNED	21	P 7.000000	0.012000		10.00	0.001200		
01010JA	CRANBERRY-JUICE	15	RAW-FRESH OR CANNED	21	P 7.000000	0.012000		10.00	0.001200		
01010JA	CRANBERRY-JUICE	31	COOKED-FRESH OR CANNED	21	P 7.000000	0.012000		10.00	0.001200		
01014AA	GRAPES-FRESH	10	RAW-FRESH OR NFS	21	P 7.000000	0.260000		10.00	0.026000		
01014AA	GRAPES-FRESH	21	COOKED-NFS	21	P 7.000000	0.320000		10.00	0.032000		
01014AA	GRAPES-FRESH	31	COOKED-FRESH OR CANNED	21	P 7.000000	0.320000		10.00	0.032000		
01014DA	GRAPES-RAISINS	10	RAW-FRESH OR NFS	21	P 7.000000	0.860000C		10.00	0.086000		
01014DA	GRAPES-RAISINS	21	COOKED-NFS	21	P 7.000000	0.860000C		10.00	0.086000		
01014DA	GRAPES-RAISINS	22	COOKED-FRESH-BAKED	21	P 7.000000	0.860000C		10.00	0.086000		
01014JA	GRAPES-JUICE	10	RAW-FRESH OR NFS	21	P 7.000000	5.200000C		10.00	0.520000		
01014JA	GRAPES-JUICE	15	RAW-FRESH OR CANNED	21	P 7.000000	5.200000C		10.00	0.520000		
01014JA	GRAPES-JUICE	21	COOKED-NFS	21	P 7.000000	5.200000C		10.00	0.520000		
033001AA	ALMONDS	10	RAW-FRESH OR NFS	21	P 0.100000	0.010000		10.00	0.001000		
033001AA	ALMONDS	21	COOKED-NFS	21	P 0.100000	0.010000		10.00	0.001000		
033001AA	ALMONDS	22	COOKED-FRESH-BAKED	21	P 0.100000	0.010000		10.00	0.001000		
04001AA	APPLES-FRESH	10	RAW-FRESH OR NFS	2E1266	P 7.000000	0.210000		10.00	0.021000		
04001AA	APPLES-FRESH	21	COOKED-NFS	2E1266	P 7.000000	0.270000		10.00	0.027000		
04001AA	APPLES-FRESH	31	COOKED-FRESH OR CANNED	2E1266	P 7.000000	0.270000		10.00	0.027000		
04001AA	APPLES-FRESH	62	COOKED-FRESH OR FROZEN-BAKED	2E1266	P 7.000000	0.270000		10.00	0.027000		
04001DA	APPLES-DRIED	10	RAW-FRESH OR NFS	2E1266	P 7.000000	0.210000		10.00	0.021000		
04001DA	APPLES-DRIED	22	COOKED-FRESH-BAKED	2E1266	P 7.000000	0.270000		10.00	0.027000		
04001DA	APPLES-DRIED	62	COOKED-FRESH OR FROZEN-BAKED	2E1266	P 7.000000	0.270000		10.00	0.027000		
04001JA	APPLES-JUICE	15	RAW-FRESH OR CANNED	2E1266	P 7.000000	0.330000C		10.00	0.033000		
04001JA	APPLES-JUICE	31	COOKED-FRESH OR CANNED	2E1266	P 7.000000	0.270000C		10.00	0.027000		
05001AA	APRICOTS-FRESH	10	RAW-FRESH OR NFS	156	P 10.00000	2.500000		10.00	0.250000		
05001AA	APRICOTS-FRESH	21	COOKED-NFS	156	P 10.00000	2.600000		10.00	0.260000		
05001AA	APRICOTS-FRESH	31	COOKED-FRESH OR CANNED	156	P 10.00000	2.600000		10.00	0.260000		
05001DA	APRICOTS-DRIED	10	RAW-FRESH OR NFS	156	P 10.00000	2.500000		10.00	0.250000		
05001DA	APRICOTS-DRIED	22	COOKED-FRESH-BAKED	156	P 10.00000	2.600000		10.00	0.260000		
05001DA	APRICOTS-DRIED	62	COOKED-FRESH OR FROZEN-BAKED	156	P 10.00000	2.600000		10.00	0.260000		
05003AA	NECTARINES	10	RAW-FRESH OR NFS	156	P 10.00000	0.410000		10.00	0.041000		
05004AA	PEACHES-FRESH	10	RAW-FRESH OR NFS	156	P 10.00000	1.400000		10.00	0.140000		
05004AA	PEACHES-FRESH	21	COOKED-NFS	156	P 10.00000	1.700000		10.00	0.170000		
05004AA	PEACHES-FRESH	31	COOKED-FRESH OR CANNED	156	P 10.00000	1.700000		10.00	0.170000		
05004AA	PEACHES-FRESH	51	COOKED-CANNED	156	P 10.00000	1.700000		10.00	0.170000		
05004DA	PEACHES-DRIED	10	RAW-FRESH OR NFS	156	P 10.00000	1.400000		10.00	0.140000		
05004DA	PEACHES-DRIED	21	COOKED-NFS	156	P 10.00000	1.700000		10.00	0.170000		
06002AA	BANANAS-UNSPEC	22	COOKED-FRESH-BAKED	2F1257	P 0.500000	0.018000		10.00	0.001800		
06002AB	BANANAS-FRESH	10	RAW-FRESH OR NFS	2F1257	P 0.500000	0.018000		10.00	0.001800		

Table 1a (Con't)

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DATE: 06/29/88

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 443AA

ETU from Maneb	CHEMICAL	STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
		2yr feeding- rat	NOEL=	Increased incidence of thyroid hyperplasia.	Evidence of oncogenicity in rats (thyroid) and mice (liver).	PADI SF -->3000	OPP RfD= 0.000080	Reproduction Chronic feeding- dog UF 3000 for data gaps, lack of NOEL.	Q* calculated.	TOX complete 9/26/86.	TOX reassessed 12/09/86.
	Caswell #443AA	0.0000 mg/kg	0.00 ppm								
	CAS No. 96-45-7	0.00 ppm	0.00 ppm								
	A.I. CODE:	LEL=	0.2500 mg/kg								
	CFR No. 180.	5.00 ppm	5.00 ppm								
		ONCO: Class B2 (CAG/TOX)				Q*= 0.140000		EBDC plant metabolite.		EPA deferred 2/25/88. New monkey study submitted.	WHO last reviewed 1986.
FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)		ANTICIPATED RESIDUE (ppm)		AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)	
				P	P	P	P				
06002AB	BANANAS-FRESH	21 COOKED-NFS	2F1257	P 0.500000		0.018000			10.00	0.001800	
06002AB	BANANAS-FRESH	31 COOKED-FRESH OR CANNED	2F1257	P 0.500000		0.018000			10.00	0.001800	
06002AB	BANANAS-FRESH	10 RAW-FRESH OR NFS	2F1257	P 0.500000		0.018000			10.00	0.001800	
06002DA	BANANAS-DRIED	21 COOKED-NFS	2F1257	P 0.500000		0.018000			10.00	0.001800	
06005AA	FIGS	10 RAW-FRESH OR NFS	21	P 7.000000		0.015000			10.00	0.001500	
06005AA	FIGS	21 COOKED-NFS	21	P 7.000000		0.015000			10.00	0.001500	
06005AA	FIGS	22 COOKED-FRESH-BAKED	21	P 7.000000		0.015000			10.00	0.001500	
06010AA	PAPAYAS-UNSPEC	00 NOT SPECIFIED (NO CONSUMPTION)	6F0485	P 10.000000		0.002000			10.00	0.000200	
06010AB	PAPAYAS-PULP	10 RAW-FRESH OR NFS	6F0485	P 10.000000		0.002000			10.00	0.000200	
06010AB	PAPAYAS-PULP	51 COOKED-CANNED	6F0485	P 10.000000		0.002000			10.00	0.000200	
06010AB	PAPAYAS-DRIED	10 RAW-FRESH OR NFS	6F0485	P 10.000000		0.002000			10.00	0.000200	
06010AB	PAPAYAS-DRIED	10 RAW-FRESH OR NFS	6F0485	P 10.000000		0.002000			10.00	0.000200	
06010AB	PAPAYAS-JUICE	10 RAW-FRESH OR NFS	6F0485	P 10.000000		0.002000			10.00	0.000200	
06016AA	PLANTAINS	21 COOKED-NFS	2F1257	P 0.500000		0.018000			10.00	0.001800	
06016AA	PLANTAINS	23 COOKED-FRESH-BOILED	2F1257	P 0.500000		0.018000			10.00	0.001800	
06016AA	PLANTAINS	25 COOKED-FRESH-FRIED	2F1257	P 0.500000		0.018000			10.00	0.001800	
08048DA	PAPRIKA	00 NOT SPECIFIED (NO CONSUMPTION)	21	P 7.000000		0.080000			10.00	0.008000	
10002AA	CANTALOUPE-UNSP	00 NOT SPECIFIED (NO CONSUMPTION)	2F1256	P 4.000000		0.015000			10.00	0.001500	
10002AB	CANTALOUPE-PULP	10 RAW-FRESH OR NFS	2F1256	P 4.000000		0.015000			10.00	0.001500	
10002AB	CANTALOUPE-PULP	21 COOKED-NFS	2F1256	P 4.000000		0.089000			10.00	0.008900	
10003AA	CASABAS	10 RAW-FRESH OR NFS	2F1256	P 4.000000		0.015000			10.00	0.001500	
10004AA	CRENSHAW	00 NOT SPECIFIED (NO CONSUMPTION)	2F1256	P 4.000000		0.015000			10.00	0.001500	
10005AA	HONEYDEW MELONS	10 RAW-FRESH OR NFS	2F1256	P 4.000000		0.015000			10.00	0.001500	
10007AA	PERSTON MELONS	00 NOT SPECIFIED (NO CONSUMPTION)	2F1256	P 4.000000		0.015000			10.00	0.001500	
10008AA	WATERMELON	10 RAW-FRESH OR NFS	2F1256	P 4.000000		0.015000			10.00	0.001500	
10008AA	WATERMELON	21 COOKED-NFS	2F1256	P 4.000000		0.089000			10.00	0.008900	
10010AA	CUCUMBERS	10 RAW-FRESH OR NFS	2F1256	P 4.000000		0.060000			10.00	0.006000	
10010AA	CUCUMBERS	11 RAW-FRESH-PICKLED, CORNED, OR CURED	2F1256	P 4.000000		0.060000			10.00	0.006000	
10010AA	CUCUMBERS	21 COOKED-NFS	329	P 7.000000		0.094000			10.00	0.009400	
10011AA	PUMPKIN	21 COOKED-NFS	329	P 7.000000		0.089000			10.00	0.008900	
10011AA	PUMPKIN	22 COOKED-FRESH-BAKED	329	P 7.000000		0.089000			10.00	0.008900	
10011AA	PUMPKIN	62 COOKED-FRESH OR FROZEN-BAKED	329	P 7.000000		0.089000			10.00	0.008900	
10013AA	SQUASH-SUMMER	10 RAW-FRESH OR NFS	2F1256	P 4.000000		0.020000			10.00	0.000200	
10013AA	SQUASH-SUMMER	21 COOKED-NFS	2F1256	P 4.000000		0.044000			10.00	0.004400	
10014AA	SQUASH-WINTER	10 RAW-FRESH OR NFS	2F1256	P 4.000000		0.020000			10.00	0.000200	
10014AA	SQUASH-WINTER	21 COOKED-NFS	2F1256	P 4.000000		0.044000			10.00	0.004400	
10014AA	SQUASH-WINTER	31 COOKED-FRESH OR CANNED	2F1256	P 4.000000		0.044000			10.00	0.004400	
10017AA	BITTER MELON	00 NOT SPECIFIED (NO CONSUMPTION)	2F1256	P 4.000000		0.044000			10.00	0.004400	
10020AA	TOMELGOURD	00 NOT SPECIFIED (NO CONSUMPTION)	2F1256	P 4.000000		0.044000			10.00	0.004400	
11001AA	EGGPLANT	10 RAW-FRESH OR NFS	21	P 7.000000		0.020000			10.00	0.000200	
11001AA	EGGPLANT	21 COOKED-NFS	21	P 7.000000		0.025000			10.00	0.002500	

Table 1a (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 443AA

DATE: 06/29/88

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FOOD CODE	FOOD	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS	RES. VALUE USED IN TAS RUN (ppm)
11001AA	EGGPLANT	25 COOKED-FRESH-FRIED	21	P 7.000000	0.025000	10.00	0.002500
11003AA	PEPPERS, SWEET	10 RAW-FRESH OR NFS	21	P 7.000000	0.080000	10.00	0.008000
11003AA	PEPPERS, SWEET	21 COOKED-NFS	21	P 7.000000	0.410000	10.00	0.041000
11003AB	CHILI PEPPERS	00 NOT SPECIFIED (NO CONSUMPTION)	21	P 7.000000	0.080000	10.00	0.008000
11003AD	PEPPERS-OTHER	10 RAW-FRESH OR NFS	21	P 7.000000	0.080000	10.00	0.008000
11003AD	PEPPERS-OTHER	21 COOKED-NFS	21	P 7.000000	0.410000	10.00	0.041000
11003AD	PEPPERS-OTHER	51 COOKED-CANNED	21	P 7.000000	0.410000	10.00	0.041000
11004AA	PIMIENTOS	10 RAW-FRESH OR NFS	21	P 7.000000	0.080000	10.00	0.008000
11004AA	PIMIENTOS	21 COOKED-NFS	21	P 7.000000	0.410000	10.00	0.041000
11004AA	PIMIENTOS	31 COOKED-FRESH OR CANNED	21	P 7.000000	0.410000	10.00	0.041000
11005AA	TOMATOES-WHOLE	10 RAW-FRESH OR NFS	2F1256	P 4.000000	0.003000	20.00	0.000600
11005AA	TOMATOES-WHOLE	21 COOKED-NFS	2F1256	P 4.000000	0.025000	20.00	0.005000
11005JA	TOMATOES-JUICE	10 RAW-FRESH OR NFS	2F1256	P 4.000000	0.025000	20.00	0.005000
11005JA	TOMATOES-JUICE	21 COOKED-NFS	2F1256	P 4.000000	0.075000C	20.00	0.015000
11005RA	TOMATOES-PUREE	10 RAW-FRESH OR NFS	2F1256	P 4.000000	0.075000C	20.00	0.015000
11005RA	TOMATOES-PUREE	21 COOKED-NFS	2F1256	P 4.000000	0.003000	20.00	0.000600
11005RA	TOMATOES-PUREE	31 COOKED-FRESH OR CANNED	2F1256	P 4.000000	0.025000C	20.00	0.005000
11005RA	TOMATOES-PUREE	32 COOKED-FRESH OR CANNED-BAKED	2F1256	P 4.000000	0.025000C	20.00	0.005000
11005RA	TOMATOES-PUREE	51 COOKED-CANNED	2F1256	P 4.000000	0.025000C	20.00	0.005000
11005TA	TOMATOES-PASTE	21 COOKED-NFS	2F1256	P 4.000000	0.075000C	20.00	0.015000
11005TA	TOMATOES-PASTE	22 COOKED-FRESH-BAKED	2F1256	P 4.000000	0.075000C	20.00	0.015000
11005TA	TOMATOES-PASTE	31 COOKED-FRESH OR CANNED	2F1256	P 4.000000	0.075000C	20.00	0.015000
11005UA	TOMATOES-CATSUP	21 COOKED-NFS	2F1256	P 4.000000	0.075000C	20.00	0.015000
13002AA	CELERY	10 RAW-FRESH OR NFS	2F1256	P 5.000000	0.350000	10.00	0.035000
13002AA	CELERY	21 COOKED-NFS	2F1256	P 5.000000	8.100000	10.00	0.810000
13005AA	BROCCOLI	21 COOKED-NFS	183	P 10.000000	2.500000	25.00	0.625000
13005AA	BROCCOLI	31 COOKED-FRESH OR CANNED	183	P 10.000000	2.500000	25.00	0.625000
13005AA	BROCCOLI	63 COOKED-FRESH OR FROZEN-BOILED	183	P 10.000000	2.500000	25.00	0.625000
13006AA	BRUSSEL SPROUTS	23 COOKED-NFS	183	P 10.000000	2.500000	25.00	0.625000
13006AA	BRUSSEL SPROUTS	10 RAW-FRESH OR NFS	156	P 10.000000	0.003000	25.00	0.000750
13007AA	CABBAGE	11 RAW-FRESH-PICKLED, CORNED, OR CURED	156	P 10.000000	0.003000	25.00	0.000750
13007AA	CABBAGE	21 COOKED-NFS	156	P 10.000000	0.100000	25.00	0.025000
13007AA	CABBAGE	10 RAW-FRESH OR NFS	183	P 10.000000	0.100000	25.00	0.025000
13008AA	CAULIFLOWER	21 COOKED-NFS	183	P 10.000000	0.100000	25.00	0.025000
13009AA	COLLARDS	51 COOKED-CANNED	156	P 10.000000	5.400000	10.00	0.540000
13009AA	COLLARDS	63 COOKED-FRESH OR FROZEN-BOILED	156	P 10.000000	5.400000	10.00	0.540000
13010AA	CABBAGE-CHINESE	10 RAW-FRESH OR NFS	156	P 10.000000	0.003000	25.00	0.000750
13010AA	CABBAGE-CHINESE	21 COOKED-NFS	156	P 10.000000	0.100000	25.00	0.025000

Table 1a (Con't.)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 443AA

DATE: 06/29/88

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CHEMICAL			STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
ETU from Maneb		2yr feeding- rat	Increased incidence of									
Caswell #443AA		NOEL= 0.0000 mg/kg	thyroid hyperplasia.									TOX complete 9/26/86.
CAS No. 96-45-7		0.00 ppm	Evidence of oncogenicity									EPA verified 12/09/86.
A.I. CODE:		LEI= 0.2500 mg/kg	in rats (thyroid) and									TOX reassess 10/30/87.
CFR No. 180.		5.00 ppm	mice (liver).									EPA deferred 2/25/88. New
		ONCO: Class B2 (CAG/TOX)										monkey study submitted.
												WHO last reviewed 1986.
FOOD			TOLERANCE		ANTICIPATED		AR STATISTIC TYPE		RES. VALUE USED			
FOOD CODE	FOOD	FOOD FORM	PET. #	(ppm)	RESIDUE (ppm)		% CROP TREATED	IN TAS RUN (ppm)				
13011AA	KALE	63 COOKED-FRESH OR FROZEN-BOILED	56	P 10.00000	2.800000		10.00	0.280000				
13012AA	KOHLRABI	21 COOKED-NFS	183	P 10.00000	2.500000		10.00	0.250000				
13013AA	LETTUCE-LEAFY	10 RAW-FRESH OR NFS	156	P 10.00000	0.620000		32.00	0.198400				
13015AA	ENDIVE	10 RAW-FRESH OR NFS	156	P 10.00000	0.620000		10.00	0.062000				
13015AA	ENDIVE	21 COOKED-NFS	156	P 10.00000	0.620000		10.00	0.062000				
13016AA	FENNEL	00 NOT SPECIFIED (NO CONSUMPTION)	2F1256	P 5.000000	8.100000		10.00	0.810000				
13020AA	LETTUCE-UNSPEC	10 RAW-FRESH OR NFS	156	P 10.00000	0.620000		32.00	0.198400				
13021AA	MUSTARD GREENS	21 COOKED-NFS	156	P 10.00000	6.200000		10.00	0.620000				
13021AA	MUSTARD GREENS	63 COOKED-FRESH OR FROZEN-BOILED	156	P 10.00000	6.200000		10.00	0.620000				
13023AA	RHUBARB	10 RAW-FRESH OR NFS	225	P 10.00000	0.350000		10.00	0.035000				
13023AA	RHUBARB	21 COOKED-NFS	225	P 10.00000	8.100000		10.00	0.810000				
13023AA	RHUBARB	31 COOKED-FRESH OR CANNED	225	P 10.00000	8.100000		10.00	0.810000				
13023AA	RHUBARB	62 COOKED-FRESH OR FROZEN-BAKED	225	P 10.00000	8.100000		10.00	0.810000				
13024AA	SPINACH	10 RAW-FRESH OR NFS	156	P 10.00000	0.092000		48.00	0.04160				
13024AA	SPINACH	21 COOKED-NFS	156	P 10.00000	5.400000		48.00	2.592000				
13024AA	SPINACH	31 COOKED-FRESH OR CANNED	156	P 10.00000	5.400000		48.00	2.592000				
13026AA	TURNIPS-TOPS	10 RAW-FRESH OR NFS	156	P 10.00000	0.290000		10.00	0.029000				
13026AA	TURNIPS-TOPS	21 COOKED-NFS	156	P 10.00000	6.000000		10.00	0.600000				
13026AA	TURNIPS-TOPS	31 COOKED-FRESH OR CANNED	156	P 10.00000	6.000000		10.00	0.600000				
13045AA	LETTUCE-HEAD	10 RAW-FRESH OR NFS	156	P 10.00000	0.052000		32.00	0.016640				
13045AA	LETTUCE-HEAD	21 COOKED-NFS	156	P 10.00000	0.860000		32.00	0.275200				
14003AA	CARROTS	10 RAW-FRESH OR NFS	21	P 7.000000	0.023000		10.00	0.002300				
14003AA	CARROTS	21 COOKED-NFS	21	P 7.000000	1.300000		10.00	0.130000				
14003AA	CARROTS	23 COOKED-FRESH-BOILED	21	P 7.000000	1.300000		10.00	0.130000				
14003AA	CARROTS	31 COOKED-FRESH OR CANNED	21	P 7.000000	1.300000		10.00	0.130000				
14003AA	CARROTS	51 COOKED-CANNED	21	P 7.000000	1.300000		10.00	0.130000				
14007AA	GARLIC	10 RAW-FRESH OR NFS	21	P 7.000000	0.160000		10.00	0.016000				
14007AA	GARLIC	21 COOKED-NFS	21	P 7.000000	0.930000		10.00	0.093000				
14007AA	GARLIC	32 COOKED-FRESH OR CANNED-BAKED	21	P 7.000000	0.930000		10.00	0.093000				
14010AA	LEEK	31 COOKED-FRESH OR CANNED	21	P 7.000000	2.500000		10.00	0.250000				
14011AA	ONIONS-DRY-BULB	10 RAW-FRESH OR NFS	21	P 7.000000	0.160000		10.00	0.016000				
14011AA	ONIONS-DRY-BULB	21 COOKED-NFS	21	P 7.000000	0.930000		10.00	0.093000				
14011AA	ONIONS-DRY-BULB	22 COOKED-FRESH-BAKED	21	P 7.000000	0.930000		10.00	0.093000				
14011AA	ONIONS-DRY-BULB	31 COOKED-FRESH OR CANNED	21	P 7.000000	0.930000		10.00	0.093000				
14011DA	ONIONS-DRIED	12 RAW-FRESH-DRIED	21	P 7.000000	0.160000		10.00	0.016000				
14013AA	POTATO(WH)-WHOLE	10 RAW-FRESH OR NFS	21	P 0.100000	0.003000		10.00	0.003000				
14013AA	POTATO(WH)-WHOLE	21 COOKED-NFS	21	P 0.100000	0.170000		10.00	0.017000				
14013AA	POTATO(WH)-WHOLE	22 COOKED-FRESH-BAKED	21	P 0.100000	0.170000		10.00	0.017000				
14013AB	POTATO(WH)-UNSP	22 COOKED-FRESH-BAKED	21	P 0.100000	0.170000		10.00	0.017000				
14013AC	POTATO(WH)-PULP	21 COOKED-NFS	21	P 0.100000	0.130000		10.00	0.013000				

Table 1a (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 443AA DATE: 06/29/88 PAGE: 5

CHEMICAL		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS
ETU from Maneb		2yr feeding- rat		Increased incidence of thyroid hyperplasia.		PADI SF --33000		Reproduction		TOX complete 9/26/86.
Caswell #443AA		NOEL= 0.0000 mg/kg		Evidence of oncogenicity in rats (thyroid) and mice (liver). <td></td> <th>OPP RfD= 0.000080</th> <th>EPA RfD= 0.000030</th> <th>Chronic feeding- dog</th> <th></th> <th>EPA verified 12/09/86.</th>		OPP RfD= 0.000080	EPA RfD= 0.000030	Chronic feeding- dog		EPA verified 12/09/86.
CAS No. 96-45-7		0.00 ppm						UF 3000 for data gaps,		TOX reassess 10/30/87.
A.I. CODE:		LEL= 0.2500 mg/kg						lack of NOEL.		EPA deferred 2/25/88. New
CFR No. 180.		5.00 ppm						Q* calculated.		monkey study submitted.
		ONCO: Class B2 (CAG/TOX)				Q*= 0.140000		EBDC plant metabolite.		WHO last reviewed 1986.
FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)		
14013AC	POTATO(WH)-PULP	22 COOKED-FRESH-BAKED	21	P 0.100000	0.130000		10.00	0.013000		
14013AC	POTATO(WH)-PULP	23 COOKED-FRESH-BOILED	21	P 0.100000	0.130000		10.00	0.013000		
14013AC	POTATO(WH)-PULP	25 COOKED-FRESH-FRIED	21	P 0.100000	0.003000		10.00	0.000300		
14013DA	POTATO(WH)-DRY	10 RAW-FRESH OR NFS	21	P 0.100000	0.003000C		10.00	0.000300		
14013DA	POTATO(WH)-DRY	31 COOKED-FRESH OR CANNED	21	P 0.100000	0.003000C		10.00	0.000300		
14013HA	POTATO(WH)-PEEL	22 COOKED-FRESH-BAKED	21	P 0.100000	0.530000		10.00	0.053000		
14017AA	SHALLOTS	00 NOT SPECIFIED (NO CONSUMPTION)	21	P 7.000000	2.500000		10.00	0.250000		
14019AA	TURNIPS-ROOTS	10 RAW-FRESH OR NFS	156	P 7.000000	0.290000		10.00	0.029000		
14019AA	TURNIPS-ROOTS	21 COOKED-NFS	156	P 7.000000	2.100000		10.00	0.210000		
15001AA	BEANS-DRY-GRT NO	00 NOT SPECIFIED (NO CONSUMPTION)	156	P 7.000000	0.240000		10.00	0.024000		
15001AB	BEANS-DRY-KIDNEY	21 COOKED-NFS	156	P 7.000000	0.240000		10.00	0.024000		
15001AB	BEANS-DRY-KIDNEY	31 COOKED-FRESH OR CANNED	156	P 7.000000	0.240000		10.00	0.024000		
15001AC	BEANS-DRY-LIMA	21 COOKED-NFS	156	P 7.000000	0.240000		60.00	0.144000		
15001AD	BEANS-DRY-NAVY	21 COOKED-NFS	156	P 7.000000	0.240000		10.00	0.024000		
15001AD	BEANS-DRY-NAVY	31 COOKED-FRESH OR CANNED	156	P 7.000000	0.240000		10.00	0.024000		
15001AE	BEANS-DRY-OTHER	21 COOKED-NFS	156	P 7.000000	0.240000		10.00	0.024000		
15001AE	BEANS-DRY-OTHER	25 COOKED-FRESH-FRIED	156	P 7.000000	0.240000		10.00	0.024000		
15001AE	BEANS-DRY-OTHER	31 COOKED-FRESH OR CANNED	156	P 7.000000	0.240000		10.00	0.024000		
15001AF	BEANS-DRY-PINTO	21 COOKED-NFS	156	P 7.000000	0.240000		10.00	0.024000		
15002AA	BEANS-SUCC-LIMA	10 RAW-FRESH OR NFS	156	P 10.000000	0.075000		60.00	0.045000		
15002AA	BEANS-SUCC-LIMA	21 COOKED-NFS	156	P 10.000000	0.310000		60.00	0.186000		
15003AA	BEANS-SUCC-GREEN	21 COOKED-NFS	156	P 10.000000	0.310000		10.00	0.031000		
15003AB	BEANS-SUCC-OTH	10 RAW-FRESH OR NFS	156	P 10.000000	0.075000		10.00	0.007500		
15003AB	BEANS-SUCC-OTH	21 COOKED-NFS	156	P 10.000000	0.310000		10.00	0.031000		
15003AC	BEANS-SUCC-WAX	21 COOKED-NFS	156	P 10.000000	0.310000		10.00	0.031000		
15005AA	CORN, SWEET	10 RAW-FRESH OR NFS	2F1266	P 5.000000	0.004000		12.00	0.000480		
15005AA	CORN, SWEET	21 COOKED-NFS	2F1266	P 5.000000	0.021000		12.00	0.002520		
15005AA	CORN, SWEET	31 COOKED-FRESH OR CANNED	2F1266	P 5.000000	0.021000		12.00	0.002520		
15013AA	MUNG BEANS	10 RAW-FRESH OR NFS	156	P 7.000000	0.045000		10.00	0.004500		
15013AA	MUNG BEANS	21 COOKED-NFS	156	P 7.000000	0.240000		10.00	0.024000		
15013AA	MUNG BEANS	31 COOKED-FRESH OR CANNED	156	P 7.000000	0.240000		10.00	0.024000		
15022AA	BEANS-SUCC-BROAD	00 NOT SPECIFIED (NO CONSUMPTION)	156	P 7.000000	0.310000		10.00	0.031000		
15022AB	BEANS-SUCC-BROAD	00 NOT SPECIFIED (NO CONSUMPTION)	156	P 7.000000	0.310000		10.00	0.031000		
15023AA	BEANS-DRY-PIGEON	21 COOKED-NFS	156	P 7.000000	0.240000		10.00	0.024000		
15027AA	BEANS-UNSPEC	21 COOKED-NFS	156	P 7.000000	0.240000		10.00	0.024000		
15030AA	BEANS-DRY-HYAC	00 NOT SPECIFIED (NO CONSUMPTION)	156	P 7.000000	0.240000		10.00	0.024000		
15030AB	BEANS-SUCC-HYAC	00 NOT SPECIFIED (NO CONSUMPTION)	156	P 7.000000	0.310000		10.00	0.031000		
15031AA	BLAKEY PEAS-DRY	21 COOKED-NFS	156	P 7.000000	0.240000		10.00	0.024000		
15032AA	BEANS-DRY	21 COOKED-NFS	156	P 7.000000	0.240000		10.00	0.024000		
15032AA	BEANS-DRY	31 COOKED-FRESH OR CANNED	156	P 7.000000	0.240000		10.00	0.024000		
16004AA	ONIONS-GREEN	10 RAW-FRESH OR NFS	21	P 7.000000	0.060000		10.00	0.006000		

Table 1a (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 443AA

PAGE: 6

DATE: 06/29/88

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
ETU from Maneb	2yr feeding- rat	Increased incidence of	PADI SF -->3000	Reproduction	TOX complete 9/26/86.
Caswell #443AA	NOEL= 0.0000 mg/kg	thyroid hyperplasia.	OPP RfD= 0.000080	Chronic feeding- dog	EPA verified 12/09/86.
CAS No. 96-45-7	0.00 ppm	Evidence of oncogenicity	EPA RfD= 0.000030	UF 3000 for data gaps,	TOX reassess 10/30/87.
A.I. CODE:	LEL= 0.2500 mg/kg	in rats (thyroid) and		lack of NOEL.	EPA deferred 2/25/88. New
CFR No. 180.	5.00 ppm	mice (liver).		Q* calculated.	monkey study submitted.
	ONCO: Class B2 (CAG/TOX)		Q*= 0.140000	EBDC plant metabolite.	WHO last reviewed 1986.

FOOD CODE	FOOD	TOLERANCE (ppm)	PET. #	ANTICIPATED		AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
				RESIDUE (ppm)				
16004AA	ONIONS-GREEN	21	21	2.500000			10.00	0.250000
16004AA	ONIONS-GREEN	25	21	2.500000			10.00	0.250000
25002SA	BET SUGAR	10		0.004000			10.00	0.000400
25002SA	BET SUGAR	21		0.004000			10.00	0.000400
25002SA	BET SUGAR	22		0.004000			10.00	0.000400
25002SA	BET SUGAR	31		0.004000			10.00	0.000400
26011AA	GUAR BEANS	00		0.240000			10.00	0.024000
270010A	CANDOR BEANS	00	156	0.240000			10.00	0.024000
43058AA	WINE AND SHERRY	00	156	5.200000			10.00	0.520000
43058AA	WINE AND SHERRY	21	21	5.200000			10.00	0.520000
50000DB	MILK-NON-FAT SOL 10	00		0.050000			10.00	0.005000
50000DB	MILK-NON-FAT SOL 21	00		0.050000			10.00	0.005000
50000FA	MILK-FAT SOLIDS 10	00		0.050000			10.00	0.005000
50000FA	MILK-FAT SOLIDS 21	00		0.050000			10.00	0.005000
50000FA	MILK-FAT SOLIDS 51	00		0.050000			10.00	0.005000
50000SA	MILK SUG (LACT)	21		0.050000			10.00	0.005000
50000SA	MILK SUG (LACT)	51		0.050000			10.00	0.005000
53001BA	BEEF-HEAT BYP	21		0.054000			10.00	0.005400
53001BA	BEEF-HEAT BYP	26		0.054000			10.00	0.005400
53001BB	BEEF-OTH ORGAN	21		0.054000			10.00	0.005400
53001BA	BEEF-OTH ORGAN	51		0.054000			10.00	0.005400
53001DA	BEEF-DRIED	21		0.024000			10.00	0.002400
53001FA	BEEF-FAT	10		0.002000			10.00	0.000200
53001FA	BEEF-FAT	21		0.002000			10.00	0.000200
53001FA	BEEF-FAT	22		0.002000			10.00	0.000200
53001FA	BEEF-FAT	23		0.002000			10.00	0.000200
53001FA	BEEF-FAT	24		0.002000			10.00	0.000200
53001FA	BEEF-FAT	25		0.002000			10.00	0.000200
53001KA	BEEF-KIDNEY	21		0.050000			10.00	0.005000
53001LA	BEEF-LIVER	25		0.054000			10.00	0.005400
53001LA	BEEF-LIVER	31		0.054000			10.00	0.005400
53001NA	BEEF-LEAN	10		0.024000			10.00	0.002400
53001NA	BEEF-LEAN	21		0.024000			10.00	0.002400
53001NA	BEEF-LEAN	22		0.024000			10.00	0.002400
53001NA	BEEF-LEAN	23		0.024000			10.00	0.002400
53001NA	BEEF-LEAN	24		0.024000			10.00	0.002400
53002BA	GOAT-HEAT BYP	00		0.054000			10.00	0.005400
53002BB	GOAT-OTH ORGAN	00		0.054000			10.00	0.005400
53002FA	GOAT-FAT	23		0.002000			10.00	0.000200

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Table 1a (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 443AA

DATE: 06/29/88

PAGE: 8

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			PADI	SF		
ETU from Maneb	2yr feeding- rat	Increased incidence of thyroid hyperplasia.	OPP RfD= 0.000080	UF 3000 for data gaps, lack of NOEL.	Reproduction	TOX complete 9/26/86.
Caswell #443AA	NOEL= 0.0000 mg/kg	Evidence of oncogenicity in rats (thyroid) and mice (liver).	EPA RfD= 0.000030	Q* calculated.	Chronic feeding- dog	EPA verified 12/09/86.
CAS No. 96-45-7	LEL= 0.2500 mg/kg					TOX reassess 10/30/87.
A.I. CODE:	5.00 ppm					EPA deferred 2/25/88. New monkey study submitted.
CFR No. 180.	ONCO: Class B2 (CAG/TOX)		Q*= 0.140000		EBDC plant metabolite.	WHO last reviewed 1986.

FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE ANTICIPATED		AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
				(ppm)	RESIDUE (ppm)			
55014AA	EGGS-WHOLE	10 RAW-FRESH OR NFS	P	0.000000	0.006000		100.00	0.006000
55014AA	EGGS-WHOLE	21 COOKED-NFS	P	0.000000	0.006000		100.00	0.006000
55014AA	EGGS-WHOLE	22 COOKED-FRESH-BAKED	P	0.000000	0.006000		100.00	0.006000
55014AA	EGGS-WHOLE	23 COOKED-FRESH-BOILED	P	0.000000	0.006000		100.00	0.006000
55014AA	EGGS-WHOLE	25 COOKED-FRESH-FRIED	P	0.000000	0.006000		100.00	0.006000
55014AB	EGGS-WHITE ONLY	10 RAW-FRESH OR NFS	P	0.000000	0.006000		100.00	0.006000
55014AB	EGGS-WHITE ONLY	21 COOKED-NFS	P	0.000000	0.006000		100.00	0.006000
55014AB	EGGS-WHITE ONLY	22 COOKED-FRESH-BAKED	P	0.000000	0.006000		100.00	0.006000
55014AB	EGGS-WHITE ONLY	62 COOKED-FRESH OR FROZEN-BAKED	P	0.000000	0.006000		100.00	0.006000
55014AB	EGGS-WHITE ONLY	81 COOKED-FROZEN	P	0.000000	0.006000		100.00	0.006000
55014AC	EGGS-YOLK ONLY	10 RAW-FRESH OR NFS	P	0.000000	0.006000		100.00	0.006000
55014AC	EGGS-YOLK ONLY	21 COOKED-NFS	P	0.000000	0.006000		100.00	0.006000
55014AC	EGGS-YOLK ONLY	25 COOKED-FRESH-FRIED	P	0.000000	0.006000		100.00	0.006000
55014AC	EGGS-YOLK ONLY	31 COOKED-FRESH OR CANNED	P	0.000000	0.006000		100.00	0.006000
55015A	CHICKEN-BYP	00 NOT SPECIFIED (NO CONSUMPTION)	P	0.000000	0.008000		100.00	0.008000
55015A	CHICKEN-ORGAN	21 COOKED-NFS	P	0.000000	0.008000		100.00	0.008000
55015A	CHICKEN-ORGAN	25 COOKED-FRESH-FRIED	P	0.000000	0.008000		100.00	0.008000
55015A	CHICKEN-W/O SKIN	25 COOKED-FRESH-PICKLED, CORNED, OR CURED	P	0.000000	0.008000		100.00	0.008000
55015A	CHICKEN-W/O SKIN	21 COOKED-NFS	P	0.000000	0.009000		100.00	0.009000
55015A	CHICKEN-W/O SKIN	22 COOKED-FRESH-BAKED	P	0.000000	0.009000		100.00	0.009000
55015A	CHICKEN-W/O SKIN	25 COOKED-FRESH-FRIED	P	0.000000	0.009000		100.00	0.009000
55015A	CHICKEN-W/O SKIN	31 COOKED-FRESH OR CANNED	P	0.000000	0.009000		100.00	0.009000
55015A	CHICKEN-W/O SKIN	53 COOKED-CANNED-BOILED	P	0.000000	0.009000		100.00	0.009000
55015AB	CHICKEN+SKIN	21 COOKED-NFS	P	0.000000	0.009000		100.00	0.009000
55015AB	CHICKEN+SKIN	25 COOKED-FRESH-FRIED	P	0.000000	0.009000		100.00	0.009000

Table 2

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 06/29/88

PAGE: 1

CHEMICAL INFORMATION		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
Maneb		6mo feeding- monkey		Increased thyroid weight, inhibition of I-131 up-take at 3000 ppm.		PADI SF -->1000 OPP RD= 0.005000 EPA RD= 0.005000		Chronic feeding- dog Chronic feeding- rat Reproduction Teratology- 2 species		TOX complete 10/15/86. TOX reassess 9/28/87. EPA verified 10/14/87	
Caswell #539		NOEL= 5.0000 mg/kg									
CAS No. 12427-38-2		100.00 ppm									
A.I. CODE: 014505		LEL= 15.0000 mg/kg									
CFR No. 180.110		300.00 ppm		No adequate oncogenicity data available (see ETU).						WHO last reviewed 1980; see Mancozeb.	
ONCO: Undetermined.											
POPULATION SUBGROUP		TOTAL TMRC (MG/KG BODY WEIGHT/DAY)		NEW TMRC**		NEW TMRC AS PERCENT OF RFD		DIFFERENCE AS PERCENT OF RFD		EFFECT OF ANTICIPATED RESIDUES	
		CURRENT TMRC*								ARC	
U.S. POPULATION - 48 STATES		0.030265		0.030265		605.316440		0.000000		0.003652	
U.S. POPULATION - SPRING SEASON		0.028340		0.028340		566.810780		0.000000		0.003565	
U.S. POPULATION - SUMMER SEASON		0.032196		0.032196		643.932580		0.000000		0.004315	
U.S. POPULATION - FALL SEASON		0.030371		0.030371		607.436200		0.000000		0.003380	
U.S. POPULATION - WINTER SEASON		0.029973		0.029973		599.478700		0.000000		0.003349	
NORTHEAST REGION		0.031533		0.031533		630.664760		0.000000		0.003922	
NORTH CENTRAL REGION		0.028775		0.028775		575.517260		0.000000		0.003471	
SOUTHERN REGION		0.028118		0.028118		562.369440		0.000000		0.003253	
WESTERN REGION		0.034200		0.034200		684.004080		0.000000		0.004243	
HISPANICS		0.031923		0.031923		638.479560		0.000000		0.003649	
NON-HISPANIC WHITES		0.030458		0.030458		609.162860		0.000000		0.003614	
NON-HISPANIC BLACKS		0.027547		0.027547		550.946940		0.000000		0.003845	
NON-HISPANIC OTHERS		0.032942		0.032942		658.854360		0.000000		0.004108	
NURSING INFANTS (< 1 YEAR OLD)		0.071299		0.071299		1425.980500		0.000000		0.008265	
NON-NURSING INFANTS (< 1 YEAR OLD)		0.114500		0.114500		2290.016540		0.000000		0.015801	
FEMALES (13+ YEARS, PREGNANT)		0.022697		0.022697		453.955320		0.000000		0.002704	
FEMALES 13+ YEARS, NURSING		0.028975		0.028975		579.516260		0.000000		0.004335	
CHILDREN (1-6 YEARS OLD)		0.064401		0.064401		1288.028420		0.000000		0.006509	
CHILDREN (7-12 YEARS OLD)		0.041119		0.041119		822.399900		0.000000		0.005024	
MALES (13-19 YEARS OLD)		0.024733		0.024733		494.676200		0.000000		0.002848	
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)		0.023278		0.023278		465.579480		0.000000		0.002690	
MALES (20 YEARS AND OLDER)		0.022151		0.022151		443.025720		0.000000		0.002725	
FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)		0.023771		0.023771		475.431360		0.000000		0.003127	

*Current TMRC does not include new or pending tolerances.

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

Table 2a

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 06/29/88

PAGE: 1

CHEMICAL INFORMATION		STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
ETU from Maneb	2yr feeding- rat	Increased incidence of	IPADI SF -->3000	Reproduction	TOX complete 9/26/86.	
Caswell #443AA	NOEL= 0.0000 mg/kg	thyroid hyperplasia.	OPP RfD= 0.000080	Chronic feeding- dog	EPA verified 12/09/86.	
CAS No. 96-45-7	0.00 ppm	Evidence of oncogenicity	EPA RfD= 0.000030	UF 3000 for data gaps,	TOX reassess 10/30/87.	
A.I. CODE: .	LEL= 0.2500 mg/kg	in rats (thyroid) and		Lack of NOEL.	EPA deferred 2/25/88. New	
CFR No. 180.	5.00 ppm	mice (liver).	Q* calculated.	Q* calculated.	monkey study submitted.	
	ONCO: Class B2 (CAG/TOX)		Q*= 0.140000	EBDC plant metabolite.	WHO last reviewed 1986.	

TOTAL TMRC (MG/KG BODY WEIGHT/DAY)

DIFFERENCE AS PERCENT OF RFD

EFFECT OF ANTICIPATED RESIDUES

POPULATION SUBGROUP	CURRENT TMRC*	NEW TMRC**	OF RFD	OF RFD	ARC	%RFD
U.S. POPULATION - 48 STATES					0.000462	577.58625
U.S. POPULATION - SPRING SEASON					0.000449	562.06750
U.S. POPULATION - SUMMER SEASON					0.000442	552.51125
U.S. POPULATION - FALL SEASON					0.000476	595.11125
U.S. POPULATION - WINTER SEASON					0.000480	600.65000
NORTHEAST REGION					0.000512	640.43875
NORTH CENTRAL REGION					0.000403	504.86125
SOUTHERN REGION					0.000428	536.05625
WESTERN REGION					0.000537	671.45750
HISPANICS					0.000397	497.49125
NON-HISPANIC WHITES					0.000447	559.21250
NON-HISPANIC BLACKS					0.000582	728.01000
NON-HISPANIC OTHERS					0.000504	630.47750
NURSING INFANTS (< 1 YEAR OLD)					0.000684	855.31625
NON-NURSING INFANTS (< 1 YEAR OLD)					0.001845	2306.44625
FEMALES (13+ YEARS, PREGNANT)					0.000321	401.30125
FEMALES 13+ YEARS, NURSING					0.000656	820.68750
CHILDREN (1-6 YEARS OLD)					0.000903	1129.54625
CHILDREN (7-12 YEARS OLD)					0.000608	761.17875
MALES (13-19 YEARS OLD)					0.000344	430.22250
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)					0.000297	371.54500
MALES (20 YEARS AND OLDER)					0.000360	450.41000
FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)					0.000390	487.97500

This portion of the analysis summary is not applicable.

This portion of the analysis summary is not applicable.

*Current TMRC does not include new or pending tolerances.

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