



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

AUG 10 1988

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Anticipated Residue Data for Chlorothalonil

FROM: Debra F. Edwards, Ph.D.
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THROUGH: William J. Boodee, Supervisory Chemist
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TO: Charles Frick, Acting TAS Program Manager
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The average dietary residue values listed in the following table were obtained from FDA domestic and import (bananas only) surveillance monitoring data for 1985-1987 and percent crop treated data obtained from Kathy Pierce (SRB) on August 5. A minimum of 10% crop treated was used in calculating average dietary residues, with the exception of soybeans where 1% crop treated was used due to the magnitude of available use data for soybeans. The percent crop treated data were used to permit assignment of values to samples in which no residues were detected. For example, if 25 out of a total of 100 samples analyzed over the three year period bore measurable residues and the percent crop treated is 40%, then 60 samples were assigned a value of 0 ppm and 15 assigned a value of 0.005 ppm (1/2 the limit of detection). This assumes that 40% of the collected samples were treated with chlorothalonil, 25% bearing measurable residues and 15% bearing some residue level below the limit of detection. The following formula was used in calculation of average dietary residues:

$$[(\%CT * TSC - TPC) * 0.005 \text{ ppm} + APS * TPC] / TSC$$

%CT = % Crop Treated

TSC = total sample counts (total number of samples analyzed using methods that detect chlorothalonil)

TPC = total positive counts (total number of samples bearing measurable residues of chlorothalonil)

0.005 ppm = 1/2 the limit of detection

APS = average residue in positive samples (ppm)

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COMMODITY	% CROP TREATED	TOTAL # SAMPLES	AVERAGE DIETARY RESIDUE (ppm)
apricots	10	48	0.0005
bananas	10 ^a	150	0.0005
beans, snap	24	135	0.0026
beans, dried	100	30	0.005
broccoli	40	393	0.0036
brussels sprouts	30	40	0.0015
cabbage	30	343	0.019
cabbage, chinese	30	56	0.0027
carrots	41	286	0.0022
cauliflower	40	265	0.002
celery	47	229	0.52
cherries	10	119	0.047
corn, sweet	10	127	0.0005
cranberries	100	41	0.012
cucumbers	47	166	0.0030
garlic	10	- ^b	0.0005
leeks	100	28	0.005
melons	22	250	0.0083
nectarines	10	66	0.0005
onions	43	181	0.0022
papayas	100	25	0.005
parsnips	10	43	0.0005
peaches	10	221	0.00052
peanuts	70	86	0.0035
plantains	10	- ^c	0.0005
plums	11	90	0.00055
plums (dried)	11	15	0.00055
potatoes	10	541	0.0005
soybeans	1	28	0.00005
summer squash	25	266	0.0038
tomatoes	38	479	0.035
tomato juice	38	- ^d	0.0088
tomato catsup	38	- ^d	0.00071
tomato paste	38	- ^d	0.00071
tomato puree	38	- ^d	0.00071
watermelon, pumpkins	58	124	0.0035
winter squash	25	- ^e	0.0095

^a percent of imported bananas treated

^b data translated from bulb onions

^c data translated from bananas

^d Value for tomatoes multiplied by reduction factor obtained from MRID 00129178 (juice = 0.25x; paste, puree, and catsup = 0.02x). It was assumed that most FDA tomato samples have been washed at the packing plant. Thus, the factors used are based on the residue reduction observed from processing washed tomatoes.

^e data translated from melons.

Since the average dietary residue values given in the table above are based on a specific value for % crop treated, a change in % crop treated will require that each residue value be multiplied by an appropriate conversion factor. For example, to determine the expected average dietary residue level in broccoli if the % crop treated changes from 40 to 60%, the residue value given above must be multiplied by 1.5 (0.0054 ppm).

Due to an absence of monitoring data for the following crops, tolerance values should be used in conjunction with available % crop treated data as in a normal TAS run: green onions, passion fruit, shallots, mint, and cocoa beans. A value at 1/10 the tolerance level may be used for coffee beans, based on data reviewed by Al Smith (RCB) in a memo dated 2/8/83 (PP#2E2744).

cc: Esther Saito(SIPS), Susan Stanton(RCB), FRSTR file for chlorothalonil, Reading File

Table 1

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 2158

DATE: 08/11/88

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CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Chlorothalonil	2yr feeding-dog	Renal tubular vacuolization	IPADI SF -->100	Rabbit teratology (Core-Supplementary)	TOX complete 3/14/86.
Caswell #2158	NOEL= 1 5000 mg/kg		OPP RFD= 0.015000		EPA verified 4/8/86.
CAS No 1897-45-6	60.00 ppm		EPA RFD= 0.015000		WHO last reviewed 1987.
A.I. CODE: 081901	LEL= 3.0000 mg/kg	Evidence of oncogenicity in rats and mice (kidney)			
CFR No 180 275	120.00 ppm				
	ONCO: Class B2 (TOX NOTE)		Q* = 0.011000	Q* calculated.	On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
01010AA	CRANBERRIES	10 RAW-FRESH OR NFS	2E2939	P 5 000000	0.012000	MONITORING	100 00	0.012000
01010AA	CRANBERRIES	21 COOKED-NFS	2E2939	P 5 000000	0.012000	MONITORING	100 00	0.012000
01010AA	CRANBERRIES	31 COOKED-FRESH OR CANNED	2E2939	P 5 000000	0.012000	MONITORING	100 00	0.012000
01010JA	CRANBERRY-JUICE	15 RAW-FRESH OR CANNED	2E2939	P 5 000000	0.012000	MONITORING	100 00	0.012000
01010JA	CRANBERRY-JUICE	31 COOKED-FRESH OR CANNED	2E2939	P 5 000000	0.012000	MONITORING	100 00	0.012000
05001AA	APRICOTS-FRESH	10 RAW-FRESH OR NFS	3F1382	P 0 500000	0.000500	MONITORING	100 00	0.000500
05001AA	APRICOTS-FRESH	21 COOKED-NFS	3F1382	P 0 500000	0.000500	MONITORING	100 00	0.000500
05001AA	APRICOTS-FRESH	31 COOKED-FRESH OR CANNED	3F1382	P 0 500000	0.000500	MONITORING	100 00	0.000500
05001DA	APRICOTS-DRIED	10 RAW-FRESH OR NFS	3F1382	P 0 500000	0.000500	MONITORING	100 00	0.000500
05001DA	APRICOTS-DRIED	22 COOKED-FRESH BAKED	3F1382	P 0 500000	0.000500	MONITORING	100 00	0.000500
05002AA	CHERRIES-FRESH	10 RAW-FRESH OR NFS	3F1382	P 0 500000	0.047000	MONITORING	100 00	0.047000
05002AA	CHERRIES-FRESH	21 COOKED-NFS	3F1382	P 0 500000	0.047000	MONITORING	100 00	0.047000
05002AA	CHERRIES-FRESH	31 COOKED-FRESH OR CANNED	3F1382	P 0 500000	0.047000	MONITORING	100 00	0.047000
05002AA	CHERRIES-FRESH	62 COOKED-FRESH OR FROZEN BAKED	3F1382	P 0 500000	0.047000	MONITORING	100 00	0.047000
05002AA	CHERRIES-FRESH	10 RAW SPECIFIED (NO CONSUMPTION)	3F1382	P 0 500000	0.047000	MONITORING	100 00	0.047000
05002AA	CHERRIES-FRESH	15 RAW-FRESH OR CANNED	3F1382	P 0 500000	0.047000	MONITORING	100 00	0.047000
05002AA	CHERRIES-FRESH	21 COOKED-NFS	3F1382	P 0 500000	0.047000	MONITORING	100 00	0.047000
05002AA	CHERRIES-FRESH	31 COOKED-FRESH OR CANNED	3F1382	P 0 500000	0.047000	MONITORING	100 00	0.047000
05004AA	PEACHES-FRESH	10 RAW-FRESH OR NFS	3F1382	P 0 500000	0.000500	MONITORING	100 00	0.000500
05004AA	PEACHES-FRESH	21 COOKED-NFS	3F1382	P 0 500000	0.000500	MONITORING	100 00	0.000500
05004AA	PEACHES-FRESH	31 COOKED-FRESH OR CANNED	3F1382	P 0 500000	0.000500	MONITORING	100 00	0.000500
05004AA	PEACHES-FRESH	51 COOKED-CANNED	3F1382	P 0 500000	0.000500	MONITORING	100 00	0.000500
05004DA	PEACHES-DRIED	10 RAW-FRESH OR NFS	3F1382	P 0 500000	0.000500	MONITORING	100 00	0.000500
05005AA	PLUMS-FRESH	10 RAW-FRESH OR NFS	2F2602	P 0 200000	0.000550	MONITORING	100 00	0.000550
05005AA	PLUMS-FRESH	31 COOKED-FRESH OR CANNED	2F2602	P 0 200000	0.000550	MONITORING	100 00	0.000550
05005AA	PLUMS-PRUNES	10 RAW-FRESH OR NFS	2F2602	P 0 200000	0.000550	MONITORING	100 00	0.000550
05005AA	PLUMS-PRUNES	21 COOKED-NFS	2F2602	P 0 200000	0.000550	MONITORING	100 00	0.000550
05005AA	PLUMS-PRUNES	31 COOKED-FRESH OR CANNED	2F2602	P 0 200000	0.000550	MONITORING	100 00	0.000550
05005JA	PRUNE-JUICE	10 RAW-FRESH OR NFS	2F2602	P 0 200000	0.000550	MONITORING	100 00	0.000550
05005JA	PRUNE-JUICE	62 COOKED-FRESH OR FROZEN BAKED	2F2602	P 0 200000	0.000550	MONITORING	100 00	0.000550
06002AA	BANANAS-UNSPEC	22 COOKED-FRESH BAKED	8F2067	P 0 050000	0.000500	MONITORING	100 00	0.000500
06002AB	BANANAS-FRESH	10 RAW-FRESH OR NFS	8F2067	P 0 050000	0.000500	MONITORING	100 00	0.000500
06002AB	BANANAS-FRESH	31 COOKED-FRESH OR CANNED	8F2067	P 0 050000	0.000500	MONITORING	100 00	0.000500
06002DA	BANANAS-DRIED	10 RAW-FRESH OR NFS	8F2067	P 0 050000	0.000500	MONITORING	100 00	0.000500
06002DA	BANANAS-DRIED	21 COOKED-NFS	8F2067	P 0 050000	0.000500	MONITORING	100 00	0.000500
06010AA	PAPAYAS-UNSPEC	00 NOT SPECIFIED (NO CONSUMPTION)	6E1761	P 15 00000	0.005000	MONITORING	100 00	0.005000
06010AB	PAPAYAS-PULP	10 RAW-FRESH OR NFS	6E1761	P 15 00000	0.005000	MONITORING	100 00	0.005000
06010AB	PAPAYAS-PULP	51 COOKED CANNED	6E1761	P 15 00000	0.005000	MONITORING	100 00	0.005000

Table 1 (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 2158 DATE: 08/11/88 PAGE 2

CHEMICAL	STUDY TYPE		EFFECTS		TOLERANCE (ppm)		REFERENCE DOSES		DATA CAPS/COMMENTS		STATUS
Chlorothalonil	2yr feeding-dog	Renal tubular vacuolization									TOX complete 3/14/86. EPA verified 4/8/86. WHO last reviewed 1987
Caswell #2158	NOEL=										
CAS No. 1897-45-6	60 00 ppm										
A.I. CODE: 081901	LEL=	Evidence of oncogenicity in rats and mice (kidney)									
CFR No 180 275	120.00 ppm										
	ONCO: Class B2 (TOX NOTE)									Q* calculated.	On IRIS
FOOD CODE	FOOD	FOOD FORM	PET #	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)				
060100A	PAPAYAS-DRIED	10 RAW-FRESH OR NFS	6E1761	0.005000	MONITORING	100 00	0.005000				
060101A	PAPAYAS-JUICE	10 RAW-FRESH OR NFS	631761	0.005000	MONITORING	100 00	0.005000				
060140A	PASSION FRUIT	00 NOT SPECIFIED (NO CONSUMPTION)	5E1569	3.000000	NOT AVAILABLE	100 00	3.000000				
060160A	PLANTAINS	21 COOKED-NFS	8F2067	0.005000	MONITORING	100 00	0.005000				
060160A	PLANTAINS	23 COOKED-FRESH-BOILED	8F2067	0.005000	MONITORING	100 00	0.005000				
060160A	PLANTAINS	25 COOKED-FRESH-FRIED	8F2067	0.005000	MONITORING	100 00	0.005000				
07001FA	COCOA BUTTER	21 COOKED-NFS	2E2744	0.050000	NOT AVAILABLE	100 00	0.050000				
07001SA	CHOCOLATE	10 RAW-FRESH OR NFS	2E2744	0.050000	NOT AVAILABLE	100 00	0.050000				
07001SA	CHOCOLATE	21 COOKED-NFS	2E2744	0.050000	NOT AVAILABLE	100 00	0.050000				
07001SA	CHOCOLATE	22 COOKED-FRESH-BAKED	2E2744	0.050000	NOT AVAILABLE	100 00	0.050000				
07002AA	COFFEE	21 COOKED-NFS	2E2744	0.020000	PROCESSING	100 00	0.020000				
10002AA	CANTALOUPE: UNSP	00 NOT SPECIFIED (NO CONSUMPTION)	IF1024	0.008300	MONITORING	100 00	0.008300				
10002AB	CANTALOUPE: PULP	10 RAW FRESH OR NFS	IF1024	0.008300	MONITORING	100 00	0.008300				
10002AB	CANTALOUPE: PULP	21 COOKED-NFS	IF1024	0.008300	MONITORING	100 00	0.008300				
10003AA	CASABAS	10 RAW FRESH OR NFS	IF1024	0.008300	MONITORING	100 00	0.008300				
10004AA	CHENSHANS	00 NOT SPECIFIED (NO CONSUMPTION)	IF1024	0.008300	MONITORING	100 00	0.008300				
10005AA	IKNE'DEW MELONS	10 RAW-FRESH OR NFS	IF1024	0.008300	MONITORING	100 00	0.008300				
10007AA	PERSION MELONS	00 NOT SPECIFIED (NO CONSUMPTION)	IF1024	0.008300	MONITORING	100 00	0.008300				
10008AA	WATERMELON	10 RAW-FRESH OR NFS	IF1024	0.003500	MONITORING	100 00	0.003500				
10008AA	WATERMELON	21 COOKED-NFS	IF1024	0.003500	MONITORING	100 00	0.003500				
100100A	CUCUMBERS	10 RAW-FRESH OR NFS	IF1024	0.003000	MONITORING	100 00	0.003000				
100100A	CUCUMBERS	11 RAW FRESH-PICKLED, CORNED, OR CURED	IF1024	0.003000	MONITORING	100 00	0.003000				
100100A	CUCUMBERS	21 COOKED-NFS	IF1024	0.003000	MONITORING	100 00	0.003000				
10011AA	PUMPKIN	21 COOKED-NFS	IF1024	0.003500	MONITORING	100 00	0.003500				
10011AA	PUMPKIN	22 COOKED-FRESH-BAKED	IF1024	0.003500	MONITORING	100 00	0.003500				
10011AA	PUMPKIN	62 COOKED-FRESH OR FROZEN-BAKED	IF1024	0.003500	MONITORING	100 00	0.003500				
10013AA	SQUASH-SUMMER	10 RAW-FRESH OR NFS	IF1024	0.003800	MONITORING	100 00	0.003800				
10013AA	SQUASH-SUMMER	21 COOKED-NFS	IF1024	0.003800	MONITORING	100 00	0.003800				
10014AA	SQUASH-WINTER	10 RAW-FRESH OR NFS	IF1024	0.009500	MONITORING	100 00	0.009500				
10014AA	SQUASH-WINTER	21 COOKED-NFS	IF1024	0.009500	MONITORING	100 00	0.009500				
10014AA	SQUASH-WINTER	31 COOKED-FRESH OR CANNED	IF1024	0.009500	MONITORING	100 00	0.009500				
10017AA	BITTER MELON	21 COOKED-NFS	IF1024	0.009500	MONITORING	100 00	0.009500				
10020AA	TOMEGOURD	00 NOT SPECIFIED (NO CONSUMPTION)	IF1024	0.009500	MONITORING	100 00	0.009500				
11005AA	TOMATOES-WHOLE	10 RAW-FRESH OR NFS	IF1024	0.035000	MONITORING	100 00	0.035000				
11005AA	TOMATOES-WHOLE	21 COOKED-NFS	IF1024	0.035000	MONITORING	100 00	0.035000				
11005AA	TOMATOES-WHOLE	31 COOKED-FRESH OR CANNED	IF1024	0.035000	MONITORING	100 00	0.035000				
11005AA	TOMATOES-WHOLE	10 RAW-FRESH OR NFS	IF1024	0.008800C	MONITORING	100 00	0.008800				
11005AA	TOMATOES-WHOLE	21 COOKED-NFS	IF1024	0.008800C	MONITORING	100 00	0.008800				
11005AA	TOMATOES-WHOLE	10 RAW FRESH OR NFS	IF1024	0.000710C	MONITORING	100 00	0.000710				
11005AA	TOMATOES-WHOLE	21 COOKED-NFS	IF1024	0.000710C	MONITORING	100 00	0.000710				

Table 1 (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 2158

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DATE: 08/11/88

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			IPADI	SF		
Chlorothaloni	2 yr feeding - dog	Renal tubular vacuolization	OPD RID= 0.015000	100	Rabbit teratology (Core-Supplementary)	TOX complete 3/14/86.
Caswell #2158	NOEL= 1 5000 mg/kg		EPA RID= 0.015000			EPA verified 4/8/86.
CAS NO 1897-45-6	60 00 ppm	Evidence of oncogenicity in rats and mice (kidney)				WHO last reviewed 1987
A I CODE 081901	LEL= 3 0000 mg/kg					
CFR NO 180 275	120 00 ppm					
	ONCO: Class B2 (TOX NOTE)		Q*= 0.011000		Q* calculated.	On IRIS

FOOD CODE	FOOD	TOLERANCE (ppm)	PET #	ANTICIPATED		CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
				RESIDUE (ppm)	AR STATISTIC TYPE		
11005RA	TOMATOES-PUREE	31 COOKED-FRESH OR CANNED	1F1024	P 5 000000	0.000710C MONITORING	100.00	0.000710
11005RA	TOMATOES-PUREE	32 COOKED-FRESH OR CANNED-BAKED	1F1024	P 5 000000	0.000710C MONITORING	100.00	0.000710
11005RA	TOMATOES-PUREE	51 COOKED-CANNED	1F1024	P 5 000000	0.000710C MONITORING	100.00	0.000710
11005TA	TOMATOES-PASTE	21 COOKED-FRESH	1F1024	P 5 000000	0.000710C MONITORING	100.00	0.000710
11005TA	TOMATOES-PASTE	22 COOKED-FRESH-BAKED	1F1024	P 5 000000	0.000710C MONITORING	100.00	0.000710
11005TA	TOMATOES-PASTE	31 COOKED-FRESH OR CANNED	1F1024	P 5 000000	0.000710C MONITORING	100.00	0.000710
11005UA	TOMATOES-CATSUP	21 COOKED-NFS	1F1024	P 5 000000	0.000710C MONITORING	100.00	0.000710
13002AA	CELERY	10 RAW-FRESH OR NFS	7F0599	P 15 000000	0.520000 MONITORING	100.00	0.520000
13002AA	CELERY	21 COOKED-NFS	7F0599	P 15 000000	0.520000 MONITORING	100.00	0.520000
13005AA	BROCCOLI	21 COOKED-NFS	7F0599	P 5 000000	0.003600 MONITORING	100.00	0.003600
13005AA	BROCCOLI	31 COOKED-FRESH OR CANNED	7F0599	P 5 000000	0.003600 MONITORING	100.00	0.003600
13005AA	BROCCOLI	63 COOKED-FRESH OR FROZEN-BOILED	7F0599	P 5 000000	0.003600 MONITORING	100.00	0.003600
13006AA	BRUSSEL SPROUTS	21 COOKED-NFS	7F0599	P 5 000000	0.001500 MONITORING	100.00	0.001500
13006AA	BRUSSEL SPROUTS	23 COOKED-FRESH-BOILED	7F0599	P 5 000000	0.001500 MONITORING	100.00	0.001500
13007AA	CABBAGE	10 RAW-FRESH OR NFS	7F0599	P 5 000000	0.019000 MONITORING	100.00	0.019000
13007AA	CABBAGE	11 RAW-FRESH-PICKLED, CORNED, OR CURED	7F0599	P 5 000000	0.019000 MONITORING	100.00	0.019000
13007AA	CABBAGE	21 COOKED-NFS	7F0599	P 5 000000	0.019000 MONITORING	100.00	0.019000
13008AA	CABBAGE	10 RAW-FRESH OR NFS	7F0599	P 5 000000	0.020000 MONITORING	100.00	0.020000
13008AA	CABBAGE	21 COOKED-NFS	7F0599	P 5 000000	0.020000 MONITORING	100.00	0.020000
13010AA	CABBAGE-CHINESE	10 RAW-FRESH OR NFS	7F0599	P 5 000000	0.027000 MONITORING	100.00	0.027000
13010AA	CABBAGE-CHINESE	21 COOKED-NFS	7F0599	P 5 000000	0.027000 MONITORING	100.00	0.027000
13016AA	FENNEL	00 NOT SPECIFIED (NO CONSUMPTION)	7F0599	P 15 000000	0.520000 MON (CELERY)	100.00	0.520000
14003AA	CARROTS	10 RAW-FRESH OR NFS	7E1887	P 1 000000	0.002200 MONITORING	100.00	0.002200
14003AA	CARROTS	21 COOKED-NFS	7E1887	P 1 000000	0.002200 MONITORING	100.00	0.002200
14003AA	CARROTS	23 COOKED-FRESH-BOILED	7E1887	P 1 000000	0.002200 MONITORING	100.00	0.002200
14003AA	CARROTS	31 COOKED-FRESH OR CANNED	7E1887	P 1 000000	0.002200 MONITORING	100.00	0.002200
14003AA	CARROTS	51 COOKED-CANNED	7E1887	P 1 000000	0.002200 MONITORING	100.00	0.002200
14007AA	GARLIC	10 RAW-FRESH OR NFS	4E1502	P 0 500000	0.000500 MONITORING	100.00	0.000500
14007AA	GARLIC	21 COOKED-NFS	4E1502	P 0 500000	0.000500 MONITORING	100.00	0.000500
14007AA	GARLIC	32 COOKED-FRESH OR CANNED-BAKED	4E1502	P 0 500000	0.000500 MONITORING	100.00	0.000500
14010AA	LEEKS	31 COOKED-FRESH OR CANNED	4E1502	P 0 500000	0.005000 MONITORING	100.00	0.005000
14011AA	ONIONS-DRY-BULB	10 RAW-FRESH OR NFS	4E1502	P 0 500000	0.002200 MONITORING	100.00	0.002200
14011AA	ONIONS-DRY-BULB	21 COOKED-NFS	4E1502	P 0 500000	0.002200 MONITORING	100.00	0.002200
14011AA	ONIONS-DRY-BULB	22 COOKED-FRESH-BAKED	4E1502	P 0 500000	0.002200 MONITORING	100.00	0.002200
14011AA	ONIONS-DRY-BULB	31 COOKED-FRESH OR CANNED	4E1502	P 0 500000	0.002200 MONITORING	100.00	0.002200
14011DA	ONIONS-DRIED	12 RAW-FRESH-DRIED	4E1502	P 0 500000	0.002200 MONITORING	100.00	0.002200
14013AA	POTATO(WH) - WHOLE	10 RAW-FRESH OR NFS	9F0743	P 0 100000	0.000500 MONITORING	100.00	0.000500
14013AA	POTATO(WH) - WHOLE	21 COOKED-NFS	9F0743	P 0 100000	0.000500 MONITORING	100.00	0.000500
14013AA	POTATO(WH) - WHOLE	22 COOKED-FRESH BAKED	9F0743	P 0 100000	0.000500 MONITORING	100.00	0.000500
14013AB	POTATO(WH) - UNSPE	22 COOKED-FRESH BAKED	9F0743	P 0 100000	0.000500 MONITORING	100.00	0.000500

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ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 2158

CHEMICAL		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
FOOD CODE	FOOD	FOOD FORM	PET #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)			
1401JAC	Chlorothalonil	2yr. feeding- dog	Renal tubular vacuolization.								
1401JAC	Caswell #2158	NOEL= 1.5000 mg/kg	Evidence of oncogenicity in rats and mice (kidney)								
1401JAC	CAS No 1897-45-6	60.00 ppm									
1401JAC	A I CODE 081901	LEL= 3.0000 mg/kg									
1401JDA	CFR No 180 275	120.00 ppm									
1401JDA	ONCO: Class B2 (TOX NOTE)										
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Table 1 (Cont.)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 2158 DATE: 08/11/88 PAGE 5

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Chlorothalonil	2yr. feeding - dog	Renal tubular vacuolization	PADI SF --> 100	Rabbit teratology	TOX complete 3/14/86.
Caswell #2158	NOEL = 1 5000 mg/kg		OPP RfD = 0 015000	(Core-Supplementary)	EPA verified 4/8/86.
CAS No. 1897-45-6	60 00 ppm		EPA RfD = 0 015000		WHO last reviewed 1987.
A.I. CODE: 081901	LEL = 3 0000 mg/kg	Evidence of oncogenicity in rats and mice (kidney)			
CFR No. 180 275	120 00 ppm				
	ONCO: Class B2 (TOX NOTE)		Q* = 0.011000	Q* calculated.	On IRIS.

FOOD CODE	FOOD	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
28023AA	SOYBEANS-UNSPEC	21 COOKED-NFS	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AB	SOYBEANS-DRY	10 RAW-FRESH OR NFS	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AB	SOYBEANS-DRY	21 COOKED-NFS	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AB	SOYBEANS-DRY	23 COOKED-FRESH-BOILED	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AB	SOYBEANS-DRY	25 COOKED-FRESH-FRIED	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AB	SOYBEANS-DRY	31 COOKED-FRESH OR CANNED	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AA	SOY-FL, FULL FAT	21 COOKED-NFS	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AA	SOY-FL, FULL FAT	22 COOKED-FRESH-BAKED	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AB	SOY-FL, FULL FAT	31 COOKED FRESH OR CANNED	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AB	SOY-FL, LOW FAT	21 COOKED-NFS	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AC	SOY-FL, DEFAT	10 RAW-FRESH OR NFS	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AC	SOY-FL, DEFAT	21 COOKED NFS	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AC	SOY-FL, DEFAT	22 COOKED FRESH-BAKED	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AC	SOY-FL, DEFAT	51 COOKED CANNED	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28023AC	SOY-FL, DEFAT	53 COOKED CANNED BOILED	6F1799	P 0.200000	0.000050	MONITORING	100 00	0.000050
28081AA	PEPPERMINT	00 NOT SPECIFIED (NO CONSUMPTION)	1E2473	P 2.000000	2.000000	NOT AVAILABLE	100 00	2.000000
28081AA	PEPPERMINT OIL	00 NOT SPECIFIED (NO CONSUMPTION)	1E2473	P 2.000000	2.000000	NOT AVAILABLE	100 00	2.000000
28081AA	SPEARMINT	00 NOT SPECIFIED (NO CONSUMPTION)	1E2473	P 2.000000	2.000000	NOT AVAILABLE	100 00	2.000000
28081AA	SPEARMINT OIL	00 NOT SPECIFIED (NO CONSUMPTION)	1E2473	P 2.000000	2.000000	NOT AVAILABLE	100 00	2.000000

Table 2

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE 08/11/88

PAGE 1

CHEMICAL INFORMATION		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
Chlorothalonil	2-yr feeding dog	Renal tubular vacuolization	IPAD1 SF -->100	Rabbit teratology (Core-Supplementary)	TOX complete 3/14/86						
Caswell #2158	NOEL= 1 5000 mg/kg		OPP Rfd= 0 015000		EPA verified 4/8/86						
CAS No 1897-45-6	60 00 ppm		EPA Rfd= 0 015000		WHO last reviewed 1987						
A I CODE 081901	LEL= 3 0000 mg/kg	Evidence of oncogenicity in rats and mice (kidney)									
CFR No 180 275	120 00 ppm										
	ONCO: Class B2 (TOX NOTE)		Q* = 0 011000	Q* calculated	On IRIS						
POPULATION SUBGROUP		TOTAL THRC (MG/KG BODY WEIGHT/DAY)		NEW THRC AS PERCENT OF RFD		DIFFERENCE AS PERCENT OF RFD		EFFECT OF ANTICIPATED RESIDUES			
		CURRENT THRC*	NEW THRC**								
U S POPULATION - 48 STATES		0 012611	0 012611	84 073733	0 000000	0 000071	0 47418				
U S POPULATION - SPRING SEASON		0 012335	0 012335	82 235873	0 000000	0 000082	0 55077				
U S POPULATION - SUMMER SEASON		0 014354	0 014354	95 694733	0 000000	0 000075	0 50420				
U S POPULATION - FALL SEASON		0 012029	0 012029	80 196120	0 000000	0 000062	0 41667				
U S POPULATION - WINTER SEASON		0 011706	0 011706	78 041820	0 000000	0 000061	0 42493				
NORTHEAST REGION		0 012814	0 012814	85 432546	0 000000	0 000072	0 48216				
NORTH CENTRAL REGION		0 012711	0 012711	84 744386	0 000000	0 000070	0 47111				
SOUTHERN REGION		0 011687	0 011687	77 913340	0 000000	0 000059	0 39111				
WESTERN REGION		0 013758	0 013758	91 725640	0 000000	0 000089	0 59882				
HISPANICS		0 012588	0 012588	83 922953	0 000000	0 000078	0 52367				
NON HISPANIC WHITES		0 012977	0 012977	86 514460	0 000000	0 000074	0 49734				
BLACKS		0 010011	0 010011	66 876733	0 000000	0 000043	0 28761				
OTHERS		0 014166	0 014166	94 445706	0 000000	0 000089	0 59593				
NURSING INFANTS (< 1 YEAR OLD)		0 006350	0 006350	42 338580	0 000000	0 000015	0 10350				
NON NURSING INFANTS (< 1 YEAR OLD)		0 015674	0 015674	104 495626	0 000000	0 000048	0 32054				
FEMALES (13+ YEARS, PREGNANT)		0 010285	0 010285	68 571260	0 000000	0 000060	0 40312				
FEMALES (13+ YEARS, NURSING CHILDREN (1-6 YEARS OLD))		0 012008	0 012008	80 055706	0 000000	0 000074	0 49886				
CHILDREN (7-12 YEARS OLD)		0 022414	0 022414	149 432886	0 000000	0 000100	0 66807				
MALES (13-19 YEARS OLD)		0 017966	0 017966	119 779633	0 000000	0 000084	0 56128				
FEMALES (13-19 YEARS OLD, NOT PREG OR NURSING)		0 012309	0 012309	82 061260	0 000000	0 000059	0 39651				
MALES (20 YEARS AND OLDER)		0 011107	0 011107	74 051566	0 000000	0 000055	0 36921				
FEMALES (20 YEARS AND OLDER, NOT PREG OR NURS)		0 010222	0 010222	68 151900	0 000000	0 000068	0 45417				
		0 010616	0 010616	70 776193	0 000000	0 000068	0 45722				

*Current THRC does not include new or pending tolerances.

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

TABLE 3

COMMODITY CONTRIBUTION TO CHLOROTHALONIL EXPOSURE AND
ONCOGENIC RISK (OVERALL U.S. POPULATION)

<u>COMMODITY</u>	<u>% CROP TREATED</u>	<u>RESIDUE DATA</u>	<u>EXPOSURE (UG/KG/DAY)</u>	<u>ONCOGENIC RISK^a</u>
CELERY	47	MONITORING	0.031699	3.5E-07
TOMATOES	38	MONITORING ^C	0.017884	2.0E-07
GREEN ONIONS	100	TOLERANCE	0.009779	1.1E-07
COCOA BEANS	100	TOLERANCE	0.002070	2.3E-08
CABBAGE	30	MONITORING	0.001779	2.0E-08
CHERRIES	10	MONITORING	0.001753	1.9E-08
COFFEE	100	PROCESSING	0.000926	1.0E-08
DRY BEANS	100	MONITORING	0.000724	8.0E-09
POTATOES	10	MONITORING	0.000566	6.2E-09
SNAP BEANS	24	MONITORING	0.000520	5.7E-09
CRANBERRIES	100	MONITORING	0.000405	4.5E-09
CARROTS	41	MONITORING	0.000382	4.2E-09
CANTALOUPE	22	MONITORING	0.000369	4.1E-09
WINTER SQUASH	25	MONITORING	0.000308	3.4E-09
WATERMELON	58	MONITORING	0.000267	2.9E-09
PEANUTS	70	MONITORING	0.000262	2.9E-09
ONIONS	43	MONITORING	0.000236	2.6E-09
CUCUMBERS	47	MONITORING	0.000216	2.4E-09
BROCCOLI	40	MONITORING	0.000177	1.9E-09
MELONS, OTHER	22	MONITORING	0.000158	1.7E-09
SUMMER SQUASH	25	MONITORING	0.000120	1.3E-09
SWEET CORN	10	MONITORING	0.000119	1.3E-09
BANANAS	10	MONITORING	0.000115	1.3E-09

TABLE 3 (CON'T.)

COMMODITY	% CROP TREATED	RESIDUE DATA	EXPOSURE (UG/KG/DAY)	ONCOGENIC RISK ^a
PEACHES	10	MONITORING	0.000112	1.2E-09
PAPAYAS	100	MONITORING	0.000038	4.2E-10
PLUMS	11	MONITORING	0.000033	3.6E-10
CAULIFLOWER	40	MONITORING	0.000032	3.5E-10
APRICOTS	10	MONITORING	0.000018	2.0E-10
SOYBEANS	1	MONITORING	0.000016	1.8E-10
PUMPKINS	58	MONITORING	0.000015	1.7E-10
CHINESE CABBAGE	30	MONITORING	0.000013	1.4E-10
BRUSSELS SPROUTS	30	MONITORING	0.000011	1.2E-10
NECTARINES	10	MONITORING	0.000006	6.6E-11
PARSNIPS	10	MONITORING	<0.000001	<1.1E-11
PLAINTAINS	10	MONITORING	<0.000001	<1.1E-11
LEEKs	100	MONITORING	<0.000001	<1.1E-11
GARLIC	10	MONITORING	<0.000001	<1.1E-11
FENNEL ^b	47	MONITORING	INEST.	INEST.
SHALLOTS ^b	100	TOLERANCE	INEST.	INEST.
PASSION FRUIT ^b	100	TOLERANCE	INEST.	INEST.
MINT ^b	100	TOLERANCE	INEST.	INEST.
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TOTAL	—		0.071128	7.8E-07

^aONCOGENIC RISK IS ESTIMATED FOR THE OVERALL U.S. POPULATION AND IS BASED ON A Q_1^* OF $0.011 \text{ (MG/KG/DAY)}^{-1}$.

^bTHE TAS DATABASE DOES NOT CONTAIN CONSUMPTION DATA FOR THESE FOOD FORMS. SINCE CONSUMPTION IS LIKELY QUITE LOW, RISK FROM THESE FOODS WOULD PROBABLY BE INSIGNIFICANT.

^cAVAILABLE INFORMATION ON PROCESSING WAS USED IN CONJUNCTION WITH THE MONITORING DATA TO ARRIVE AT RESIDUES FOR PROCESSED TOMATO PRODUCTS.