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

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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Anticipated Residue Data for Chlorothalonil

FROM: Debra F. Edwards, Ph.D.
Residue Chemistry Branch
Hazard Evaluation Division (TS-769C)

Debra Edwards

THROUGH: William J. Boodee, Supervisory Chemist
Residue Chemistry Branch
Hazard Evaluation Division (TS-769C)

WJB

TO: Charles Frick, Acting TAS Program Manager
Residue Chemistry Branch
Hazard Evaluation Division (TS-769C)

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)

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

FOOD CODE	FOOD	FOOD FORM	PET #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)		AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
					RESIDUE (ppm)	AR			
01010A	Chloroethalonil	10 RAW-FRESH OR NFS	2E2939	P 5.000000	0.012000	MONITORING	100.00	0.012000	
01010A	Caswell #215B	21 COOKED-NFS	2E2939	P 5.000000	0.012000	MONITORING	100.00	0.012000	
01010A	CAS No 1897-45-6	31 COOKED-FRESH OR CANNED	2E2939	P 5.000000	0.012000	MONITORING	100.00	0.012000	
01010JA	A.I. CODE: 081901	15 RAW-FRESH OR CANNED	2E2939	P 5.000000	0.012000	MONITORING	100.00	0.012000	
01010JA	CFR No 180 275	31 COOKED-FRESH OR CANNED	2E2939	P 5.000000	0.012000	MONITORING	100.00	0.012000	
05001AA		10 RAW-FRESH OR NFS	3F1382	P 0.500000	0.000500	MONITORING	100.00	0.000500	
05001AA		21 COOKED-NFS	3F1382	P 0.500000	0.000500	MONITORING	100.00	0.000500	
05001AA		31 COOKED-FRESH OR CANNED	3F1382	P 0.500000	0.000500	MONITORING	100.00	0.000500	
05001DA		10 RAW-FRESH OR NFS	3F1382	P 0.500000	0.000500	MONITORING	100.00	0.000500	
05001DA		22 COOKED-FRESH BAKED	3F1382	P 0.500000	0.000500	MONITORING	100.00	0.000500	
05002AA		10 RAW-FRESH OR NFS	3F1382	P 0.500000	0.047000	MONITORING	100.00	0.047000	
05002AA		21 COOKED-NFS	3F1382	P 0.500000	0.047000	MONITORING	100.00	0.047000	
05002AA		31 COOKED-FRESH OR CANNED	3F1382	P 0.500000	0.047000	MONITORING	100.00	0.047000	
05002AA		62 COOKED-FRESH OR FROZEN BAKED	3F1382	P 0.500000	0.047000	MONITORING	100.00	0.047000	
05002AA		10 RAW-FRESH OR NFS	3F1382	P 0.500000	0.047000	MONITORING	100.00	0.047000	
05002AA		21 COOKED-NFS	3F1382	P 0.500000	0.047000	MONITORING	100.00	0.047000	
05002AA		31 COOKED-FRESH OR CANNED	3F1382	P 0.500000	0.000500	MONITORING	100.00	0.000500	
05004AA		10 RAW-FRESH OR NFS	3F1382	P 0.500000	0.000500	MONITORING	100.00	0.000500	
05004AA		21 COOKED-NFS	3F1382	P 0.500000	0.000500	MONITORING	100.00	0.000500	
05004AA		31 COOKED-FRESH OR CANNED	3F1382	P 0.500000	0.000500	MONITORING	100.00	0.000500	
05004AA		51 COOKED-CANNED	3F1382	P 0.500000	0.000500	MONITORING	100.00	0.000500	
05004DA		10 RAW-FRESH OR NFS	3F1382	P 0.500000	0.000500	MONITORING	100.00	0.000500	
05005AA		10 RAW-FRESH OR NFS	2F2602	P 0.200000	0.000550	MONITORING	100.00	0.000550	
05005AA		31 COOKED-FRESH OR CANNED	2F2602	P 0.200000	0.000550	MONITORING	100.00	0.000550	
05005DA		10 RAW-FRESH OR NFS	2F2602	P 0.200000	0.000550	MONITORING	100.00	0.000550	
05005DA		21 COOKED-NFS	2F2602	P 0.200000	0.000550	MONITORING	100.00	0.000550	
05005DA		31 COOKED-FRESH OR CANNED	2F2602	P 0.200000	0.000550	MONITORING	100.00	0.000550	
05005JA		10 RAW-FRESH OR NFS	2F2602	P 0.200000	0.000550	MONITORING	100.00	0.000550	
05005JA		62 COOKED-FRESH OR FROZEN-BAKED	2F2602	P 0.200000	0.000550	MONITORING	100.00	0.000550	
06002AA		22 COOKED-FRESH-BAKED	8F2067	P 0.050000	0.000500	MONITORING	100.00	0.000500	
06002AB		10 RAW-FRESH OR NFS	8F2067	P 0.050000	0.000500	MONITORING	100.00	0.000500	
06002AB		21 COOKED-NFS	8F2067	P 0.050000	0.000500	MONITORING	100.00	0.000500	
06002AB		31 COOKED-FRESH OR CANNED	8F2067	P 0.050000	0.000500	MONITORING	100.00	0.000500	
06002DA		10 RAW-FRESH OR NFS	8F2067	P 0.050000	0.000500	MONITORING	100.00	0.000500	
06002DA		21 COOKED-NFS	8F2067	P 0.050000	0.000500	MONITORING	100.00	0.000500	
06010AA		00 NOT SPECIFIED (NO CONSUMPTION)	6E1761	P 15.000000	0.005000	MONITORING	100.00	0.005000	
06010AB		10 RAW-FRESH OR NFS	6E1761	P 15.000000	0.005000	MONITORING	100.00	0.005000	
06010AB		51 COOKED-CANNED	6E1761	P 15.000000	0.005000	MONITORING	100.00	0.005000	

REFERENCE DOSES: (PAD) SF -->100
 OPP RFD= 0.015000
 EPA RFD= 0.015000
 DATA GAPS/COMMENTS: Rabbit teratology (Core-Supplementary).
 STATUS: TOX complete 3/14/86.
 EPA verified 4/8/86.
 WHO last reviewed 1987.
 Q* = 0.011000 Q* calculated. On IRIS.

Table 1 (Con't)

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

FOOD CODE	FOOD	FOOD FORM	PET #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)	EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
									STUDY TYPE	RENAL TUBULAR VACUOLIZATION	IPADI SF -->100	OPP RfD= 0.015000		
060100A	PAPAYAS-DRIED	10 RAW-FRESH OR NFS	6E1761	P 15 00000	0.005000	MONITORING	100 00	0.005000						
06010JA	PAPAYAS-JUICE	10 RAW-FRESH OR NFS	6J1761	P 15 00000	0.005000	MONITORING	100 00	0.005000						
06014AA	PASSION FRUIT	00 NOT SPECIFIED (NO CONSUMPTION)	5E1569	P 3 000000	3.000000	NOT AVAILABLE	100 00	3.000000						
06016AA	PLANTAINS	21 COOKED-NFS	8F2067	P 0 050000	0.000500	MONITORING	100 00	0.000500						
06016AA	PLANTAINS	23 COOKED-FRESH-BOILED	8F2067	P 0 050000	0.000500	MONITORING	100 00	0.000500						
06016AA	PLANTAINS	25 COOKED-FRESH-FRIED	8F2067	P 0 050000	0.000500	MONITORING	100 00	0.000500						
07001FA	COCOA BUTTER	21 COOKED-NFS	2E2744	P 0 050000	0.000500	MONITORING	100 00	0.000500						
07001SA	CHOCOLATE	10 RAW-FRESH OR NFS	2E2744	P 0 050000	0.050000	NOT AVAILABLE	100 00	0.050000						
07001SA	CHOCOLATE	21 COOKED-NFS	2E2744	P 0 050000	0.050000	NOT AVAILABLE	100 00	0.050000						
07001SA	CHOCOLATE	22 COOKED-FRESH-BAKED	2E2744	P 0 050000	0.050000	NOT AVAILABLE	100 00	0.050000						
07002AA	COFFEE	21 COOKED-NFS	2E2744	P 0 200000	0.020000	PROCESSING	100 00	0.020000						
10002AA	CANTALOUPE-UNSP	00 NOT SPECIFIED (NO CONSUMPTION)	IF1024	P 5 000000	0.008300	MONITORING	100 00	0.008300						
10002AB	CANTALOUPE PULP	10 RAW FRESH OR NFS	IF1024	P 5 000000	0.008300	MONITORING	100 00	0.008300						
10002AB	CANTALOUPE PULP	21 COOKED-NFS	IF1024	P 5 000000	0.008300	MONITORING	100 00	0.008300						
10003AA	CASAVAS	10 RAW FRESH OR NFS	IF1024	P 5 000000	0.008300	MONITORING	100 00	0.008300						
10004AA	CASAVAS	00 NOT SPECIFIED (NO CONSUMPTION)	IF1024	P 5 000000	0.008300	MONITORING	100 00	0.008300						
10005AA	HONEYDEW MELONS	10 RAW-FRESH OR NFS	IF1024	P 5 000000	0.008300	MONITORING	100 00	0.008300						
10007AA	PERSHON MELONS	00 NOT SPECIFIED (NO CONSUMPTION)	IF1024	P 5 000000	0.008300	MONITORING	100 00	0.008300						
10008AA	WATERMELON	10 RAW-FRESH OR NFS	IF1024	P 5 000000	0.003500	MONITORING	100 00	0.003500						
10008AA	WATERMELON	21 COOKED-NFS	IF1024	P 5 000000	0.003500	MONITORING	100 00	0.003500						
10010AA	CUCUMBERS	10 RAW-FRESH OR NFS	IF1024	P 5 000000	0.003000	MONITORING	100 00	0.003000						
10010AA	CUCUMBERS	11 RAW FRESH-PICKLED,CORNEED,OR CURED	IF1024	P 5 000000	0.003000	MONITORING	100 00	0.003000						
10010AA	CUCUMBERS	21 COOKED-NFS	IF1024	P 5 000000	0.003000	MONITORING	100 00	0.003000						
10011AA	PUMPKIN	21 COOKED-NFS	IF1024	P 5 000000	0.003500	MONITORING	100 00	0.003500						
10011AA	PUMPKIN	22 COOKED-FRESH-BAKED	IF1024	P 5 000000	0.003500	MONITORING	100 00	0.003500						
10011AA	PUMPKIN	62 COOKED-FRESH OR FROZEN-BAKED	IF1024	P 5 000000	0.003500	MONITORING	100 00	0.003500						
10013AA	SQUASH-SUMMER	10 RAW-FRESH OR NFS	IF1024	P 5 000000	0.003800	MONITORING	100 00	0.003800						
10013AA	SQUASH-SUMMER	21 COOKED-NFS	IF1024	P 5 000000	0.003800	MONITORING	100 00	0.003800						
10014AA	SQUASH-WINTER	10 RAW-FRESH OR NFS	IF1024	P 5 000000	0.009500	MONITORING	100 00	0.009500						
10014AA	SQUASH-WINTER	21 COOKED-NFS	IF1024	P 5 000000	0.009500	MONITORING	100 00	0.009500						
10014AA	SQUASH-WINTER	31 COOKED-FRESH OR CANNED	IF1024	P 5 000000	0.009500	MONITORING	100 00	0.009500						
10017AA	BITTER MELON	21 COOKED-NFS	IF1024	P 5 000000	0.009500	MONITORING	100 00	0.009500						
10020AA	TOMEGOURD	00 NOT SPECIFIED (NO CONSUMPTION)	IF1024	P 5 000000	0.009500	MONITORING	100 00	0.009500						
11005AA	TOMATOES-WHOLE	10 RAW-FRESH OR NFS	IF1024	P 5 000000	0.035000	MONITORING	100 00	0.035000						
11005AA	TOMATOES-WHOLE	21 COOKED-NFS	IF1024	P 5 000000	0.035000	MONITORING	100 00	0.035000						
11005AA	TOMATOES-WHOLE	31 COOKED-FRESH OR CANNED	IF1024	P 5 000000	0.035000	MONITORING	100 00	0.035000						
11005JA	TOMATOES-JUICE	10 RAW-FRESH OR NFS	IF1024	P 5 000000	0.008800C	MONITORING	100 00	0.008800						
11005JA	TOMATOES-JUICE	21 COOKED NFS	IF1024	P 5 000000	0.008800C	MONITORING	100 00	0.008800						
11005RA	TOMATOES-PUREE	10 RAW FRESH OR NFS	IF1024	P 5 000000	0.000710C	MONITORING	100 00	0.000710						
11005RA	TOMATOES-PUREE	21 COOKED NFS	IF1024	P 5 000000	0.000710C	MONITORING	100 00	0.000710						

Table 1 (Con't)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 2158 DATE: 08/11/88 PAGE: 3

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			IPADI SF	OPP RID=		
Chlorothaloni	2 yr. feeding - dog	Renal tubular vacuolization	--100	0.015000	Rabbit teratology (Core-Supplementary)	TOX complete 3/14/86.
Caswell #2158	NOEL= 1 5000 mg/kg			0.015000		EPA verified 4/8/86.
CAS NO 1897-45-6	60.00 ppm	Evidence of oncogenicity in rats and mice (kidney)		0.015000		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	FOOD FORM	PET #	TOLERANCE (ppm)	ANTICIPATED		RES. VALUE USED IN TMS RUN (ppm)
					RESIDUE (ppm)	AR STATISTIC TYPE	
11005RA	TOMATOES-PUREE	31 COOKED-FRESH OR CANNED	1F1024	P 5 000000	0.000710C	MONITORING	0.000710
11005RA	TOMATOES-PUREE	32 COOKED-FRESH OR CANNED-BAKED	1F1024	P 5 000000	0.000710C	MONITORING	0.000710
11005RA	TOMATOES-PUREE	51 COOKED-CANNED	1F1024	P 5 000000	0.000710C	MONITORING	0.000710
11005TA	TOMATOES-PASTE	21 COOKED-NFS	1F1024	P 5 000000	0.000710C	MONITORING	0.000710
11005TA	TOMATOES-PASTE	22 COOKED-FRESH-BAKED	1F1024	P 5 000000	0.000710C	MONITORING	0.000710
11005TA	TOMATOES-PASTE	31 COOKED-FRESH OR CANNED	1F1024	P 5 000000	0.000710C	MONITORING	0.000710
11005UA	TOMATOES-CATSUP	21 COOKED-NFS	1F1024	P 5 000000	0.000710C	MONITORING	0.000710
11002AA	CELERY	10 RAW-FRESH OR NFS	7F0599	P 15 000000	0.520000	MONITORING	0.520000
11002AA	CELERY	21 COOKED-NFS	7F0599	P 15 000000	0.520000	MONITORING	0.520000
11005AA	BROCCOLI	21 COOKED-NFS	7F0599	P 5 000000	0.003600	MONITORING	0.003600
11005AA	BROCCOLI	31 COOKED-FRESH OR CANNED	7F0599	P 5 000000	0.003600	MONITORING	0.003600
11005AA	BROCCOLI	63 COOKED-FRESH OR FROZEN-BOILED	7F0599	P 5 000000	0.003600	MONITORING	0.003600
11006AA	BRUSSEL SPROUTS	21 COOKED-NFS	7F0599	P 5 000000	0.001500	MONITORING	0.001500
11006AA	BRUSSEL SPROUTS	23 COOKED-FRESH-BOILED	7F0599	P 5 000000	0.001500	MONITORING	0.001500
11007AA	CABBAGE	10 RAW-FRESH OR NFS	7F0599	P 5 000000	0.019000	MONITORING	0.019000
11007AA	CABBAGE	11 RAW-FRESH-PICKLED, CORNED, OR CURED	7F0599	P 5 000000	0.019000	MONITORING	0.019000
11007AA	CABBAGE	21 COOKED-NFS	7F0599	P 5 000000	0.019000	MONITORING	0.019000
11008AA	CAULIFLOWER	10 RAW-FRESH OR NFS	7F0599	P 5 000000	0.002000	MONITORING	0.002000
11008AA	CAULIFLOWER	21 COOKED-NFS	7F0599	P 5 000000	0.002000	MONITORING	0.002000
11010AA	CABBAGE-CHINESE	10 RAW-FRESH OR NFS	7F0599	P 5 000000	0.002700	MONITORING	0.002700
11010AA	CABBAGE-CHINESE	21 COOKED-NFS	7F0599	P 5 000000	0.002700	MONITORING	0.002700
11016AA	FENNEL	00 NOT SPECIFIED (NO CONSUMPTION)	7F0599	P 15 000000	0.520000	MON (CELERY)	0.002700
14003AA	CARROTS	10 RAW-FRESH OR NFS	7E1887	P 1 000000	0.002200	MONITORING	0.002200
14003AA	CARROTS	21 COOKED-NFS	7E1887	P 1 000000	0.002200	MONITORING	0.002200
14003AA	CARROTS	23 COOKED-FRESH-BOILED	7E1887	P 1 000000	0.002200	MONITORING	0.002200
14003AA	CARROTS	31 COOKED-FRESH OR CANNED	7E1887	P 1 000000	0.002200	MONITORING	0.002200
14003AA	CARROTS	51 COOKED-CANNED	7E1887	P 1 000000	0.002200	MONITORING	0.002200
14007AA	GARLIC	10 RAW-FRESH OR NFS	4E1502	P 0 500000	0.000500	MONITORING	0.000500
14007AA	GARLIC	21 COOKED-NFS	4E1502	P 0 500000	0.000500	MONITORING	0.000500
14007AA	GARLIC	32 COOKED-FRESH OR CANNED-BAKED	4E1502	P 0 500000	0.000500	MONITORING	0.000500
14010AA	LEEKS	31 COOKED-FRESH OR CANNED	4E1502	P 5 000000	0.005000	MONITORING	0.005000
14011AA	ONIONS-DRY-BULB	10 RAW-FRESH OR NFS	4E1502	P 0 500000	0.002200	MONITORING	0.002200
14011AA	ONIONS-DRY-BULB	21 COOKED-NFS	4E1502	P 0 500000	0.002200	MONITORING	0.002200
14011AA	ONIONS-DRY-BULB	22 COOKED-FRESH-BAKED	4E1502	P 0 500000	0.002200	MONITORING	0.002200
14011AA	ONIONS-DRY-BULB	31 COOKED-FRESH OR CANNED	4E1502	P 0 500000	0.002200	MONITORING	0.002200
14011DA	ONIONS-DRYED	12 RAW-FRESH-DRIED	4E1502	P 0 500000	0.002200	MONITORING	0.002200
14013AA	POTATO(WH)-WHOLE	10 RAW-FRESH OR NFS	9F0743	P 0 100000	0.000500	MONITORING	0.000500
14013AA	POTATO(WH)-WHOLE	21 COOKED-NFS	9F0743	P 0 100000	0.000500	MONITORING	0.000500
14013AA	POTATO(WH)-WHOLE	22 COOKED-FRESH-BAKED	9F0743	P 0 100000	0.000500	MONITORING	0.000500
14013AB	POTATO(WH)-UNSP	22 COOKED-FRESH-BAKED	9F0743	P 0 100000	0.000500	MONITORING	0.000500

Table 1 (Cont.)

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 215B DATE: 08/11/88 PAGE: 4

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GRPS/COMMENTS	STATUS
			IPADI	SF -->100		
Chloroethalonil	2yr. feeding- dog	Renal tubular			Rabbit teratology	TOX complete 3/14/86.
Caswell #215B	NOEL= 1.5000 mg/kg	vacuolization.			(Core-Supplementary)	EPA verified 4/8/86.
CAS No 1897-45-6	60 00 ppm	Evidence of oncogenicity				WHO last reviewed 1987.
A I CODE 081901	LEL= 3.0000 mg/kg	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)
14013AC	POTATO(WH)-PULP	21 COOKED-NFS	9F0743	P 0.100000	0.000500	MONITORING	100.00	0.000500
14013AC	POTATO(WH)-PULP	22 COOKED-FRESH-BAKED	9F0743	P 0.100000	0.000500	MONITORING	100.00	0.000500
14013AC	POTATO(WH)-PULP	23 COOKED-FRESH-BOILED	9F0743	P 0.100000	0.000500	MONITORING	100.00	0.000500
14013AC	POTATO(WH)-PULP	25 COOKED-FRESH-FRIED	9F0743	P 0.100000	0.000500	MONITORING	100.00	0.000500
14013DA	POTATO(WH)-DRY	10 RAW-FRESH OR NFS	9F9743	P 0.100000	0.000500	MONITORING	100.00	0.000500
14013DA	POTATO(WH)-DRY	31 COOKED-FRESH OR CANNED	9F9743	P 0.100000	0.000500	MONITORING	100.00	0.000500
14013DA	POTATO(WH)-PEEL	22 COOKED-FRESH-BAKED	9F0743	P 0.100000	0.000500	MONITORING	100.00	0.000500
14017AA	SHALLOTS	00 NOT SPECIFIED (NO CONSUMPTION)	4E1502	P 5.000000	5.000000	NOT AVAILABLE	100.00	5.000000
14021AA	PARSNIPS	21 COOKED-NFS	7E1887	P 1.000000	0.000500	MONITORING	100.00	0.000500
15001AA	BEANS-DRY-GRN NO	00 NOT SPECIFIED (NO CONSUMPTION)	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15001AB	BEANS-DRY-KIDNEY	21 COOKED-NFS	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15001AB	BEANS-DRY-KIDNEY	31 COOKED FRESH OR CANNED	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15001AA	BEANS-DRY-LIMA	21 COOKED NFS	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15001AA	BEANS-DRY-LIMA	21 COOKED NFS	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15001AA	BEANS-DRY-LIMA	31 COOKED FRESH OR CANNED	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15001AA	BEANS-DRY-OTHER	25 COOKED-FRESH-FRIED	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15001AA	BEANS-DRY-OTHER	31 COOKED-FRESH OR CANNED	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15001AF	BEANS DRY-PINTO	21 COOKED-NFS	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15003AA	BEANS SUCC-GREEN	21 COOKED-NFS	1F1024	P 5.000000	0.002600	MONITORING	100.00	0.002600
15005AA	CORN SWEET	10 RAW-FRESH OR NFS	7F0599	P 1.000000	0.000500	MONITORING	100.00	0.000500
15005AA	CORN SWEET	21 COOKED-NFS	7F0599	P 1.000000	0.000500	MONITORING	100.00	0.000500
15005AA	CORN SWEET	31 COOKED-FRESH OR CANNED	7F0599	P 1.000000	0.000500	MONITORING	100.00	0.000500
15006AA	PEANUTS-WHOLE	10 RAW-FRESH OR NFS	1F1024	P 0.300000	0.003500	MONITORING	100.00	0.003500
15006AA	PEANUTS-WHOLE	21 COOKED-NFS	1F1024	P 0.300000	0.003500	MONITORING	100.00	0.003500
15006AA	PEANUTS-WHOLE	22 COOKED-FRESH-BAKED	1F1024	P 0.300000	0.003500	MONITORING	100.00	0.003500
15013AA	MUNG BEANS	10 RAW-FRESH OR NFS	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15013AA	MUNG BEANS	21 COOKED-NFS	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15022AA	BEANS-DRY-BROAD	00 NOT SPECIFIED (NO CONSUMPTION)	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15023AA	BEANS-DRY-PIGEON	21 COOKED-NFS	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15029AA	SOYBEAN-SPROUTED	00 NOT SPECIFIED (NO CONSUMPTION)	6F1799	P 0.200000	0.000050	MONITORING	100.00	0.000050
15030AA	BEANS-DRY-HYAC	00 NOT SPECIFIED (NO CONSUMPTION)	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15031AA	BLUKEYE PEAS-DRY	21 COOKED-NFS	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
15032AA	BEANS-DRY	31 COOKED-FRESH OR CANNED	8E2065	P 0.100000	0.005000	MONITORING	100.00	0.005000
16004AA	ONIONS-GREEN	10 RAW-FRESH OR NFS	4E1502	P 5.000000	5.000000	NOT AVAILABLE	100.00	5.000000
16004AA	ONIONS-GREEN	21 COOKED-NFS	4E1502	P 5.000000	5.000000	NOT AVAILABLE	100.00	5.000000
16004AA	ONIONS-GREEN	25 COOKED-FRESH FRIED	4E1502	P 5.000000	5.000000	NOT AVAILABLE	100.00	5.000000
27007AA	PEANUTS OIL	18 PROCESSED OIL	1F1024	P 0.100000	0.003500	MONITORING	100.00	0.003500
27010AA	SOYBEANS OIL	18 PROCESSED OIL	6F1799	P 0.200000	0.000050	MONITORING	100.00	0.000050

Table 1 (Cont.)

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			PADI SF	OPP RfD		
Chlorothalonil	2yr, feeding- dog	Renal tubular vacuolization.	100	0.015000	Rabbit teratology (Core-Supplementary).	TOX complete 3/14/86.
Caswell #2158	NOEL= 1 5000 mg/kg		0.015000	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	FOOD FORM	PET. #	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TMS 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-BOTTLED	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		2yr feeding dog	Renal tubular vacuolization	IPADI SF -->100	Rabbit teratology (Core-Supplementary)	TOX complete 3/14/86
Caswell #215B		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

TOTAL TMRC (MG/KG BODY WEIGHT/DAY)

POPULATION SUBGROUP	CURRENT TMRC*	NEW TMRC**	NEW TMRC AS PERCENT OF RFD	DIFFERENCE AS PERCENT OF RFD	EFFECT OF ANTICIPATED RESIDUES
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	0.000063 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 0.39777
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	68.151800	0.000000	0.000068 0.45417
FEMALES (20 YEARS AND OLDER, NOT PREG OR NURS)	0.010616	0.010616	70.776193	0.000000	0.000068 0.45722

*Current TMRC does not include new or pending tolerances.

**New TMRC 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.)

<u>COMMODITY</u>	<u>% CROP TREATED</u>	<u>RESIDUE DATA</u>	<u>EXPOSURE (UG/KG/DAY)</u>	<u>ONCOGENIC RISK^a</u>
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.

TOTAL			0.071128	7.8E-07

^aONCOGENIC RISK IS ESTIMATED FOR THE OVERALL U.S. POPULATION AND IS BASED ON A Q₁^{*} OF 0.011 (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.