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WASHINGTON, D.C. 20460

OFFICIAL RECORD
HEALTH EFFECTS DIVISION
SCIENTIFIC DATA REVIEWS
EPA SERIES 361

APR 27 1993

MEMORANDUM

PC 128897

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

SUBJECT: Dietary Exposure Analysis for the Proposed Dermal Application of Lambda-cyhalothrin to Beef Cattle (PP#9F3770)

FROM: Stephen A. Schaible *Stephen A. Schaible*
Dietary Risk Evaluation Section
Science Analysis Branch/ HED (H7509C)

TO: George LaRocca, PM 15
Insecticide-Rodenticide Branch
Registration Division (H7505C)

THROUGH: James P. Kariya, Head *Kariya*
DRES/ SAB
Health Effects Division *W. B. Bunn* (H7509C)

Action Requested

DRES has been requested by RD to perform a dietary exposure and risk analysis for the proposed dermal application of Lambda-cyhalothrin to beef cattle.

Discussion

1. Toxicological Endpoint: The DRES chronic dietary exposure analysis used a Reference Dose (RfD) of 0.001 mg/kg body weight/day, based on a No Observed Effect Level (NOEL) of 0.1 mg/kg bwt/day and an Uncertainty Factor of 100. The NOEL was taken from a 1 year dog feeding study which demonstrated as effects clinical signs of neurotoxicity including ataxia, muscle tremors and convulsions (G. Ghali memorandum dated 2/17/93; personal communication with G. Ghali, 4/22/93). This RfD was recommended by the HED RfD Peer Review Committee in its 2/12/93 meeting; the final document reflecting this RfD has not yet been distributed to and signed by all members of the RfD Peer Review Committee.

An RfD of 0.005 mg/kg bwt/day was used in previous DRES analyses for this chemical. It should be noted that the increased risk estimates observed when comparing this analysis to previous DRES analyses is in part due to the fact that the RfD used in this analysis is five-fold lower than the RfD used in previous analyses. Exposure from existing uses expressed as risk will therefore be five times greater.



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Lambda-cyhalothrin was classified as a Group D human carcinogen by the HED Carcinogenicity Peer Review Committee. No referral to other committees was recommended, and there are no acute toxicity concerns (G.Ghali, 2/17/93).

2. Residue Information: Food uses evaluated in this analysis were the published food uses listed in 40 CFR 180.438; the published food additive tolerance for use in food handling establishments in 40 CFR 185.1310; pending tolerances for soybeans, poultry and eggs at 0.01 ppm; and the proposed tolerances of 1 ppm for cattle fat and 0.1 ppm for cattle meat and meat byproducts. For the purpose of this analysis, any exposure or risk posed by the pending tolerances of 0.01 ppm on soybeans, poultry, and eggs (PP#7F3488) is considered to be accounted for by the published food additive tolerance of 0.01 ppm. A summary of the residue information used in this analysis is attached as Table 1.

Though the use of lambda-cyhalothrin on cottonseed and the resulting secondary residues in meat and milk are listed as permanent tolerances in 40 CFR 180.438, it should be noted that these uses were introduced through a petition (PP#6F3318) for conditional registrations and tolerances to expire August 30, 1991. These expiration dates have been extended, with registrations due to expire November 15, 1993 and tolerances due to expire November 15, 1994 (personal communication, G. LaRocca, 4/21/93). For this reason these uses were kept in the DRES file for this analysis, despite the fact that they are not present in the Tolerance Index System (TIS) file for this chemical. Some sort of documentation of these extensions (e.g., an FR notice) is expected from RD.

Published tolerances on cattle fat, meat and meat byproducts already exist in the DRES file, stemming from both a food handling establishment tolerance of 0.01 ppm as well as tolerances accounting for secondary residues in cattle resulting from the use of dried hops as a feed item. To reflect these published uses as well as the proposed uses and to accurately characterize the incremental increase in risk posed by the proposed tolerances, the DRES analysis assumed 0.98 ppm for the proposed residues in cattle fat and 0.09 ppm for the proposed residues in cattle meat and meat byproducts. When these residue values are added to the existing tolerances in the file, the combined residue values in the analysis for cattle fat and cattle meat and meat byproducts were 1.0 ppm and 0.1 ppm, the recommended tolerances for these proposed uses.

3. Results: The DRES routine chronic exposure analysis used tolerance level residues and 100 percent crop treated to estimate the Theoretical Maximum Residue Contribution (TMRC) for the overall U.S. population and 22 population subgroups. Due to the assumptions that residues would be in or on commodities at tolerance level, and that 100 percent of each commodity would be treated with this single pesticide, the TMRC must be viewed as a "worst case" estimate of exposure. A summary of the TMRCs and their representations as percentages of the RfD for the overall

population and the 22 population subgroups is attached as Table 2.

The TMRC for the overall U.S. population from published uses of lambda-cyhalothrin is 0.000409 mg/kg bwt/day, which represents 41% of the RfD. The proposed tolerances on cattle fat and cattle meat and meat byproducts result in an exposure of 0.000474 mg/kg bwt/day, or 47% of the RfD; the cumulative exposure from published and proposed uses is 0.000883 mg/kg bwt/day, or 88% of the RfD.

Four subgroups have exposures from all uses which exceed the RfD. These subgroups are Hispanics (105%), non-nursing infants less than one year old (166%), children aged one through six (180%), and children aged seven through twelve (128%). The subgroup most highly exposed, children aged one through six, has a TMRC from published uses of 0.000943 mg/kg bwt/day, or 94% of the RfD. The proposed uses contribute an additional 0.000854 mg/kg bwt/day (85%) to the RfD, raising the percent of RfD from published and proposed uses to 180%.

Given that four of the DRES subgroups exceed the RfD, DRES recommends that RD pursue refined estimates of residue and percent of crop treated information, so that more accurate estimates of dietary exposure and risk may be estimated. Percent of crop treated refinements would only be applicable for cottonseed and dried hops, as all other published uses in the file are present through the tolerance on food handling establishments or are animal commodities. Anticipated residues for the food handling establishment tolerance reflecting one half the limit of detection uses could be requested, as this tolerance is set based on the sensitivity of the analytical method (the limit of detection) (L. Rodriguez memorandum, 4/12/90). Anticipated residues specific to the requested dermal use on cattle would also be useful, as the two proposed tolerances for residues on cattle fat and cattle meat and meat byproducts contribute a large amount of the risk.

Attachments

cc: DRES, CBTS, Tox I, Caswell # 271F

TABLE 1

CHEMICAL INFORMATION FOR CASWELL NUMBER 271F

DATE: 04/23/93

PAGE: 1

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			ADI	UF		
Cyhalothrin/Karate Caswell #271F CAS No. 68085-85-8 A.I. CODE: 128867 CFR No. 180.438	1 yr feeding- dog	Clinical signs of neuro-	OPP Rfd= 0.001000	-->100	This PROOVOL based on G.	WHO last reviewed 1984.
	NOEL= 0.1000 mg/kg	toxicity including	EPA Rfd= 0.005000		Chali Rfd memo dated	
	LEL= 0.5000 mg/kg	ataxia, muscle tremors			2/17/93	
	ONCO: Negative- 2 species	and convulsions			Chemical is a mixture of several isomers, Karate is two isomers only.	

FOOD CODE	FOOD NAME	PETITION NUMBER	TOLERANCE (PPM)	
			PENDING	PUBLISHED
01002AA	BLACKBERRIES	9H5577		0.0100
01003AA	BOYSENBERRIES	9H5577		0.0100
01004AA	DEWBERRIES	9H5577		0.0100
01005AA	LOGANBERRIES	9H5577		0.0100
01006AA	RASPBERRIES	9H5577		0.0100
01007AA	YOUNGBERRIES	9H5577		0.0100
01009AA	BLUEBERRIES	9H5577		0.0100
01010AA	CRANBERRIES	9H5577		0.0100
01010JA	CRANBERRIES-JUICE	9H5577		0.0100
01011AA	CURRENTS	9H5577		0.0100
01012AA	ELDERBERRIES	9H5577		0.0100
01013AA	GOOSEBERRIES	9H5577		0.0100
01014AA	GRAPES-FRESH	9H5577		0.0100
01014DA	GRAPES-RAISINS	9H5577		0.0100
01014JA	GRAPES-JUICE	9H5577		0.0100
01015AA	HUCKLEBERRIES (GAYLUSSACIA)	9H5577		0.0100
01016AA	STRAWBERRIES	9H5577		0.0100
01024AA	JUNE BERRY	9H5577		0.0100
01025AA	MULBERRIES	9H5577		0.0100
02001AA	CITRUS CITRUS	9H5577		0.0100
02002AA	GRAPEFRUIT-UNSPECIFIED	9H5577		0.0100
02002AB	GRAPEFRUIT-PULP	9H5577		0.0100
02002JA	GRAPEFRUIT-JUICE	9H5577		0.0100
02003AA	KUMQUATS	9H5577		0.0100
02004AA	LEMONS-UNSPECIFIED	9H5577		0.0100
02004AB	LEMONS-PULP	9H5577		0.0100
02004HA	LEMONS-PEEL	9H5577		0.0100
02004JA	LEMONS-JUICE	9H5577		0.0100
02005AA	LIMES-UNSPECIFIED	9H5577		0.0100
02005AB	LIMES-PULP	9H5577		0.0100
02005HA	LIMES-PEEL	9H5577		0.0100
02005JA	LIMES-JUICE	9H5577		0.0100
02006AA	ORANGES-UNSPECIFIED	9H5577		0.0100
02006AB	ORANGES-PULP	9H5577		0.0100
02006HA	ORANGES-PEEL	9H5577		0.0100
02006JA	ORANGES-JUICE	9H5577		0.0100
02007AA	TANGELOS	9H5577		0.0100
02008AA	TANGERINES	9H5577		0.0100
02008JA	TANGERINE-JUICE	9H5577		0.0100
03001AA	ALMONDS	9H5577		0.0100

4

CHEMICAL INFORMATION FOR CASWELL NUMBER 271F

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Cyhalothrin/Karate	1 yr feeding- dog NOEL= 0.1000 mg/kg 0.00 ppm LEL= 0.5000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Clinical signs of neuro- toxicity including ataxia, muscle tremors and convulsions	ADI UF -->100 OPP RfD= 0.001000 EPA RfD= 0.005000	This PROOVOL based on G. Ghali RfD memo dated 2/17/93 Chemical is a mixture of several isomers, Karate is two isomers only.	WHO last reviewed 1984.
CAS No. 68085-85-8 A.I. CODE: 128867 CFR No. 180.438					On IRIS.

FOOD CODE	FOOD NAME	PETITION NUMBER	TOLERANCE (PPM)		PUBLISHED
			NEW	PENDING	
033002AA	BRAZIL NUTS	9H5577			0.0100
033003AA	CASHEWS	9H5577			0.0100
033004AA	CHESTNUTS	9H5577			0.0100
033005AA	FILBERTS, HAZELNUTS	9H5577			0.0100
033006AA	HICKORY NUTS	9H5577			0.0100
033007AA	MACADAMIA NUTS (BUSH NUTS)	9H5577			0.0100
033008AA	PECANS	9H5577			0.0100
033009AA	WALNUTS	9H5577			0.0100
033010AA	BUTTER NUTS	9H5577			0.0100
033011AA	PISTACHIO NUTS	9H5577			0.0100
033013AA	BEECHNUTS	9H5577			0.0100
040017AA	APPLES-FRESH	9H5577			0.0100
040018AA	APPLES-DRIED	9H5577			0.0100
040019AA	APPLES-JUICE	9H5577			0.0100
040020AA	CRABAPPLES	9H5577			0.0100
040033AA	PEARS-FRESH	9H5577			0.0100
040034AA	PEARS-DRIED	9H5577			0.0100
040044AA	QUINCES	9H5577			0.0100
050011AA	APRICOTS-FRESH	9H5577			0.0100
050012AA	APRICOTS-DRIED	9H5577			0.0100
050022AA	CHERRIES-FRESH	9H5577			0.0100
050023AA	CHERRIES-DRIED	9H5577			0.0100
050024AA	CHERRIES-JUICE	9H5577			0.0100
050033AA	NECTARINES	9H5577			0.0100
050044AA	PEACHES-FRESH	9H5577			0.0100
050045AA	PEACHES-DRIED	9H5577			0.0100
050055AA	PLUMS(DAMSONS)-FRESH	9H5577			0.0100
050056AA	PLUMS-PRUNES(DRIED)	9H5577			0.0100
050057AA	PLUMS, PRUNE-JUICE	9H5577			0.0100
060011AA	AVOCADOS	9H5577			0.0100
060022AA	BANANAS-UNSPECIFIED	9H5577			0.0100
060023AA	BANANAS-FRESH	9H5577			0.0100
060024AA	BANANAS-DRIED	9H5577			0.0100
060033AA	COCONUT-FRESH	9H5577			0.0100
060034AA	COCONUT-COPRA	9H5577			0.0100
060035AA	COCONUT-WATER	9H5577			0.0100
060044AA	DATES	9H5577			0.0100
060055AA	FIGS	9H5577			0.0100
060066AA	GUAVA	9H5577			0.0100
060077AA	MANGOES	9H5577			0.0100

CHEMICAL INFORMATION FOR CASWELL NUMBER 271F

DATE: 04/23/93

PAGE: 3

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			AD1	UF -->100		
Cyhalothrin/Karate Caswell #271F CAS No. 68085-85-8 A.I. CODE: 128867 CFR No. 180.438	1 yr feeding- dog NOEL= 0.1000 mg/kg 0.00 ppm LEL= 0.5000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Clinical signs of neuro- toxicity including ataxia, muscle tremors and convulsions	OPP RfD= 0.001000 EPA RfD= 0.005000		This RRODVOL based on G. Chali RfD memo dated 2/17/93 Chemical is a mixture of several isomers, Karate is two isomers only.	WHO Last reviewed 1984.

FOOD CODE	FOOD NAME	PETITION NUMBER	TOLERANCE (PPM)		PUBLISHED
			NEW	PENDING	
06008AA	LOQUATS	9H5577			0.0100
06009AA	OLIVES	9H5577			0.0100
06010AA	PAPAYAS-UNSPECIFIED	9H5577			0.0100
06010AB	PAPAYAS-PULP	9H5577			0.0100
06010DA	PAPAYAS-DRIED	9H5577			0.0100
06010JA	PAPAYAS-JUICE	9H5577			0.0100
06011AA	PAMPAMS	9H5577			0.0100
06012AA	PERSIMMONS	9H5577			0.0100
06013AA	PINEAPPLE-FRESH,PULP	9H5577			0.0100
06013DA	PINEAPPLE-DRIED	9H5577			0.0100
06013JA	PINEAPPLE-FRESH,JUICE	9H5577			0.0100
06014AA	PASSION FRUIT (GRANADILLA)	9H5577			0.0100
06015AA	POMEGRANATES	9H5577			0.0100
06016AA	PLANTAINS	9H5577			0.0100
06017AA	LYCHEES (LITCHI)	9H5577			0.0100
06017DA	LYCHEE-DRIED	9H5577			0.0100
06018AA	KIWI	9H5577			0.0100
06020AA	ACEROLA	9H5577			0.0100
06021AA	GINKGO NUTS	9H5577			0.0100
06022AA	MANEY (MAMMEE APPLE)	9H5577			0.0100
06023AA	PITANGA (SURINAM CHERRY)	9H5577			0.0100
06024AA	SOURSOP (ANNONA MURICATA)	9H5577			0.0100
06025AA	SUGAR APPLES (SWEETSOP)	9H5577			0.0100
06026AA	BREAD FRUIT	9H5577			0.0100
06027AA	BREAD NUTS	9H5577			0.0100
06029AA	CARAMBOLA	9H5577			0.0100
06030AA	CHERIMOYA	9H5577			0.0100
06031AA	LONGAN FRUIT	9H5577			0.0100
06033AA	GENIP (SPANISH LIME)	9H5577			0.0100
06106AA	PLANTAINS	9H5577			0.0100
07001FA	COCOA BUTTER	9H5577			0.0100
07001SA	CHOCOLATE	9H5577			0.0100
07002AA	COFFEE	9H5577			0.0100
07003AA	TEA	9H5577			0.0100
07006AA	CHICORY	9H5577			0.0100
08004AA	ANICE	9H5577			0.0100
08006AA	BASIL	9H5577			0.0100
08007AA	CARRAWAY	9H5577			0.0100
08008AA	CASSIA	9H5577			0.0100
08011AA	CINNAMON	9H5577			0.0100

9

CHEMICAL INFORMATION FOR CASWELL NUMBER 271F

DATE: 04/23/93

PAGE: 4

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			ADI	UF		
Cyanolotrin/Karate Caswell #271F CAS No. 68085-85-8 A.I. CODE: 128867 CFR No. 180.438	1 yr feeding- dog	Clinical signs of neuro- toxicity including ataxia, muscle tremors and convulsions	OPP RfD= 0.001000 EPA RfD= 0.005000	-->100	This PROOVOL based on G. Ghali RfD memo dated 2/17/93 Chemical is a mixture of several isomers, Karate is two isomers only.	WHO last reviewed 1984.
	NOEL= 0.1000 mg/kg					
	0.00 ppm					
	LEL= 0.5000 mg/kg					
	0.00 ppm					
	ONCO: Negative- 2 species					On IRIS.

FOOD CODE	FOOD NAME	PETITION NUMBER	TOLERANCE (PPM)	
			NEW	PUBLISHED
08012AA	CLOVE	9H5577		0.0100
08013AA	CORIANDER	9H5577		0.0100
08014AA	CUMIN	9H5577		0.0100
08015AA	DILL	9H5577		0.0100
08019AA	GINGER	9H5577		0.0100
08020AA	HOPS	9H5577		0.0100
08020AA	HOPS	9H5599		9.9900
08022AA	HORSERADISH	9H5577		0.0100
08023AA	ROSEMARY	9H5577		0.0100
08026AA	MARJORAM	9H5577		0.0100
08026AB	OREGANO	9H5577		0.0100
08028AA	MUSTARD SEED	9H5577		0.0100
08029AA	NUTHEG	9H5577		0.0100
08029AB	MACE	9H5577		0.0100
08035AA	SAGE	9H5577		0.0100
08036AA	SAVORY	9H5577		0.0100
08038AA	BAY	9H5577		0.0100
08042AA	THYME	9H5577		0.0100
08043AA	TURNERIC	9H5577		0.0100
08047AA	ALLSPICE	9H5577		0.0100
08048DA	PAPRIKA	9H5577		0.0100
08049AA	POPPY	9H5577		0.0100
10002AA	CANTALOUPE-UNSPECIFIED	9H5577		0.0100
10002AB	CANTALOUPE-PULP	9H5577		0.0100
10003AA	CASABAS	9H5577		0.0100
10004AA	CRENSHAW	9H5577		0.0100
10005AA	HONEYDEW MELONS	9H5577		0.0100
10007AA	PERSTON MELONS	9H5577		0.0100
10008AA	WATERMELON	9H5577		0.0100
10010AA	CUCUMBERS	9H5577		0.0100
10011AA	PUMPKIN	9H5577		0.0100
10013AA	SQUASH-SUMMER	9H5577		0.0100
10014AA	SQUASH-WINTER	9H5577		0.0100
10017AA	BITTER MELON	9H5577		0.0100
10020AA	TOMELGOURD	9H5577		0.0100
11001AA	EGGPLANT	9H5577		0.0100
11003AA	PEPPERS, SHEET, GARDEN	9H5577		0.0100
11003AB	CHILI PEPPERS	9H5577		0.0100
11003AD	PEPPERS-OTHER	9H5577		0.0100
11004AA	PIMIENTOS	9H5577		0.0100

7

DATE: 04/23/93

FOOD CODE	FOOD NAME	PETITION NUMBER	NEW	TOLERANCE (PPM)	PUBLISHED
				PENDING	
1005AA	TOMATOES-WHOLE	9H5577		0.0100	
1005JA	TOMATOES- JUICE	9H5577		0.0100	H
1005RA	TOMATOES-PUREE	9H5577		0.0100	H
1005TA	TOMATOES-PASTE	9H5577		0.0100	H
1005UA	TOMATOES-CATSUP	9H5577		0.0100	H
1006AA	GROUNDCHERRIES (POM/CAPE-GOOSEBERRIES)	9H5577		0.0100	
3001AA	BEETS-TOPS(GREENS)	9H5577		0.0100	
3002AA	CELERY	9H5577		0.0100	
3003AA	CHICORY (FRENCH OR BELGIAN ENDIVE)	9H5577		0.0100	
3005AA	BROCCOLI	9H5577		0.0100	
3006AA	BRUSSEL SPROUTS	9H5577		0.0100	
3007AA	CABBAGE-GREEN AND RED	9H5577		0.0100	
3008AA	CAULIFLOWER	9H5577		0.0100	
3009AA	COLLARDS	9H5577		0.0100	
3010AA	CABBAGE-CHINESE/CELERY, INC. 80K CHOY	9H5577		0.0100	
3011AA	KALE	9H5577		0.0100	
3012AA	KOHLRABI	9H5577		0.0100	
3013AA	LETTUCE-LEAFY VARIETIES	9H5577		0.0100	
3014AA	DANDELION	9H5577		0.0100	
3015AA	ENDIVE, CURLY AND ESCAROLE	9H5577		0.0100	
3016AA	FENNEL	9H5577		0.0100	
3017AA	CRESS, GARDEN, FIELD	9H5577		0.0100	
3018AA	ARTICHOKES-GLOBE	9H5577		0.0100	
3020AA	LETTUCE-UNSPECIFIED	9H5577		0.0100	
3021AA	MUSTARD GREENS	9H5577		0.0100	
3022AA	PARSLEY	9H5577		0.0100	
3023AA	RHUBARB	9H5577		0.0100	
3024AA	SPINACH	9H5577		0.0100	
3025AA	SWISS CHARD	9H5577		0.0100	
3026AA	TURNIPS-TOPS	9H5577		0.0100	
3027AA	WATERCRESS	9H5577		0.0100	
3034AA	TARO-GREENS	9H5577		0.0100	
3039AA	CRESS, UPLAND	9H5577		0.0100	
3045AA	LETTUCE-HEAD VARIETIES	9H5577		0.0100	
3047AA	LAMBSQUARTER	9H5577		0.0100	
3048AA	CACTUS PADS	9H5577		0.0100	
3049AA	GRAPES-LEAVES	9H5577		0.0100	
3099AA	LEAFY ORIENTAL VEGETABLES	9H5577		0.0100	
14001AA	BEETS-ROOTS	9H5577		0.0100	
14003AA	CARROTS	9H5577		0.0100	

CHEMICAL INFORMATION FOR CASWELL NUMBER 271F DATE: 04/23/93 PAGE: 6

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Cyhalothrin/Karate Caswell #271F CAS No. 68085-85-8 A.I. CODE: 128867 CFR No. 180.438	1 yr feeding- dog NOEL= 0.1000 mg/kg 0.00 ppm LEL= 0.5000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Clinical signs of neuro- toxicity including ataxia, muscle tremors and convulsions	ADI UF -->100 OPP Rfd= 0.001000 EPA Rfd= 0.005000	This PRODVOL based on G. Ghali Rfd memo dated 2/17/93 Chemical is a mixture of several isomers, Karate is two isomers only.	WHO last reviewed 1984. On IRIS.

FOOD CODE	FOOD NAME	PETITION NUMBER	NEW	TOLERANCE (PPM) PENDING	PUBLISHED
14004AA	CELERTAC	9H5577			0.0100
14005AA	CHIVES	9H5577			0.0100
14006AA	TARO-ROOT	9H5577			0.0100
14007AA	GARLIC	9H5577			0.0100
14009AA	ARTICHOKES- JERUSALEM	9H5577			0.0100
14010AA	LEeks	9H5577			0.0100
14011AA	ONIONS-DRY-BULB (CIPOLLINI)	9H5577			0.0100
14011DA	ONIONS-DEHYDRATED OR DRIED	9H5577			0.0100
14013AA	POTATOES(WHITE)-WHOLE	9H5577			0.0100
14013AB	POTATOES(WHITE)-UNSPECIFIED	9H5577			0.0100
14013AC	POTATOES(WHITE)-PEELED	9H5577			0.0100
14013DA	POTATOES(WHITE)-DRY	9H5577			0.0100
14013HA	POTATOES(WHITE)-PEEL ONLY	9H5577			0.0100
14014AA	RADISHES-ROOTS	9H5577			0.0100
14014AB	RADISHES-TOPS	9H5577			0.0100
14015AA	RUTABAGAS-ROOTS	9H5577			0.0100
14015AB	RUTABAGAS-TOPS	9H5577			0.0100
14016AA	SALSIFF(OYSTER PLANT)	9H5577			0.0100
14017AA	SHALLOTS	9H5577			0.0100
14018AA	SWEETPOTATOES (INCLUDING YAMS)	9H5577			0.0100
14019AA	TURNIPS-ROOTS	9H5577			0.0100
14021AA	PARSNIPS	9H5577			0.0100
14024AA	YAMBEAN, TUBER	9H5577			0.0100
14026AA	CASSAVA (YUCA BLANCA)	9H5577			0.0100
14026AB	TAPIOCA	9H5577			0.0100
14028AA	YAUTIA, TANNIER	9H5577			0.0100
14030AA	PARSLEY ROOTS	9H5577			0.0100
14031AA	WATER CHESTNUTS	9H5577			0.0100
15001AA	BEANS-DRY-GREAT NORTHERN	9H5577			0.0100
15001AB	BEANS-DRY-KIDNEY	9H5577			0.0100
15001AC	BEANS-DRY-LIMA	9H5577			0.0100
15001AD	BEANS-DRY-NAVY (PEA)	9H5577			0.0100
15001AE	BEANS-DRY-OTHER	9H5577			0.0100
15001AF	BEANS-DRY-PINTO	9H5577			0.0100
15002AA	BEANS-SUCCULENT-LIMA	9H5577			0.0100
15003AA	BEANS-SUCCULENT-GREEN	9H5577			0.0100
15003AB	BEANS-SUCCULENT-OTHER	9H5577			0.0100
15003AC	BEANS-SUCCULENT-YELLOW, WAX	9H5577			0.0100
15004AA	CORN, POP	9H5577			0.0100
15005AA	CORN, SWEET	9H5577			0.0100

6

CHEMICAL INFORMATION FOR CASWELL NUMBER 271F

DATE: 04/23/93

PAGE: 7

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			AD1	UF		
Cyhalothrin/Karate Caswell #271F CAS No. 68085-85-8 A.I. CODE: 128867 CFR No. 180.438	1 yr feeding- dog NOEL= 0.1000 mg/kg 0.00 ppm LEL= 0.5000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Clinical signs of neuro- toxicity including ataxia, muscle tremors and convulsions	OPP RfD= 0.001000 EPA RfD= 0.005000	-->100	This PROOVOL based on G. Chali RfD memo dated 2/17/93 Chemical is a mixture of several isomers, Karate is two isomers only.	WHO last reviewed 1984.

FOOD CODE	FOOD NAME	PETITION NUMBER	TOLERANCE (PPM)	
			NEW	PENDING
15006AA	PEANUTS-WHOLE	9H5577		0.0100
15007AA	PEAS(GARDEN)-MATURE SEEDS DRY	9H5577		0.0100
15009AA	PEAS(GARDEN)-GREEN IMMATURE	9H5577		0.0100
15011AA	LENTILES-WHOLE	9H5577		0.0100
15011AB	LENTILES-SPLIT	9H5577		0.0100
15013AA	MUNG BEANS (SPROUTS)	9H5577		0.0100
15015AA	OKRA	9H5577		0.0100
15018AA	SUNFLOWER-SEEDS	9H5577		0.0100
15020AA	CAROB	9H5577		0.0100
15021AA	ALFALFA SPROUTS	9H5577		0.0100
15022AA	BEANS-DRY-BROADBEANS(MATURE SEED)	9H5577		0.0100
15022AB	BEANS-SUCCULENT-BROADBEANS(IMMAT. SEED)	9H5577		0.0100
15023AA	BEANS-DRY-PIGION BEANS	9H5577		0.0100
15026AA	SESAME SEEDS	9H5577		0.0100
15027AA	BEANS-UNSPECIFIED	9H5577		0.0100
15028AA	PINEUTS	9H5577		0.0100
15029AA	SOYBEANS-SPROUTED SEEDS	7F3488		0.0100
15030AA	BEANS-DRY-HYACINTH(MATURE SEEDS)	9H5577		0.0100
15030AB	BEANS-SUCCULENT-HYACINTH(YOUNG PODS)	9H5577		0.0100
15031AA	BEANS-DRY-BLACKEYE PEAS(COMPEAS)	9H5577		0.0100
15032AA	BEANS-DRY-GARBANZO(CHICK PEA)	9H5577		0.0100
16002AA	ASPARAGUS	9H5577		0.0100
16003AA	MUSHROOMS	9H5577		0.0100
16004AA	ONIONS-GREEN	9H5577		0.0100
16007AA	POKE GREENS	9H5577		0.0100
16008AA	BAMBOO SHOOTS	9H5577		0.0100
24001AA	BARLEY	9H5577		0.0100
24002EA	CORN, GRAIN- ENDOSPERM	9H5577		0.0100
24002HA	CORN, GRAIN-BRAN	9H5577		0.0100
24002SA	CORN SUGAR	9H5577		0.0100
24003AA	OATS	9H5577		0.0100
24004AA	RICE-ROUGH	9H5577		0.0100
24004AB	RICE-MILLED	9H5577		0.0100
24005AA	RYE-ROUGH	9H5577		0.0100
24005GA	RYE-GERM	9H5577		0.0100
24005VA	RYE-FLOUR	9H5577		0.0100
24006AA	SORGHUM (INCLUDING MILO)	9H5577		0.0100
24007AA	WHEAT-ROUGH	9H5577		0.0100
24007GA	WHEAT-GERM	9H5577		0.0100
24007HA	WHEAT-BRAN	9H5577		0.0100

10

CHEMICAL INFORMATION FOR CASHELL NUMBER 271F

DATE: 04/23/93

PAGE: 8

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES	DATA GAPS/COMMENTS	STATUS
Cyhalothrin/Karate Caswell #271F CAS No. 68085-85-8 A.I. CODE: 128867 CFR No. 180.438	1 yr feeding- dog NOEL= 0.1000 mg/kg 0.00 ppm LEL= 0.5000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Clinical signs of neuro- toxicity including ataxia, muscle tremors and convulsions	ADI UF -->100 OPP RfD= 0.001000 EPA RfD= 0.005000	This PROOVOL based on G. Ghali RfD memo dated 2/17/93 Chemical is a mixture of several isomers, Karate is two isomers only.	WHO last reviewed 1984. On IRIS.

FOOD CODE	FOOD NAME	PETITION NUMBER	NEW	TOLERANCE (PPM) PENDING	PUBLISHED
24007AA	WHEAT- FLOUR	9H5577			0.0100
24012AA	MILLET	9H5577			0.0100
25001AA	HONEY	9H5577			0.0100
25002SA	BEET SUGAR	9H5577			0.0100
25003SA	CANE SUGAR	9H5577			0.0100
25003SB	SUGAR-MOLASSES	9H5577			0.0100
25004SA	MAPLE SYRUP	9H5577			0.0100
26001AA	BUCKWHEAT	9H5577			0.0100
26011AA	GUAR BEANS	9H5577			0.0100
270010A	CASTOR BEANS	9H5577			0.0100
270020A	CORN GRAIN-OIL	9H5577			0.0100
270030A	COTTONSEED-OIL	6F3318*			0.0500
27003WA	COTTONSEED-MEAL	6F3318*			0.0500
27004AA	FLAX SEED	9H5577			0.0100
270070A	PEANUTS-OIL	9H5577			0.0100
27008AA	SAFFLOWER-SEED	9H5577			0.0100
270080A	SAFFLOWER-OIL	9H5577			0.0100
270090A	SESAME-OIL	9H5577			0.0100
270100A	SOYBEANS-OIL	7F3488			0.0100
270110A	SUNFLOWER-OIL	9H5577			0.0100
270150A	COCOAUT-OIL	9H5577			0.0100
270160A	OLIVE OIL	9H5577			0.0100
27017AA	RAPE SEED	9H5577			0.0100
270190A	PALM OIL	9H5577			0.0100
28023AA	SOYBEANS-UNSPECIFIED	7F3488			0.0100
28023AB	SOYBEANS-MATURE, SEEDS DRY	7F3488			0.0100
28023WA	SOYBEANS-FLOUR, FULL FAT	7F3488			0.0100
28023WB	SOYBEANS-FLOUR, LOW FAT	7F3488			0.0100
28023WC	SOYBEANS-FLOUR, DEFAITED	7F3488			0.0100
28024AB	ORIENTAL VEGETABLES -NON-LEAFY	9H5577			0.0100
28040AA	SEEDS(PUMPKIN,PSYLLIUM,CHIA,APRICOT,ETC)	9H5577			0.0100
28080AA	PEPPERMINT	9H5577			0.0100
280800A	PEPPERMINT-OIL	9H5577			0.0100
28081AA	SPEARMINT	9H5577			0.0100
280810A	SPEARMINT-OIL	9H5577			0.0100
43057AA	VINEGAR	9H5577			0.0100
43058AA	WINE AND SHERRY	9H5577			0.0100
43059AA	DISTILLED ALCOHOL	9H5577			0.0100
43060AA	GELATIN	9H5577			0.0100
50000DB	MILK-NON-FAT SOLIDS	6F3318*			0.0100

CHEMICAL INFORMATION FOR CASWELL NUMBER 271F

DATE: 04/23/93

PAGE: 9

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			ADI	UF		
Cyhalothrin/Karate Caswell #271F CAS No. 68085-85-8 A.I. CODE: 128867 CFR No. 180.438	1 yr feeding- dog NOEL= 0.1000 mg/kg 0.00 ppm LEL= 0.5000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Clinical signs of neuro- toxicity including ataxia, muscle tremors and convulsions	OPP Rfd= 0.001000 EPA Rfd= 0.005000	-->100	This PROOVOL based on G. Chali Rfd memo dated 2/17/93 Chemical is a mixture of several isomers, Karate is two isomers only.	WHO last reviewed 1984.

FOOD CODE	FOOD NAME	PETITION NUMBER	TOLERANCE (PPM)	
			NEW	PENDING PUBLISHED
50000FA	MILK-FAT SOLIDS	6F3318*		0.0100
50000FA	MILK-FAT SOLIDS	0H5599		0.2400 H
50000SA	MILK SUGAR (LACTOSE)	6F3318*		0.0100
53001BA	BEEF-MEAT BYPRODUCTS	6F3318*		0.0100
53001BA	BEEF-MEAT BYPRODUCTS	9F3770	0.0900	
53001BB	BEEF(ORGAN MEATS)-OTHER	6F3318*		0.0100
53001BB	BEEF(ORGAN MEATS)-OTHER	9F3770	0.0900	
53001DA	BEEF-DRIED	6F3318*		0.0100
53001DA	BEEF-DRIED	9F3770	0.0900	
53001FA	BEEF(BONELESS)-FAT (BEEF TALLOW)	6F3318*		0.0100
53001FA	BEEF(BONELESS)-FAT (BEEF TALLOW)	0H5599		0.0100
53001FA	BEEF(BONELESS)-FAT (BEEF TALLOW)	9F3770	0.9800	
53001KA	BEEF(ORGAN MEATS)-KIDNEY	6F3318*		0.0100
53001KA	BEEF(ORGAN MEATS)-KIDNEY	9F3770	0.0900	
53001LA	BEEF(ORGAN MEATS)-LIVER	6F3318*		0.0100
53001LA	BEEF(ORGAN MEATS)-LIVER	9F3770	0.0900	
53001MA	BEEF(BONELESS)-LEAN (W/O REMOVEABLE FAT)	6F3318*		0.0100
53001MA	BEEF(BONELESS)-LEAN (W/O REMOVEABLE FAT)	9F3770	0.0900	
53002BA	GOAT-MEAT BYPRODUCTS	6F3318*		0.0100
53002BA	GOAT(ORGAN MEATS)-OTHER	6F3318*		0.0100
53002BA	GOAT(ORGAN MEATS)-OTHER	0H5599		0.0100
53002FA	GOAT(BONELESS)-FAT	6F3318*		0.0100
53002FA	GOAT(BONELESS)-FAT	0H5599		0.0100
53002KA	GOAT(ORGAN MEATS)-KIDNEY	6F3318*		0.0100
53002LA	GOAT(ORGAN MEATS)-LIVER	6F3318*		0.0100
53002MA	GOAT(BONELESS)-LEAN (W/O REMOVEABLE FAT)	6F3318*		0.0100
53003AA	HORSE	6F3318*		0.0100
53003AA	HORSE	0H5599		0.0100
53005BA	SHEEP-MEAT BYPRODUCTS	6F3318*		0.0100
53005BA	SHEEP(ORGAN MEATS)-OTHER	6F3318*		0.0100
53005BA	SHEEP(ORGAN MEATS)-OTHER	0H5599		0.0100
53005FA	SHEEP(BONELESS)-FAT	6F3318*		0.0100
53005FA	SHEEP(BONELESS)-FAT	0H5599		0.0100
53005KA	SHEEP(ORGAN MEATS)-KIDNEY	6F3318*		0.0100
53005LA	SHEEP(ORGAN MEATS)-LIVER	6F3318*		0.0100
53005MA	SHEEP(BONELESS)-LEAN (W/O REMOVEABLE FAT)	6F3318*		0.0100
53005MA	SHEEP(BONELESS)-LEAN (W/O REMOVEABLE FAT)	0H5599		0.0100
53006BA	PORK-MEAT BYPRODUCTS	6F3318*		0.0100
53006BA	PORK(ORGAN MEATS)-OTHER	6F3318*		0.0100
53006BA	PORK(ORGAN MEATS)-OTHER	0H5599		0.0100
53006KA	PORK(BONELESS)-FAT (INCLUDING LARD)	6F3318*		0.0100
53006KA	PORK(ORGAN MEATS)-KIDNEY	6F3318*		0.0100
53006LA	PORK(ORGAN MEATS)-LIVER	6F3318*		0.0100
53006MA	PORK(BONELESS)-LEAN (W/O REMOVEABLE FAT)	6F3318*		0.0100

21

CHEMICAL INFORMATION FOR CASWELL NUMBER 271F

DATE: 04/23/93

PAGE: 10

CHEMICAL	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			AD1	UF		
Cyhalothrin/Karate Caswell #271F CAS No. 68085-85-8 A.I. CODE: 128667 CFR No. 180.438	1 yr feeding- dog NOEL= 0.1000 mg/kg 0.00 ppm LEL= 0.5000 mg/kg 0.00 ppm ONCO: Negative- 2 species	Clinical signs of neuro- toxicity including ataxia, muscle tremors and convulsions	OPP RfD= 0.001000 EPA RfD= 0.005000	-->100	This PROCVOL based on G. Ghal: RfD memo dated 2/17/93 Chemical is a mixture of several isomers, Karate is two isomers only.	WHO last reviewed 1984. On IRIS.

FOOD CODE	FOOD NAME	PETITION NUMBER	TOLERANCE (PPM)	
			NEW	PUBLISHED
53010AA	FISH-UNSPECIFIED	9H5577		0.0100
53013AA	FISH-SHELLFISH	9H5577		0.0100
53014AA	MEAT, GAME	9H5577		0.0100
53015AA	FISH-ROE, CAVIAR	9H5577		0.0100
53016AA	FISH-FRESHWATER FINFISH	9H5577		0.0100
53017AA	FISH-SALTWATER FINFISH	9H5577		0.0100
53017DA	FISH-FINFISH-SALTWATER-DRIED	9H5577		0.0100
55008BA	TURKEY-BYPRODUCTS	7F3488		0.0100
55008BA	TURKEY-BYPRODUCTS	7F3488		0.0100
55008BA	TURKEY-GIBLETS (LIVER)	7F3488		0.0100
55008BA	TURKEY-GIBLETS (LIVER)	7F3488		0.0100
55008BA	TURKEY-FLESH(W/O SKIN, W/O BONES)	7F3488		0.0100
55008BA	TURKEY-FLESH(W/O SKIN, W/O BONES)	7F3488		0.0100
55008BA	TURKEY-FLESH(+SKIN, W/O BONES)	7F3488		0.0100
55008BA	TURKEY-FLESH(+SKIN, W/O BONES)	7F3488		0.0100
55008MC	TURKEY-UNSPECIFIED	7F3488		0.0100
55008MC	TURKEY-UNSPECIFIED	7F3488		0.0100
55013BA	POULTRY, OTHER-BYPRODUCTS	7F3488		0.0100
55013BA	POULTRY, OTHER-BYPRODUCTS	7F3488		0.0100
55013LA	POULTRY, OTHER-GIBLETS(LIVER)	7F3488		0.0100
55013LA	POULTRY, OTHER-GIBLETS(LIVER)	7F3488		0.0100
55013MA	POULTRY, OTHER-FLESH (+SKIN, W/O BONES)	7F3488		0.0100
55013MA	POULTRY, OTHER-FLESH (+SKIN, W/O BONES)	7F3488		0.0100
55014AA	EGGS-WHOLE	7F3488		0.0100
55014AA	EGGS-WHOLE	7F3488		0.0100
55014AB	EGGS-WHITE ONLY	7F3488		0.0100
55014AB	EGGS-WHITE ONLY	7F3488		0.0100
55014AC	EGGS-YOLK ONLY	7F3488		0.0100
55014AC	EGGS-YOLK ONLY	7F3488		0.0100
55015BA	CHICKEN-BYPRODUCTS	7F3488		0.0100
55015BA	CHICKEN-BYPRODUCTS	7F3488		0.0100
55015LA	CHICKEN-GIBLETS(LIVER)	7F3488		0.0100
55015LA	CHICKEN-GIBLETS(LIVER)	7F3488		0.0100
55015MA	CHICKEN-FLESH(W/O SKIN, W/O BONES)	7F3488		0.0100
55015MA	CHICKEN-FLESH(W/O SKIN, W/O BONES)	7F3488		0.0100
55015MB	CHICKEN-FLESH(+SKIN, W/O BONES)	7F3488		0.0100
55015MB	CHICKEN-FLESH(+SKIN, W/O BONES)	7F3488		0.0100

13

TABLE 2

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 06/23/93

PAGE: 1

CHEMICAL INFORMATION			STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
Cyhalothrin/Karate Caswell #271F CAS No. 68085-85-8 A.I. CODE: 128867 CFR No. 180.438			1 yr feeding- dog NOEL= 0.1000 mg/kg 0.00 ppm LEL= 0.5000 mg/kg 0.00 ppm ONCO: Negative- 2 species		Clinical signs of neuro- toxicity including ataxia, muscle tremors and convulsions		ADI UF -->100 OPP Rfd= 0.001000 EPA Rfd= 0.005000		This PROOVOL based on G. Ghalil Rfd memo dated 2/17/93 Chemical is a mixture of several isomers, Karate is two isomers only.		WHO last reviewed 1984. On IRIS.	
TOTAL TMRC (MG/KG BODY WEIGHT/DAY)												
CURRENT TMRC*					NEW TMRC**		NEW TMRC AS PERCENT OF RFD		DIFFERENCE AS PERCENT OF RFD		EFFECT OF ANTICIPATED RESIDUES	
POPULATION SUBGROUP											ARC	
											XRPD	
U.S. POPULATION - 48 STATES					0.000409		0.000882		88.204400		47.348000	
U.S. POPULATION - SPRING SEASON					0.000396		0.000867		86.725300		47.083600	
U.S. POPULATION - SUMMER SEASON					0.000411		0.000899		89.856200		48.795100	
U.S. POPULATION - FALL SEASON					0.000414		0.000896		89.568700		48.129600	
U.S. POPULATION - WINTER SEASON					0.000411		0.000865		86.486400		45.385400	
NORTHEAST REGION					0.000443		0.000914		91.388400		47.098500	
NORTH CENTRAL REGION					0.000407		0.000893		89.316800		48.628300	
SOUTHERN REGION					0.000359		0.000813		81.314300		45.414900	
WESTERN REGION					0.000448		0.000940		93.978300		49.166400	
HISPANICS					0.000479		0.001050		104.992500		57.085100	
NON-HISPANIC WHITES					0.000410		0.000886		88.571400		47.563900	
NON-HISPANIC BLACKS					0.000357		0.000771		77.077700		41.401300	
NON-HISPANIC OTHERS					0.000452		0.000921		92.125000		46.945800	
NURSING INFANTS (< 1 YEAR OLD)					0.000386		0.000522		52.161400		13.594300	
NON-NURSING INFANTS (< 1 YEAR OLD)					0.001355		0.001657		165.706200		30.204500	
FEMALES (13+ YEARS, PREGNANT)					0.000270		0.000598		59.756000		32.774200	
FEMALES 13+ YEARS, NURSING					0.000362		0.000721		72.129000		35.889000	
CHILDREN (1-6 YEARS OLD)					0.000942		0.001796		179.604500		85.362100	
CHILDREN (7-12 YEARS OLD)					0.000602		0.001279		127.890300		67.713900	
MALES (13-19 YEARS OLD)					0.000408		0.000947		94.672000		53.883800	
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)					0.000319		0.000746		74.631200		42.729500	
MALES (20 YEARS AND OLDER)					0.000355		0.000794		79.400700		43.949300	
FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)					0.000246		0.000597		59.704100		35.097200	

*Current TMRC does not include new or pending tolerances.

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

14

TOLERANCE ASSESSMENT SUMMARY FOR Cyhalothrin/Karate
CASWELL #271F

DATE: 04/23/93

ANALYSIS FOR POPULATION SUB-GROUP: U.S. POPULATION - 48 STATES

EXISTING TOLERANCES (PUBLISHED ONLY)		
RESULT IN A TMRC OF:	0.000409	MG/KG/DAY
THE EXISTING TMRC IS EQUIVALENT TO:	40.856	% OF THE ADI.
PROPOSED NEW TOLERANCES (CURRENT PETITION ONLY)		
RESULT IN A TMRC OF:	0.000474	MG/KG/DAY
THESE NEW TOLERANCES WILL OCCUPY:	47.348	% OF THE ADI.
IF THE NEW TOLERANCES (CURRENT PETITION ONLY)		
ARE APPROVED THE RESULTANT TMRC WILL BE:	0.000883	MG/KG/DAY
THE NEW TMRC WILL OCCUPY	88.204	% OF THE ADI.

NO OTHER PENDING TOLERANCES ARE IN THE FILE

ANALYSIS FOR POPULATION SUB-GROUP: NON-NURSING INFANTS (< 1 YEAR OLD)

EXISTING TOLERANCES (PUBLISHED ONLY)		
RESULT IN A TMRC OF:	0.001356	MG/KG/DAY
THE EXISTING TMRC IS EQUIVALENT TO:	135.502	% OF THE ADI.
PROPOSED NEW TOLERANCES (CURRENT PETITION ONLY)		
RESULT IN A TMRC OF:	0.000303	MG/KG/DAY
THESE NEW TOLERANCES WILL OCCUPY:	30.205	% OF THE ADI.
IF THE NEW TOLERANCES (CURRENT PETITION ONLY)		
ARE APPROVED THE RESULTANT TMRC WILL BE:	0.001658	MG/KG/DAY
THE NEW TMRC WILL OCCUPY	165.706	% OF THE ADI.

NO OTHER PENDING TOLERANCES ARE IN THE FILE

ANALYSIS FOR POPULATION SUB-GROUP: CHILDREN (1-6 YEARS OLD)

EXISTING TOLERANCES (PUBLISHED ONLY)		
RESULT IN A TMRC OF:	0.000943	MG/KG/DAY
THE EXISTING TMRC IS EQUIVALENT TO:	94.242	% OF THE ADI.
PROPOSED NEW TOLERANCES (CURRENT PETITION ONLY)		
RESULT IN A TMRC OF:	0.000854	MG/KG/DAY
THESE NEW TOLERANCES WILL OCCUPY:	85.362	% OF THE ADI.
IF THE NEW TOLERANCES (CURRENT PETITION ONLY)		
ARE APPROVED THE RESULTANT TMRC WILL BE:	0.001797	MG/KG/DAY
THE NEW TMRC WILL OCCUPY	179.605	% OF THE ADI.

NO OTHER PENDING TOLERANCES ARE IN THE FILE