



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

NOV 13 1992

MEMORANDUM

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

SUBJECT: Dietary Exposure Analysis and Carcinogenic Risk
Assessment for Cyanazine and Metabolites Using
Anticipated Residues

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

TO: Kathy Pearce
Special Review Branch
Special Review and Reregistration Division
(H7508W)

THROUGH: James P. Kariya, Head *Kariya*
Dietary Risk Evaluation Section/SAB
Health Effects Division

The Dietary Risk Evaluation Section was requested to perform a chronic dietary exposure analysis and carcinogenic risk assessment for cyanazine using anticipated residue information generated by CBRS. This analysis is being performed as part of the Special Review of triazines and more specifically is a risk assessment for the cyanazine parent and the seven major metabolites of the parent which contain the triazine ring.

Residue Information

Food uses included in this analysis were those for which anticipated residues were supplied by Chemistry Branch II-Reregistration Support (CBRS) in John Abbotts' memorandum titled "Cyanazine. Determination of Anticipated Residues", dated 9/22/92. Published tolerances exist for the uses of cyanazine on corn grain, cottonseed, sorghum grain, and wheat grain, and are listed in 40 CFR 180.307. In addition to these uses, anticipated residues were supplied by CBRS for secondary residues in meat, milk, poultry, and eggs; no tolerances are established under 40 CFR 180.307 for residues in animal commodities. The lack of tolerances for animal commodities is considered a data gap by CBRS, to be corrected through the reregistration process (personal communication, John Abbotts, 11/5/92).

It should be noted that while the tolerances for cyanazine presently in the CFR reflect the parent compound only, it is OPP's position that the residues of concern for cyanazine are the parent and all metabolites containing the triazine ring (Cover

Memorandum, Cyanazine Registration Standard, E. Saito, 10/10/84; R.B. Perfetti, 10/3/91). Residues given in the CBRS memo and used in this analysis are for the combined residues of the cyanazine parent and the seven major metabolites (five chloro and two hydroxy) containing the triazine ring. The parent plus these seven metabolites account for 90% or more of the total radioactive residue in plants (J. Abbotts, 9/22/92).

The inclusion of the metabolites in the anticipated residue expression resulted in ARs being supplied for corn, cottonseed, sorghum, and wheat which were larger than the tolerance values listed for these commodities in the CFR. For this reason the tolerance and the anticipated residue for these commodities are not comparable, nor are the exposure and risk estimates which result from use of these residues in the DRES analysis. Tolerances required through reregistration are expected to reflect the parent and all major plant metabolites of cyanazine containing the triazine ring, instead of just the parent.

Percent of crop treated refinements used in the analysis were supplied by the Biological and Economic Analysis Division (BEAD) in an A. Jennings memo to D. Barolo dated 6/8/92 and a R. Torla memo to S. Schaible dated 10/29/92. Though 100% crop treated was assumed in the analysis for meat, milk, poultry, and eggs, the anticipated residues supplied by CBRS reflect percent of crop treated information for feed items. The anticipated residues supplied by CBRS reflect field trial data, processing studies, and/or metabolism data. A summary of the residue information used in this analysis is attached as Table 1.

Toxicological Endpoint

The DRES chronic exposure analysis compared dietary exposure from cyanazine to a Reference Dose (RfD) of 0.002 mg/kg body weight/day, based on a no observed effect level (NOEL) of 0.2 mg/kg bwt/day and an uncertainty factor of 100. The RfD was assumed for the analysis to be appropriate also for the metabolites of cyanazine which contain the triazine ring (personal communication with S. Dapson, 11/4/92). The NOEL is taken from a two year feeding study in rats which demonstrated decreased body weight gain in females and hyperactivity in males. This RfD has been approved by the HED/RfD Peer Review Committee (6/18/92), but has not yet been reviewed by the Agency RfD Work Group.

Cyanazine has been classified as a Group C_q (possible human) carcinogen by the OPP Carcinogenicity Peer Review Committee. Its upper bound carcinogenic potency factor (Q₁*) was calculated to be $8.4 \times 10^{-1} \text{ (mg/kg bwt/day)}^{-1}$ ("List of Chemicals Evaluated for Carcinogenic Potential", R. Engler, 9/3/92). In the absence of data indicating otherwise, this potency factor is assumed also to be appropriate for the metabolites of cyanazine containing the triazine ring (personal communication, K. Baetcke, 11/12/92).

Exposure Analysis

The DRES chronic exposure analysis used anticipated residues and percent crop treated information to estimate the Anticipated Residue Contribution (ARC) for the overall U.S. population and 22 population subgroups. These exposure estimates were then compared to the RfD for cyanazine to calculate the chronic risk from the evaluated uses. A summary of the ARCs and their representations as percentages of the RfD are attached as Table 2.

The ARC for the overall U.S. population from residues of cyanazine parent and seven metabolites containing the triazine ring is 0.000029 mg/kg bwt/day, which represents 1.5% of the RfD. None of the subgroups has an exposure which represents even 5% of the RfD and the exposure to the highest exposed subgroup, children aged one through six, is 0.000065 mg/kg bwt/day, or 3.2% of the RfD. Based on these risk estimates, it is safe to say that chronic (non-cancer) risk from cyanazine and its metabolites of interest is minimal.

Though not the main focus of this analysis and not comparable to the exposure estimates calculated in this analysis, the chronic dietary exposure from published tolerances of cyanazine parent on corn grain, sorghum, wheat grain, and cottonseed is 0.000172 mg/kg bwt/day, or 9% of the RfD. This exposure value was calculated assuming tolerance level residues and 100% crop treated for the abovementioned commodities, and does not include any exposure contributed by residues in animal commodities.

Carcinogenic Risk

The upper bound carcinogenic risk for cyanazine and its seven metabolites containing the triazine ring was calculated for the overall U.S. population using the following relationship:

$$\text{Upper bound carcinogenic risk} = \text{Dietary exposure (ARC)} \times Q_1^*$$

Based on a Q^* of $0.84 \text{ (mg/kg/day)}^{-1}$, the resulting upper bound carcinogenic risk was 2.5×10^{-5} . This risk reflects residues for both the food uses listed in the CFR and secondary residues found in meat, milk, poultry, and eggs. Carcinogenic risks broken out by commodity or commodity group are listed in the table on the following page.

Upper Bound Carcinogenic Risks from Cyanazine and Metabolites

<u>Commodity/Commodity Group</u>	<u>Cancer Risk</u>
Corn	1.0 E-5
Meat	8.5 E-6
Poultry and Eggs	2.6 E-6
Wheat	1.9 E-6
Milk	1.0 E-6
Sorghum	1.0 E-7
Cottonseed	7.8 E-8
Total	2.5 E-5

These upper bound carcinogenic risk estimates reflect refinements in both the residue and percent of crop treated information. Even with these refinements, the overall cancer risk from cyanazine and metabolites exceeds the level that the Agency usually considers negligible.

The largest contributor of risk is corn, both through the raw agricultural commodity itself and through secondary residues in meat, milk, poultry, and eggs resulting from use of corn as a feed item. Corn feed accounts for 99% of the residues of cyanazine and metabolites in beef cattle, 89% in dairy cattle, and 94% in poultry (personal communication, J. Abbotts, 11/12/92). Using these numbers as a basis for calculation, a cancer risk of 1.17×10^{-5} can be attributed to secondary residues from corn of cyanazine and metabolites in meat, milk, poultry, and eggs. The total risk from these commodities considering all possible feed items having a tolerance is 1.2×10^{-5} , so 97% of the overall risk from animal commodities can be attributed to corn. The use on corn either directly or indirectly accounts for 2.17×10^{-5} of the upper bound cancer risk from this chemical.

A list of the cancer risk contributed by each commodity in the analysis is attached as Table 3.

In addition to the upper bound cancer risk contributed through food uses of cyanazine, it is probably reasonable to assume that there is additional dietary risk contributed through the presence of cyanazine and its triazine containing metabolites in drinking water. Dietary exposure and cancer risk from drinking water will be addressed at a later date as part of the Special Review of triazines, but it should still be kept in mind that there is likely to be a possibly substantial additional cancer risk to that risk reported in this analysis for the overall U.S. population.

Attachments

cc: DRES M. Beringer (CCB)
 CBRS Caswell # 188C
 Tox I

TABLE 1

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 188C

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DATE: 10/28/92

CHEMICAL		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
FOOD CODE	FOOD	2yr feeding- rat NOEL=	0.2000 mg/kg 5.00 ppm LEL=	Decreased body weight gain in females; hyper- activity in males	ADI OPP RfD= 0.002000 EPA RfD= 0.002000	UF -->100	No data gaps.	HED reassess 05/05/88. EPA verified 05/25/88. RfD/Pr complete 03/12/92. EPA verified 05/27/92. RfD/PR complete 06/18/92. On IRIS.			
		ONCO: C(q) (HED)	25.00 ppm	Positive onco in rats (mammary tumor)	Q*: 0.84000		q* calculated				
FOOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR	STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)		
15005AA	CORN, SWEET	10 RAW-FRESH OR NFS		P 0.050000	0.120000			20.00	0.024000		
15005AA	CORN, SWEET	21 COOKED-NFS		P 0.050000	0.120000			20.00	0.024000		
15005AA	CORN, SWEET	31 COOKED-FRESH OR CANNED		P 0.050000	0.120000			20.00	0.024000		
24002EA	CORN, GRAIN- ENDO	10 RAW-FRESH OR NFS		P 0.050000	0.120000			20.00	0.024000		
24002EA	CORN, GRAIN- ENDO	21 COOKED-NFS		P 0.050000	0.120000			20.00	0.024000		
24002EA	CORN, GRAIN- ENDO	22 COOKED-FRESH-BAKED		P 0.050000	0.120000			20.00	0.024000		
24002EA	CORN, GRAIN- ENDO	23 COOKED-FRESH-BOILED		P 0.050000	0.120000			20.00	0.024000		
24002HA	CORN, GRAIN- BRAN	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.050000	0.120000C			20.00	0.024000		
24002SA	CORN SUGAR	10 RAW-FRESH OR NFS		P 0.050000	0.120000C			20.00	0.024000		
24002SA	CORN SUGAR	21 COOKED-NFS		P 0.050000	0.100000			5.00	0.005000		
24002SA	CORN SUGAR	22 COOKED-FRESH-BAKED		P 0.100000	0.160000			1.00	0.001600		
24006AA	SORGHUM	00 NOT SPECIFIED (NO CONSUMPTION)		P 0.100000	0.160000			1.00	0.001600		
24007AA	WHEAT-ROUGH	10 RAW-FRESH OR NFS		P 0.100000	0.160000			1.00	0.001600		
24007AA	WHEAT-ROUGH	21 COOKED-NFS		P 0.100000	0.160000			1.00	0.001600		
24007AA	WHEAT-ROUGH	22 COOKED-FRESH-BAKED		P 0.100000	0.160000			1.00	0.001600		
24007AA	WHEAT-ROUGH	23 COOKED-FRESH-BOILED		P 0.100000	0.160000			1.00	0.001600		
24007GA	WHEAT-GERM	10 RAW-FRESH OR NFS		P 0.100000	0.160000			1.00	0.001600		
24007GA	WHEAT-GERM	22 COOKED-FRESH-BAKED		P 0.100000	0.160000			1.00	0.001600		
24007HA	WHEAT-BRAN	10 RAW-FRESH OR NFS		P 0.100000	0.160000			1.00	0.001600		
24007HA	WHEAT-BRAN	21 COOKED-NFS		P 0.100000	0.160000			1.00	0.001600		
24007HA	WHEAT-BRAN	22 COOKED-FRESH-BAKED		P 0.100000	0.160000			1.00	0.001600		
24007HA	WHEAT-FLOUR	10 RAW-FRESH OR NFS		P 0.100000	0.160000			1.00	0.001600		
24007HA	WHEAT-FLOUR	21 COOKED-NFS		P 0.100000	0.160000			1.00	0.001600		
24007HA	WHEAT-FLOUR	22 COOKED-FRESH-BAKED		P 0.100000	0.160000			1.00	0.001600		
24007HA	WHEAT-FLOUR	25 COOKED-FRESH-FRIED		P 0.100000	0.160000			1.00	0.001600		
270020A	CORN, GRAIN-OIL	18 PROCESSED OIL		P 0.050000	0.090000			20.00	0.024000		
270030A	COTTONSEED-OIL	18 PROCESSED OIL		P 0.050000	0.090000			5.00	0.004500		
270030A	COTTONSEED-MEAL	18 PROCESSED OIL		P 0.050000	0.090000			5.00	0.004500		
500000B	MILK-NON-FAT SOL	10 RAW-FRESH OR NFS	NO TOL	A 0.000034	0.000034			100.00	0.000034		
500000B	MILK-NON-FAT SOL	21 COOKED-NFS	NO TOL	A 0.000034	0.000034			100.00	0.000034		
500000B	MILK-NON-FAT SOL	51 COOKED-CANNED	NO TOL	A 0.000034	0.000034			100.00	0.000034		
50000FA	MILK-FAT SOLIDS	10 RAW-FRESH OR NFS	NO TOL	A 0.000280	0.000280			100.00	0.000280		
50000FA	MILK-FAT SOLIDS	21 COOKED-NFS	NO TOL	A 0.000280	0.000280			100.00	0.000280		
50000FA	MILK-FAT SOLIDS	51 COOKED-CANNED	NO TOL	A 0.000280	0.000280			100.00	0.000280		
50000SA	MILK SUG (LACT)	21 COOKED-NFS	NO TOL	A 0.000280	0.000280			100.00	0.000280		
50000SA	MILK SUG (LACT)	51 COOKED-CANNED	NO TOL	A 0.000280	0.000280			100.00	0.000280		
53001BA	BEEF-MEAT BYP	21 COOKED-NFS	NO TOL	A 0.010300	0.010300			100.00	0.010300		
53001BA	BEEF-MEAT BYP	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	NO TOL	A 0.010300	0.010300			100.00	0.010300		
53001BB	BEEF-OTH ORGAN	21 COOKED-NFS	NO TOL	A 0.010300	0.010300			100.00	0.010300		
53001BB	BEEF-OTH ORGAN	51 COOKED-CANNED	NO TOL	A 0.010300	0.010300			100.00	0.010300		

DATE: 10/28/92

CHEMICAL	STUDY TYPE	EFFECTS	TOLERANCE (ppm)	PET.#	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
Cyanazine (Bladex) Caswell #188C CAS No. 21725-46-2 A.I. CODE: 100101 CFR No. 180.307	2yr feeding- rat NOEL= 0.2000 mg/kg 5.00 ppm LEL= 0.9900 mg/kg 25.00 ppm ONCO: C(q) (HED)	Decreased body weight gain in females; hyper- activity in males Positive once in rats (mammary tumor)						
					ADI UF -->100 OPP RfD= 0.002000 EPA RfD= 0.002000 q*: 0.84000	No data gaps. q* calculated		
FOOD CODE	FOOD	FOOD FORM						
53001DA	BEEF-DRIED	21 COOKED-NFS	NO TOL	A 0.003450	0.003450	100.00	0.003450	0.003450
53001FA	BEEF-FAT	10 RAW-FRESH OR NFS	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53001FA	BEEF-FAT	21 COOKED-NFS	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53001FA	BEEF-FAT	22 COOKED-FRESH-BAKED	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53001FA	BEEF-FAT	23 COOKED-FRESH-BOILED	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53001FA	BEEF-FAT	24 COOKED-FRESH-BROILED	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53001FA	BEEF-FAT	25 COOKED-FRESH-FRIED	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53001KA	BEEF-KIDNEY	21 COOKED-NFS	NO TOL	A 0.004310	0.004310	100.00	0.004310	0.004310
53001LA	BEEF-LIVER	25 COOKED-FRESH-FRIED	NO TOL	A 0.003710	0.003710	100.00	0.003710	0.003710
53001LA	BEEF-LIVER	31 COOKED-FRESH OR CANNED	NO TOL	A 0.003710	0.003710	100.00	0.003710	0.003710
53001MA	BEEF-LEAN	10 RAW-FRESH OR NFS	NO TOL	A 0.003450	0.003450	100.00	0.003450	0.003450
53001MA	BEEF-LEAN	21 COOKED-NFS	NO TOL	A 0.003450	0.003450	100.00	0.003450	0.003450
53001MA	BEEF-LEAN	22 COOKED-FRESH-BAKED	NO TOL	A 0.003450	0.003450	100.00	0.003450	0.003450
53001MA	BEEF-LEAN	23 COOKED-FRESH-BOILED	NO TOL	A 0.003450	0.003450	100.00	0.003450	0.003450
53001MA	BEEF-LEAN	24 COOKED-FRESH-BROILED	NO TOL	A 0.003450	0.003450	100.00	0.003450	0.003450
53002BA	GOAT-MEAT BYP	00 NOT SPECIFIED (NO CONSUMPTION)	NO TOL	A 0.010300	0.010300	100.00	0.010300	0.010300
53002BB	GOAT-OTH ORGAN	00 NOT SPECIFIED (NO CONSUMPTION)	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53002FA	GOAT-FAT	23 COOKED-FRESH-BOILED	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53002FA	GOAT-FAT	25 COOKED-FRESH-FRIED	NO TOL	A 0.004310	0.004310	100.00	0.004310	0.004310
53002KA	GOAT-KIDNEY	00 NOT SPECIFIED (NO CONSUMPTION)	NO TOL	A 0.003710	0.003710	100.00	0.003710	0.003710
53002LA	GOAT-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)	NO TOL	A 0.003450	0.003450	100.00	0.003450	0.003450
53002MA	GOAT-LEAN	23 COOKED-FRESH-BOILED	NO TOL	A 0.010300	0.010300	100.00	0.010300	0.010300
53002MA	GOAT-LEAN	25 COOKED-FRESH-FRIED	NO TOL	A 0.010300	0.010300	100.00	0.010300	0.010300
53003AA	HORSE	00 NOT SPECIFIED (NO CONSUMPTION)	NO TOL	A 0.010300	0.010300	100.00	0.010300	0.010300
53003BA	SHEEP-MEAT BYP	21 COOKED-NFS	NO TOL	A 0.010300	0.010300	100.00	0.010300	0.010300
53005BB	SHEEP-OTH ORGAN	21 COOKED-NFS	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53005FA	SHEEP-FAT	21 COOKED-NFS	NO TOL	A 0.004310	0.004310	100.00	0.004310	0.004310
53005KA	SHEEP-KIDNEY	21 COOKED-NFS	NO TOL	A 0.003710	0.003710	100.00	0.003710	0.003710
53005LA	SHEEP-LIVER	00 NOT SPECIFIED (NO CONSUMPTION)	NO TOL	A 0.003450	0.003450	100.00	0.003450	0.003450
53005MA	SHEEP-LEAN	21 COOKED-NFS	NO TOL	A 0.003450	0.003450	100.00	0.003450	0.003450
53005MA	SHEEP-LEAN	31 COOKED-FRESH OR CANNED	NO TOL	A 0.010300	0.010300	100.00	0.010300	0.010300
53006BA	PORK-MEAT BYP	21 COOKED-NFS	NO TOL	A 0.010300	0.010300	100.00	0.010300	0.010300
53006BB	PORK-OTH ORGAN	21 COOKED-NFS	NO TOL	A 0.010300	0.010300	100.00	0.010300	0.010300
53006BB	PORK-OTH ORGAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	NO TOL	A 0.010300	0.010300	100.00	0.010300	0.010300
53006FA	PORK-FAT	10 RAW-FRESH OR NFS	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53006FA	PORK-FAT	21 COOKED-NFS	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53006FA	PORK-FAT	23 COOKED-FRESH-BOILED	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53006FA	PORK-FAT	25 COOKED-FRESH-FRIED	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53006FA	PORK-FAT	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	NO TOL	A 0.006900	0.006900	100.00	0.006900	0.006900
53006KA	PORK-KIDNEY	21 COOKED-NFS	NO TOL	A 0.004310	0.004310	100.00	0.004310	0.004310

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OOD CODE	FOOD	FOOD FORM	PET.#	TOLERANCE (ppm)	ANTICIPATED RESIDUE (ppm)	AR STATISTIC TYPE	% CROP TREATED	RES. VALUE USED IN TAS RUN (ppm)
3006LA	PORK-LIVER	21 COOKED-NFS	NO TOL	A 0.003710	0.003710		100.00	0.003710
3006LA	PORK-LIVER	25 COOKED-FRESH-FRIED	NO TOL	A 0.003710	0.003710		100.00	0.003710
3006MA	PORK-LEAN	21 COOKED-NFS	NO TOL	A 0.003450	0.003450		100.00	0.003450
3006MA	PORK-LEAN	25 COOKED-FRESH-FRIED	NO TOL	A 0.003450	0.003450		100.00	0.003450
3006MA	PORK-LEAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	NO TOL	A 0.003450	0.003450		100.00	0.003450
3006MA	PORK-LEAN	21 COOKED-NFS	NO TOL	A 0.003450	0.003450		100.00	0.003450
5008BA	TURKEY-BYP	21 COOKED-NFS	NO TOL	A 0.004320	0.004320		100.00	0.004320
5008BA	TURKEY-BYP	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	NO TOL	A 0.004320	0.004320		100.00	0.004320
5008LA	TURKEY ORGAN	21 COOKED-NFS	NO TOL	A 0.004320	0.004320		100.00	0.004320
5008LA	TURKEY ORGAN	25 COOKED-FRESH-FRIED	NO TOL	A 0.004320	0.004320		100.00	0.004320
5008MA	TURKEY W/O SKIN	21 COOKED-NFS	NO TOL	A 0.003980	0.003980		100.00	0.003980
5008MA	TURKEY W/O SKIN	31 COOKED-FRESH OR CANNED	NO TOL	A 0.003980	0.003980		100.00	0.003980
5008MA	TURKEY W/O SKIN	62 COOKED-FRESH OR FROZEN-BAKED	NO TOL	A 0.003980	0.003980		100.00	0.003980
5008MB	TURKEY+SKIN	21 COOKED-NFS	NO TOL	A 0.003980	0.003980		100.00	0.003980
5008MB	TURKEY+SKIN	25 COOKED-FRESH-FRIED	NO TOL	A 0.002320	0.002320		100.00	0.002320
5008MC	TURKEY-UNSPEC	21 COOKED-NFS	NO TOL	A 0.004320	0.004320		100.00	0.004320
5013BA	POULTRY, OTH-BYP	00 NOT SPECIFIED (NO CONSUMPTION)	NO TOL	A 0.004320	0.004320		100.00	0.004320
5013LA	POULTRY, ORGAN	25 COOKED-FRESH-FRIED	NO TOL	A 0.004320	0.004320		100.00	0.004320
5013MA	POULTRY, OTHER	21 COOKED-NFS	NO TOL	A 0.003980	0.003980		100.00	0.003980
5014AA	EGGS-WHOLE	10 RAW-FRESH OR NFS	NO TOL	A 0.002980	0.002980		100.00	0.002980
5014AA	EGGS-WHOLE	21 COOKED-NFS	NO TOL	A 0.002980	0.002980		100.00	0.002980
5014AA	EGGS-WHOLE	22 COOKED-FRESH-BAKED	NO TOL	A 0.002980	0.002980		100.00	0.002980
5014AA	EGGS-WHOLE	23 COOKED-FRESH-BOILED	NO TOL	A 0.002980	0.002980		100.00	0.002980
5014AA	EGGS-WHOLE	25 COOKED-FRESH-FRIED	NO TOL	A 0.002980	0.002980		100.00	0.002980
5014AB	EGGS-WHITE ONLY	10 RAW-FRESH OR NFS	NO TOL	A 0.002980	0.002980		100.00	0.002980
5014AB	EGGS-WHITE ONLY	21 COOKED-NFS	NO TOL	A 0.002980	0.002980		100.00	0.002980
5014AB	EGGS-WHITE ONLY	22 COOKED-FRESH-BAKED	NO TOL	A 0.002980	0.002980		100.00	0.002980
5014AB	EGGS-WHITE ONLY	62 COOKED-FRESH OR FROZEN-BAKED	NO TOL	A 0.002980	0.002980		100.00	0.002980
5014AB	EGGS-WHITE ONLY	81 COOKED-FROZEN	NO TOL	A 0.002980	0.002980		100.00	0.002980
5014AC	EGGS-YOLK ONLY	10 RAW-FRESH OR NFS	NO TOL	A 0.002980	0.002980		100.00	0.002980
5014AC	EGGS-YOLK ONLY	21 COOKED-NFS	NO TOL	A 0.002980	0.002980		100.00	0.002980
5014AC	EGGS-YOLK ONLY	25 COOKED-FRESH-FRIED	NO TOL	A 0.002980	0.002980		100.00	0.002980
5014AC	EGGS-YOLK ONLY	31 COOKED-FRESH OR CANNED	NO TOL	A 0.002980	0.002980		100.00	0.002980
5015BA	CHICKEN-BYP	00 NOT SPECIFIED (NO CONSUMPTION)	NO TOL	A 0.004320	0.004320		100.00	0.004320
5015LA	CHICKEN-ORGAN	21 COOKED-NFS	NO TOL	A 0.004320	0.004320		100.00	0.004320
5015LA	CHICKEN-ORGAN	25 COOKED-FRESH-FRIED	NO TOL	A 0.004320	0.004320		100.00	0.004320
5015LA	CHICKEN-ORGAN	26 COOKED-FRESH-PICKLED, CORNED, OR CURED	NO TOL	A 0.004320	0.004320		100.00	0.004320
5015MA	CHICKEN-W/O SKIN	21 COOKED-NFS	NO TOL	A 0.003980	0.003980		100.00	0.003980
5015MA	CHICKEN-W/O SKIN	22 COOKED-FRESH-BAKED	NO TOL	A 0.003980	0.003980		100.00	

DATE: 10/28/92

ANTICIPATED RESIDUE INFORMATION FOR CASWELL NUMBER 188C

CHEMICAL		STUDY TYPE	EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
Cyanazine (Bladex)	2yr feeding- rat	Decreased body weight gain in females; hyper-activity in males	AD1	UF -->100	No data gaps.		HED reassess 05/05/88.	
Caswell #188C	NOEL=	0.2000 mg/kg	OPP RfD=	0.002000			EPA verified 05/25/88.	
CAS No. 21725-46-2	5.00 ppm		EPA RfD=	0.002000			RfD/Pr complete 03/12/92.	
A.I. CODE: 100101	LEL=	0.9900 mg/kg					EPA verified 05/27/92.	
CFR No. 180.307	25.00 ppm	Positive onco in rats (mammary tumor)	q*: 0.84000			q* calculated	RfD/Pr complete 06/18/92.	
ONCO: C(q) (HED)		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)
55015MA	CHICKEN-W/O SKIN	53 COOKED-CANNED-BOILED	NO TOL	A 0.003980	0.003980		100.00	0.003980
55015MB	CHICKEN+SKIN	21 COOKED-NFS	NO TOL	A 0.002320	0.002320		100.00	0.002320
55015MB	CHICKEN+SKIN	25 COOKED-FRESH-FRIED	NO TOL	A 0.002320	0.002320		100.00	0.002320

TABLE 2

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 10/28/92

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CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			ADI	UF -->100		
Cyanazine (Bladex) Caswell #188C CAS No. 21725-46-2 A.I. CODE: 100101 CFR No. 180.307	2yr feeding- rat NOEL= 0.2000 mg/kg 5.00 ppm LEL= 0.9900 mg/kg 25.00 ppm ONCO: C(g) (HED)	Decreased body weight gain in females; hyper- activity in males Positive onco in rats (mammary tumor)	OPP RfD= 0.002000 EPA RfD= 0.002000	Q*: 0.84000	No data gaps. Q* calculated	HED reassess 05/05/88. EPA verified 05/25/88. RfD/Pr complete 03/12/92. EPA verified 05/27/92. RfD/Pr complete 06/18/92. On IRIS.

POPULATION SUBGROUP	TOTAL TMRC (MG/KG BODY WEIGHT/DAY)		NEW TMRC		DIFFERENCE		EFFECT OF ANTICIPATED RESIDUES	
	CURRENT TMRC*	NEW TMRC**	AS PERCENT OF RFD	AS PERCENT OF RFD	AS PERCENT OF RFD	AS PERCENT OF RFD	ARC	%RFD
U.S. POPULATION - 48 STATES	0.000172	0.00186	9.307550	0.711100	0.000029	0.000029	0.000029	1.46585
U.S. POPULATION - SPRING SEASON	0.000165	0.00179	8.955700	0.710800	0.000028	0.000028	0.000028	1.41240
U.S. POPULATION - SUMMER SEASON	0.000169	0.00183	9.170850	0.723200	0.000030	0.000030	0.000030	1.51575
U.S. POPULATION - FALL SEASON	0.000175	0.00190	9.490700	0.725500	0.000029	0.000029	0.000029	1.47450
U.S. POPULATION - WINTER SEASON	0.000173	0.00188	9.374450	0.705000	0.000029	0.000029	0.000029	1.43790
NORTHEAST REGION	0.000171	0.00185	9.268150	0.716950	0.000027	0.000027	0.000027	1.33305
NORTH CENTRAL REGION	0.000176	0.00190	9.506350	0.723050	0.000029	0.000029	0.000029	1.45110
SOUTHERN REGION	0.000168	0.00182	9.117200	0.708700	0.000031	0.000031	0.000031	1.54545
WESTERN REGION	0.000167	0.00181	9.074050	0.717750	0.000030	0.000030	0.000030	1.49680
HISPANICS	0.000179	0.00197	9.834400	0.891950	0.000040	0.000040	0.000040	1.99160
NON-HISPANIC WHITES	0.000172	0.00185	9.272000	0.691800	0.000028	0.000028	0.000028	1.38610
NON-HISPANIC BLACKS	0.000162	0.00177	8.811400	0.779100	0.000034	0.000034	0.000034	1.68805
NON-HISPANIC OTHERS	0.000159	0.00175	8.766450	0.807050	0.000029	0.000029	0.000029	1.44840
NURSING INFANTS (< 1 YEAR OLD)	0.000064	0.00072	3.598750	0.401450	0.000017	0.000017	0.000017	0.86395
NON-NURSING INFANTS (< 1 YEAR OLD)	0.000173	0.00192	9.614050	0.974950	0.000049	0.000049	0.000049	2.44900
FEMALES (13+ YEARS, PREGNANT)	0.000123	0.00133	6.635700	0.507400	0.000021	0.000021	0.000021	1.02800
FEMALES 13+ YEARS, NURSING	0.000148	0.00159	7.999300	0.556700	0.000022	0.000022	0.000022	1.10300
CHILDREN (1-6 YEARS OLD)	0.000388	0.00417	20.833300	1.439150	0.000065	0.000065	0.000065	3.24230
CHILDREN (7-12 YEARS OLD)	0.000285	0.00305	15.234000	1.000600	0.000047	0.000047	0.000047	2.33975
MALES (13-19 YEARS OLD)	0.000199	0.00216	10.702300	0.774800	0.000032	0.000032	0.000032	1.62040
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)	0.000153	0.00165	8.298150	0.611500	0.000026	0.000026	0.000026	1.28960
MALES (20 YEARS AND OLDER)	0.000132	0.00145	7.249950	0.637600	0.000023	0.000023	0.000023	1.15325
FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)	0.000110	0.00121	6.025000	0.572200	0.000019	0.000019	0.000019	0.96220

*Current TMRC does not include new or pending tolerances.

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

TOLERANCE ASSESSMENT SUMMARY FOR Cyanazine (Bladex)
USING ANTICIPATED RESIDUES
CASWELL #188C

DATE: 10/28/92

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

EXISTING ANTICIPATED RESIDUES (PUBLISHED ONLY)
RESULT IN AN ARC OF: 0.000015 MG/KG/DAY
THE EXISTING ARC IS EQUIVALENT TO: 0.750 % OF THE ADI.

NO NEW ANTICIPATED RESIDUES ARE IN THE FILE.

OTHER PENDING ANTICIPATED RESIDUES EXCLUDING THE
CURRENT NEW PETITION HAVE AN ARC OF: 0.000014 MG/KG/DAY
THIS ARC WILL OCCUPY 0.716 % OF THE ADI.

IF ALL PENDING ANTICIPATED RESIDUES (INCLUDING THE
CURRENT NEW PETITION) ARE GRANTED
THE RESULTANT ARC WILL BE: 0.000029 MG/KG/DAY
THE TOTAL ARC WILL OCCUPY 1.466 % OF THE ADI.

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

EXISTING ANTICIPATED RESIDUES (PUBLISHED ONLY)
RESULT IN AN ARC OF: 0.000029 MG/KG/DAY
THE EXISTING ARC IS EQUIVALENT TO: 1.474 % OF THE ADI.

NO NEW ANTICIPATED RESIDUES ARE IN THE FILE.

OTHER PENDING ANTICIPATED RESIDUES EXCLUDING THE
CURRENT NEW PETITION HAVE AN ARC OF: 0.000019 MG/KG/DAY
THIS ARC WILL OCCUPY 0.975 % OF THE ADI.

IF ALL PENDING ANTICIPATED RESIDUES (INCLUDING THE
CURRENT NEW PETITION) ARE GRANTED
THE RESULTANT ARC WILL BE: 0.000049 MG/KG/DAY
THE TOTAL ARC WILL OCCUPY 2.449 % OF THE ADI.

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

EXISTING ANTICIPATED RESIDUES (PUBLISHED ONLY)
RESULT IN AN ARC OF: 0.000036 MG/KG/DAY
THE EXISTING ARC IS EQUIVALENT TO: 1.807 % OF THE ADI.

NO NEW ANTICIPATED RESIDUES ARE IN THE FILE.

OTHER PENDING ANTICIPATED RESIDUES EXCLUDING THE
CURRENT NEW PETITION HAVE AN ARC OF: 0.000029 MG/KG/DAY
THIS ARC WILL OCCUPY 1.435 % OF THE ADI.

IF ALL PENDING ANTICIPATED RESIDUES (INCLUDING THE
CURRENT NEW PETITION) ARE GRANTED
THE RESULTANT ARC WILL BE: 0.000065 MG/KG/DAY
THE TOTAL ARC WILL OCCUPY 3.242 % OF THE ADI.

CHEMICAL INFORMATION			STUDY TYPE	EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	TMRD TYPE (UG/KG/DAY)	%RFD	TMRD ONCO RISK	ANTICIPATED RESIDUE (PPM)	ARC (UG/KG/DAY)	%RFD	ARC ONCO RISK		
270030A	COTTONSEED-OIL	0.050	P	0.001020	0.051	0.00000085680	0.00450	0.000092	0.0005	0.00000007728	
270030A	18 PROCESSED-OIL										
270030A	COTTONSEED-MEAL	0.050	P	0.000006	0.000	0.00000000504	0.00450	0.000001	0.000	0.00000000084	
270030A	18 PROCESSED OIL										
CROP GROUP TOTALS FOR UNSPECIFIED:											
15005AA	CORN, SWEET	0.050	P	0.011835	0.592	0.000000994140	0.02400	0.000002	0.000	0.00000000168	
15005AA	10 RAW-FRESH OR NFS						0.02400	0.004783	0.239	0.00000401772	
15005AA	21 COOKED-NFS						0.02400	0.000895	0.045	0.00000075180	
24002EA	CORN, GRAIN-ENDOSPERM	0.050	P	0.008270	0.414	0.000000694680	0.02400	0.000015	0.001	0.00000001260	
24002EA	10 RAW-FRESH OR NFS						0.02400	0.000523	0.026	0.00000043532	
24002EA	21 COOKED-NFS						0.02400	0.002949	0.147	0.00000247716	
24002EA	22 COOKED-FRESH-BAKED						0.02400	0.000483	0.024	0.00000040572	
24002EA	23 COOKED-FRESH-BOILED						0.02400	0.000000	0.000	0.00000000000	
24002HA	CORN, GRAIN-BRAN	0.050	P	0.000000	0.000	0.000000000000	0.02400	0.000000	0.000	0.00000000000	
24002HA	00 NOT SPECIFIED (NO CONSUMPTION)										
24002SA	CORN SUGAR	0.050	P	0.007287	0.364	0.000000612108	0.02400	0.000091	0.005	0.00000007644	
24002SA	10 RAW-FRESH OR NFS						0.02400	0.002022	0.101	0.00000169848	
24002SA	21 COOKED-NFS						0.02400	0.000219	0.011	0.00000018396	
24006AA	SORGHUM (INCLUDING MILO)	0.050	P	0.001188	0.059	0.000000099792	0.0500	0.000119	0.006	0.00000000996	
24007AA	WHEAT-ROUGH	0.100	P	0.014061	0.703	0.000001181124	0.00160	0.000000	0.000	0.00000000000	
24007AA	10 RAW-FRESH OR NFS						0.00160	0.000014	0.001	0.00000001176	
24007AA	21 COOKED-NFS						0.00160	0.000137	0.007	0.00000011508	
24007AA	22 COOKED-FRESH-BAKED						0.00160	0.000073	0.004	0.00000006132	
24007AA	23 COOKED-FRESH-BOILED						0.00160	0.000000	0.000	0.00000000000	
24007GA	WHEAT-GERM	0.100	P	0.000081	0.004	0.00000006804	0.00160	0.000000	0.000	0.00000000000	
24007GA	10 RAW-FRESH OR NFS						0.00160	0.000001	0.000	0.00000000084	
24007GA	22 COOKED-FRESH-BAKED						0.00160	0.000000	0.000	0.00000000000	
24007HA	WHEAT-BRAN	0.100	P	0.001216	0.061	0.00000102144	0.00160	0.000000	0.000	0.00000000000	
24007HA	10 RAW-FRESH OR NFS						0.00160	0.000000	0.000	0.00000000000	
24007HA	21 COOKED-NFS						0.00160	0.000000	0.000	0.00000000000	
24007HA	22 COOKED-FRESH-BAKED						0.00160	0.000019	0.001	0.00000001596	

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CHEMICAL INFORMATION		STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
Cyanazine (Bladex)		2yr feeding- rat NOEL= 0.2000 mg/kg 5.00 ppm LEL= 0.9900 mg/kg 25.00 ppm	Decreased body weight gain in females; hyperactivity in males	ADI OPP RfD= 0.002000 EPA RfD= 0.002000	UF -->100	No data gaps.	HED reassess 05/05/88. EPA verified 05/25/88. RfD/Pr complete 03/12/92. EPA verified 05/27/92. RfD/Pr complete 06/18/92. On IRIS.
Caswell #188C							
CAS No. 21725-46-2							
A.I. CODE: 100101							
CFR No. 180.307		ONCO: C(q) (HED)	Positive onco in rats (mammary tumor)	Q*: 0.84000		Q* calculated	

COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES

COMMODITY CONTRIBUTION BY RAC FUR: U.S. POPULATION - 40 STATES												
FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	TMRC TYPE (UG/KG/DAY)	%RFD	TMRC ONCO RISK	ANTICIPATED RESIDUE (PPM)	ARC (UG/KG/DAY)	%RFD	ARC			
									ONCO RISK	ONCO RISK		
270020A	CORN, GRAIN-OIL 18 PROCESSED OIL	0.050	P	0.001140	0.057	0.00000095760	0.02400	0.000547	0.027	0.00000045948		
CROP GROUP TOTALS FOR CEREAL GRAINS:												
530018A	BEEF-MEAT BYPRODUCTS 21 COOKED-NFS	0.010	A	0.000182	0.009	0.00000015288	0.01030	0.000169	0.008	0.00000014196		
530018B	BEEF(ORGAN MEATS)-OTHER 21 COOKED-NFS	0.010	A	0.000062	0.003	0.00000005208	0.01030	0.000013	0.001	0.00000001092		
53001DA	BEEF-DRIED 51 COOKED-CANNED	0.003	A	0.000009	0.000	0.00000000756	0.01030	0.000053	0.003	0.00000004452		
53001FA	BEEF(BONELESS)-FAT (BEEF TALLOW) 10 RAW-FRESH OR NFS	0.006	A	0.002567	0.128	0.00000215628	0.00345	0.000009	0.000	0.00000000756		
53001KA	BEEF(ORGAN MEATS)-KIDNEY 21 COOKED-NFS	0.004	A	0.000002	0.000	0.00000000168	0.00690	0.000010	0.001	0.00000000840		
53001LA	BEEF(ORGAN MEATS)-LIVER 25 COOKED-FRESH-FRIED	0.003	A	0.000077	0.004	0.00000006468	0.00690	0.001023	0.051	0.00000085932		
53001MA	BEEF(BONELESS)-LEAN (W/O REMOVEABLE FAT) 31 COOKED-FRESH OR CANNED	0.003	A	0.004009	0.200	0.000000336756	0.00690	0.000172	0.009	0.00000014448		
530028A	GOAT-MEAT BYPRODUCTS 00 NOT SPECIFIED (NO CONSUMPTION)	0.010	A	0.000000	0.000	0.000000000000	0.00690	0.000230	0.012	0.00000019320		
530028B	GOAT(ORGAN MEATS)-OTHER 00 NOT SPECIFIED (NO CONSUMPTION)	0.010	A	0.000000	0.000	0.000000000000	0.00690	0.000982	0.049	0.00000082488		
53002FA	GOAT(BONELESS)-FAT 23 COOKED-FRESH-BOILED	0.006	A	0.000000	0.000	0.000000000000	0.00690	0.000149	0.007	0.00000012516		
53002KA	GOAT(ORGAN MEATS)-KIDNEY 00 NOT SPECIFIED (NO CONSUMPTION)	0.004	A	0.000000	0.000	0.000000000000	0.00431	0.000002	0.000	0.00000000168		
53002LA	GOAT(ORGAN MEATS)-LIVER 00 NOT SPECIFIED (NO CONSUMPTION)	0.003	A	0.000000	0.000	0.000000000000	0.00371	0.000076	0.004	0.00000006384		
							0.00371	0.000001	0.000	0.00000000084		
							0.00345	0.000000	0.000	0.000000000000		
							0.00345	0.002388	0.119	0.0000200592		
							0.00345	0.000164	0.008	0.00000013776		
							0.00345	0.000254	0.013	0.00000021336		
							0.00345	0.001202	0.060	0.00000100968		
							0.01030	0.000000	0.000	0.000000000000		
							0.01030	0.000000	0.000	0.000000000000		
							0.00690	0.000000	0.000	0.000000000000		
							0.00690	0.000000	0.000	0.000000000000		
							0.00431	0.000000	0.000	0.000000000000		
							0.00371	0.000000	0.000	0.000000000000		

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

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CHEMICAL INFORMATION		STUDY TYPE	EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
Cyanazine (Bladex) Caswell #188C CAS No. 21725-46-2 A.I. CODE: 100101 CFR No. 180.307	2yr feeding- rat NOEL= 0.2000 mg/kg 5.00 ppm LEL= 0.9900 mg/kg 25.00 ppm ONCO: C(q) (HED)		Decreased body weight gain in females; hyper- activity in males	ADI	UF	No data gaps.	HED reassess 05/05/88. EPA verified 05/25/88. RfD/Pr complete 03/12/92. EPA verified 05/27/92. RfD/Pr complete 06/18/92. On IRIS.			
				OPP RfD=	0.002000					
				EPA RfD=	0.002000					
				q*:	0.84000					
				COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES						
FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	TMRC TYPE	TMRC (UG/KG/DAY)	%RFD	TMRC ONCO RISK	ANTICIPATED RESIDUE (PPM)	ARC (UG/KG/DAY)	%RFD	ARC ONCO RISK
53002MA	GOAT(BONELESS)-LEAN (W/O REMOVEABLE FAT) 23 COOKED-FRESH-BOILED 25 COOKED-FRESH-FRIED	0.003	A	0.000001	0.000	0.000000000084	0.00345 0.00345	0.000001 0.000000	0.000 0.000	0.000000000084 0.000000000000
53003AA	HORSE 00 NOT SPECIFIED (NO CONSUMPTION)	0.010	A	0.000000	0.000	0.000000000000	0.01030	0.000000	0.000	0.000000000000
53005BA	SHEEP-MEAT BYPRODUCTS 21 COOKED-NFS	0.010	A	0.000001	0.000	0.000000000084	0.01030	0.000001	0.000	0.000000000084
53005BB	SHEEP(ORGAN MEATS)-OTHER 21 COOKED-NFS	0.010	A	0.000000	0.000	0.000000000000	0.01030	0.000000	0.000	0.000000000000
53005FA	SHEEP(BONELESS)-FAT 21 COOKED-NFS	0.006	A	0.000030	0.002	0.00000002520	0.00690	0.000030	0.002	0.00000002520
53005KA	SHEEP(ORGAN MEATS)-KIDNEY 21 COOKED-NFS	0.004	A	0.000000	0.000	0.000000000000	0.00431	0.000000	0.000	0.000000000000
53005LA	SHEEP(ORGAN MEATS)-LIVER 00 NOT SPECIFIED (NO CONSUMPTION)	0.003	A	0.000000	0.000	0.000000000000	0.00371	0.000000	0.000	0.000000000000
53005MA	SHEEP(BONELESS)-LEAN (W/O REMOVEABLE FAT 21 COOKED-NFS 31 COOKED-FRESH OR CANNED	0.003	A	0.000043	0.002	0.00000003612	0.00345 0.00345	0.000040 0.000003	0.002 0.000	0.00000003360 0.00000000252
53006BA	PORK-MEAT BYPRODUCTS 21 COOKED-NFS	0.010	A	0.000258	0.013	0.00000021672	0.01030	0.000258	0.013	0.00000021672
53006BB	PORK(ORGAN MEATS)-OTHER 21 COOKED-NFS	0.010	A	0.000040	0.002	0.00000003360	0.01030 0.01030	0.000037 0.000003	0.002 0.000	0.00000003108 0.00000000252
53006FA	PORK(BONELESS)-FAT (INCLUDING LARD) 10 RAW-FRESH OR NFS 21 COOKED-NFS	0.006	A	0.001437	0.072	0.00000120708	0.00690 0.00690	0.000012 0.000671	0.001 0.034	0.0000001008 0.00000056364
53006KA	PORK(ORGAN MEATS)-KIDNEY 23 COOKED-FRESH-BOILED 25 COOKED-FRESH-FRIED	0.004	A	0.000000	0.000	0.000000000000	0.00690 0.00690	0.000158 0.000168	0.008 0.008	0.00000013272 0.00000014112
53006LA	PORK(ORGAN MEATS)-LIVER 21 COOKED-NFS 25 COOKED-FRESH-FRIED	0.003	A	0.000018	0.001	0.00000001512	0.00371 0.00371	0.000016 0.000002	0.001 0.000	0.00000001344 0.00000000168
53006MA	PORK(BONELESS)-LEAN (W/O REMOVEABLE FAT) 21 COOKED-NFS 25 COOKED-FRESH-FRIED 26 COOKED-FRESH-PICKLED, CORNED, OR CURED	0.003	A	0.001350	0.068	0.00000113400	0.00345 0.00345 0.00345	0.000626 0.000165 0.000559	0.031 0.008 0.028	0.00000052584 0.00000013860 0.00000046956
CROP GROUP TOTALS FOR RED MEAT:				0.010086	0.504	0.00000847224	0.010083		0.504	0.00000846972

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

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CHEMICAL INFORMATION	STUDY TYPE	EFFECTS	REFERENCE DOSES		DATA GAPS/COMMENTS	STATUS
			ADI	UF -->100		
Cyanazine (Bladex) Caswell #188C CAS No. 21725-46-2 A.I. CODE: 100101 CFR No. 180.307	2yr feeding- rat NOEL= 0.2000 mg/kg 5.00 ppm LEL= 0.9900 mg/kg 25.00 ppm ONCO: C(q) (HED)	Decreased body weight gain in females; hyper- activity in males Positive onco in rats (mammary tumor)	OPP RfD= 0.002000 EPA RfD= 0.002000		No data gaps.	HED reassess 05/05/88. EPA verified 05/25/88. RfD/pr complete 03/12/92. EPA verified 05/27/92. RfD/PR complete 06/18/92. On IRIS.

COMMODITY CONTRIBUTION BY RAC FOR: U.S. POPULATION - 48 STATES

FOOD CODE	FOODNAME/FOODFORM	TOLERANCE (PPM)	EFFECTS		TMR	TMRC	ONCO RISK'	ANTICIPATED RESIDUE (PPM)	ARC (UG/KG/DAY)	%RFD	ARC	ONCO RISK
			TYPE	TMRC								
50000DB	MILK-NON-FAT SOLIDS 10 RAW-FRESH OR NFS 21 COOKED-NFS 51 COOKED-CANNED	0.000	A	0.000242		0.012	0.00000020328	0.00003	0.000194	0.010		0.00000016296
50000FA	MILK-FAT SOLIDS 10 RAW-FRESH OR NFS 21 COOKED-NFS 51 COOKED-CANNED	0.000	A	0.000947		0.047	0.00000079548	0.00028	0.000746	0.037		0.00000062664
50000SA	MILK SUGAR (LACTOSE) 21 COOKED-NFS 51 COOKED-CANNED	0.000	A	0.000010		0.001	0.00000000840	0.00028	0.000199	0.010		0.00000016716
55014AA	EGGS-WHOLE 10 RAW-FRESH OR NFS 21 COOKED-NFS 22 COOKED-FRESH-BAKED 23 COOKED-FRESH-BOILED 25 COOKED-FRESH-FRIED	0.002	A	0.001682		0.084	0.00000141288	0.00028	0.000010	0.001		0.00000000000
55014AB	EGGS-WHITE ONLY 10 RAW-FRESH OR NFS 21 COOKED-NFS 22 COOKED-FRESH-BAKED 62 COOKED-FRESH OR FROZEN-BAKED 81 COOKED-FROZEN	0.002	A	0.000027		0.001	0.00000002268	0.00298	0.000013	0.001		0.00000001092
55014AC	EGGS-YOLK ONLY 10 RAW-FRESH OR NFS 21 COOKED-NFS 25 COOKED-FRESH-FRIED 31 COOKED-FRESH OR CANNED	0.002	A	0.000020		0.001	0.00000001680	0.00298	0.000002	0.000		0.00000000000
CROP GROUP TOTALS FOR DAIRY PRODUCTS:										0.146	0.00000245952	0.00000245952

GRAND TOTALS FOR U.S. POPULATION - 48 STATES

1.466

0.029317

0.186151

9.308

0.00015636684

0.00002462628

TOLERANCE TYPE: N=NEW; A=PENDING; P=PUBLISHED
 TMR=THEORETICAL MAXIMUM RESIDUE CONTRIBUTION
 ARC = ANTICIPATED RESIDUE CONTRIBUTION
 RFD = REFERENCE DOSE