



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

Feb-8, 1990

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Dietary Exposure Analysis for the Temporary Tolerance of Pyridate on Cabbage, Corn, and Peanuts, PP#8F3603

FROM: Rita Briggs, Ph.D. *RB*
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THROUGH: Reto Engler, Ph.D.
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TO: Robert Taylor, PM 25
Herbicides and Fungicides Branch
Registration Division (H7505C)

Action Requested

To provide an estimate of dietary exposure to pyridate based on a temporary tolerance (expiration date not to exceed one year) on cabbage, corn, and peanuts.

Discussion

1. Toxicology Endpoint: The routine chronic DRES analysis used a reference dose (PADI) of 0.02 mg/kg body weight/day, based upon a NOEL of 20 mg/kg body weight/day and an uncertainty factor of 1000 from a 90 day dog feeding study. This value has been approved by Toxicology Branch, HED (5/15/87).
2. Residue Information: No permanent tolerances have been established for pyridate. Therefore, the only food uses evaluated in this analysis are the temporary tolerances recommended by DEB (Haeberer memo, 12/14/89) of 0.03 ppm for cabbage, corn grain, and peanuts. A summary of the residue information used in the analysis is attached as Table 1.
3. Exposure Analysis: The DRES chronic exposure analysis uses tolerance level residues and 100 per cent crop treated to estimate the Theoretical Maximum Residue Contribution (TMRC) for the overall U.S. population and 22 population subgroups. The TMRC summaries for these groups are shown in Table 2.
4. Dietary Risk Assessment: The present DRES analysis is based on temporary tolerances for cabbage, corn, and peanuts. There are

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no permanent tolerances established for pyridate. The results of this analysis indicates that the exposure estimates for the overall U.S. population and for the 22 subgroups are less than 1% of the ADI (Table 2).

Attachments

cc: DRES (Tomerlin, SACB), DEB, Caswell #716A, TOX (Ioannou)

TABLE 1

CHEMICAL INFORMATION FOR CASWELL NUMBER 716A

DATE: 02/06/90

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CHEMICAL		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
Pyridate	Caswell #716A	90d Feeding- dog	dog	Emesis, ataxia; mortality at HDI. Doses given by capsule.	PADI UF -->1000 OPP RfD= 0.020000 EPA RfD= 0.000000	Chronic feeding- rat Chronic feeding- dog Reproduction- rat Teratology- rabbit (Core-Supplementary, repeat studies required)	HED approved 05/15/87. (WLB).				
	CAS No. 35512-33-9	NOEL= 20.0000 mg/kg	0.00 ppm								
	A.I. CODE: 128834	LEL= 60.0000 mg/kg	0.00 ppm	Oncogenicity studies (rat and mouse) unacceptable.							
	CFR No. 180.	ONCO: Undetermined.									

FOOD CODE	FOOD NAME	PETITION NUMBER	TOLERANCE (PPM)	
			NEW	PENDING PUBLISHED
13007AA	CABBAGE-GREEN AND RED	8F3603	0.030000	
15006AA	PEANUTS-WHOLE	8F3603	0.030000	
24002EA	CORN, GRAIN-ENDOSPERM	8F3603	0.030000	
24002HA	CORN, GRAIN-BRAN	8F3603	0.030000	
24002SA	CORN SUGAR	8F3603	0.030000	
270020A	CORN, GRAIN-OIL	8F3603	0.030000	
270070A	PEANUTS-OIL	8F3603	0.030000	

TABLE 2

TOLERANCE ASSESSMENT SYSTEM ROUTINE CHRONIC ANALYSIS

DATE: 02/06/90

PAGE: 1

CHEMICAL INFORMATION		STUDY TYPE		EFFECTS		REFERENCE DOSES		DATA GAPS/COMMENTS		STATUS	
Pyridate Caswell #716A CAS No. 35512-33-9 A.I. CODE: 128834 CFR No. 180.	90d Feeding- dog NOEL= 20.0000 mg/kg 0.00 ppm LEL= 60.0000 mg/kg 0.00 ppm ONCO: Undetermined.	Emesis, ataxia; mortality at HDT. Doses given by capsule.		PAD1 UF -->1000 OPP RfD= 0.020000 EPA RfD= 0.000000		Chronic feeding- rat Chronic feeding- dog Reproduction- rat Teratology- rabbit (Core-Supplementary, repeat studies required)		HED approved 05/15/87. (WLB).			
		Oncogenicity studies (rat and mouse) unacceptable.									

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	
									ARC	
U.S. POPULATION - 48 STATES	0.000000		0.000015		0.075355		0.075355			
U.S. POPULATION - SPRING SEASON	0.000000		0.000015		0.073715		0.073715			
U.S. POPULATION - SUMMER SEASON	0.000000		0.000015		0.077105		0.077105			
U.S. POPULATION - FALL SEASON	0.000000		0.000015		0.076175		0.076175			
U.S. POPULATION - WINTER SEASON	0.000000		0.000015		0.074450		0.074450			
NORTHEAST REGION	0.000000		0.000011		0.056730		0.056730			
NORTH CENTRAL REGION	0.000000		0.000014		0.070430		0.070430			
SOUTHERN REGION	0.000000		0.000018		0.090735		0.090735			
WESTERN REGION	0.000000		0.000016		0.081060		0.081060			
HISPANICS	0.000000		0.000020		0.100015		0.100015			
NON-HISPANIC WHITES	0.000000		0.000014		0.069340		0.069340			
NON-HISPANIC BLACKS	0.000000		0.000021		0.102625		0.102625			
NON-HISPANIC OTHERS	0.000000		0.000015		0.075060		0.075060			
NURSING INFANTS (< 1 YEAR OLD)	0.000000		0.000010		0.050290		0.050290			
NON-NURSING INFANTS (< 1 YEAR OLD)	0.000000		0.000031		0.153820		0.153820			
FEMALES (13+ YEARS, PREGNANT)	0.000000		0.000011		0.052960		0.052960			
FEMALES 13+ YEARS, NURSING	0.000000		0.000010		0.050410		0.050410			
CHILDREN (1-6 YEARS OLD)	0.000000		0.000036		0.179920		0.179920			
CHILDREN (7-12 YEARS OLD)	0.000000		0.000027		0.135955		0.135955			
MALES (13-19 YEARS OLD)	0.000000		0.000016		0.082225		0.082225			
FEMALES (13-19 YEARS OLD, NOT PREG. OR NURSING)	0.000000		0.000014		0.068885		0.068885			
MALES (20 YEARS AND OLDER)	0.000000		0.000010		0.051650		0.051650			
FEMALES (20 YEARS AND OLDER, NOT PREG. OR NURS)	0.000000		0.000009		0.046685		0.046685			

*Current TMRC does not include new or pending tolerances.

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