Caswell #157

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

OFFICE OF PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

DATE: FEB 12 1982

SUBJECT: Worst Case Teratology Risk for Captan in Dietary Single Servings.

FROM: William R. Schneider, Ph.D.
Toxicology Branch/HED (TS-769)

TO: Carol Langley, PM
Special Pesticide Review Division (TS-791)

THRU: Edwin R. Budd, Section Head
Toxicology Branch/HED (TS-769)

The "single serving" exposure assessment received today from EFB makes it possible to calculate teratology margin of safety (MOS) for Captan dietary exposure.

The dog study, Earl, et al. (1973), reported a no effect level (NOEL) of 15 mg/kg/day of Captan in the diet but has been classified invalid. The next lowest NOEL of 200 mg/kg/day Captan in the diet was reported in Syrian Golden Hamsters by Robens (1970). The allowable daily intake for a 60 kg man would be 12000 mg/day. The lowest MOS is 828 for cherries (Table 1).

In view of this I do not feel that there is any need to proceed with an teratology RPAR action at this time. Toxicology Branch will further evaluate the teratology risk when the final exposure assessments are received from EFB. The mixer/loaders or applicators may have a higher exposure level.

References

Earl, F. L., Miller, E., and Van Loon, E. J., 1973. Pestic. Environ: Continuing Controversy, Pan. Inter-Am. Conf. Toxicol. Occup. Med., 8th, 253-266 Stratton, N.Y.

Robens, J. F., 1970, Teratogenic Activity of Several Phthalimide Derivatives in the Golden Hamster, Toxicol. Appl. Pharmacol. 16, 24-34.

Attachment

OPP:HED:TOX: W.SCHNEIDER:sb 1/27/82 X73710 #1

TABLE 1

FOOD COMMODITY OR GROUPING	SERVING SINGLE (kg)	TOLERANCE (ppm)	DAILY INTAKE (mg/day)	(MOS)
Almonds	Unknown	2.00	-	-
Apples	0.212	25.00	5.30	2264
Apricots	0.114	50.00	5.70	2105
Avocados	0.150	25.00	3.75	3200
Beans, Lima, Fresh	0.072	25.00	1.80	6667
Bean, Snap, Fresh	0.055	25.00	1.38	8696
Beet Greens	0.076	100.00	7.60	1570
Beets	0.080	2.00	0.16	75000
Blackberries	0.072	25.00	1.80	6667
Blueberries	0.072	25.00	1.80	6667
Broccoli	0.092	25.00	0.18	66667
Brussel sprouts	0.078	2.00	0.16	75000
Cabbage Sauerkraut	0.090	2.00	0.18	66667
Cantalopes	0.160	25.00	4.00	3000
Carrots	0.110	2.00	0.22	54546
Cauliflower	0.115	2.00	0.23	52174
Celery	0.120	50.00	3.00	4000
Cherries	0.145	100.00	14.50	828
Collards	0.095	2.00	0.19	63158
Corn, sweet	0.080	2.00	0.16	75000
Cottonseed	Unknown	2.00	-	-
Crabapples	Unknown	25.00	-	-
Cranberries	0.070	25.00	1.75	6857
Cucumbers, pickles	0.144	25.00	3.60	3333
Dewberries	0.072	25.00	1.80	6667
Eggplant	0.100	25.00	2.50	4800
Garlic	0.003	25.00	0.08	15000
Grapefruit	0.101	25.00	2.50	4800
Shallots	0.010	50.00	0.50	24000
Soybeans (curd)	0.120	2.00	0.24	50000
Spinach	0.055	100.00	5.50	2182
Squash (winter)	0.222	25.00	5.55	2162
Strawberries	0.075	25.00	1.88	6383
Summer Squash	0.120	25.00	3.00	4000
Tangerines	0.100	25.00	2.50	4800
Taro	Unknown	0.250	-	-
Tomatoes	0.181	25.00	4.52	2655
Turnips	0.130	2.00	0.26	46154
Turnip Greens	0.072	2.00	0.14	85714
Watermelon	0.160	25.00	4.00	3000