UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Put in correspondence jacket 7173-113

DATE: October 18, 1979

SUBJECT: Chlorophacinone, Summary of Data Bank Used to Support Labelling of Currently Registered Products

Caswell #211C

FROM: John Doherty 10/18/79
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TO: TOX Branch Files

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THRU: M. Adrian Gross
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Toxicology Branch was recently asked to assist with a PMRC case (see memo from J. Doherty to Mr. Mityas, dated May 14, 1979). One of the questions raised by Mr. Mityas was if the available toxicity data supported the signal word and use directions. This reviewer inspected the toxicity data available in EPA files and has noted the following remarks:

1. Most data for the formulated products are extrapolated from unacceptable toxicity studies. There are no acute oral, acute dermal, acute inhalation (LD50 or LC50) determinations made with formulated products sold commercially.

2. The inhalation toxicity is undefined, there is no LC50 data available.

3. There are no long-term studies. Thus, the potential hazard from inhaling small doses daily for long periods of time or from skin absorption by frequent (accidental or unknowing) contact is not defined. For example, Shaul and Hall (Amer. J. of Obstetrics and Gynecology 127: 191-8 (1977) report that small doses of anticoagulants are associated with congenital abnormalities.

4. The product is usually formulated as 2% or less, thus eye and dermal irritation would be dependent upon the inerts. These studies should be conducted for the formulations containing potentially irritating inerts.

Conclusion:

Several registered products containing chlorophacinone may be mislabelled based on extrapolation of unacceptable data.

Study - Substance (Lab - Date)	Results	CORE Classification
1. Acute Oral - tech Lipha, no date	20.5 mg/kg	INVALID
2. Inhalation - 1% Lipha, no date	30 µg/L, 1 hour no deaths	SUPPLEMENTARY
3. Inhalation - 2% Lipha, no date	40 µg/L/1 hour no deaths	SUPPLEMENTARY
4. Acute Dermal - tech Lipha, no date	<< .8 gm/kg	INVALID
5. Skin Irritation - tech Lipha, no date	Strong skin irritant	MINIMUM
6. Toxicity in humans Lipha, no date	.005% chlorophacinone is less toxic than .025% warfarin	SUPPLEMENTARY
7. Toxicity in hens Lipha, no date	.005% chlorophacinone has same toxicity as .025% wartarin	SUPPLEMENTARY
8. Toxicity in Pigs Lipha, no date	.005% chlorophacinone compared with .025% Warfarin. Chlorophacinone is less toxic	SUPPLEMENTARY
9. Toxicity in Dogs Lipha, no date	Dogs live six to eight days on 500 µg/day	INVALID
10 Toxicity in Cats Lipha, no date	100 µg of chloro-phacinone per day for 10 days: 1/3 deaths. Thus seriously poisoned.	SUPPLEMENTARY
11 Toxicity in humans Lyon, France	20 mg chlorophacinone is less toxic than 78 mg Warfarin to humans	SUPPLEMENTARY
12 Eye irritation .25% (?, ?)	Not irritating	INVALID (amount and composition of formulation not stated)

Cont.

13. Dermal - oil (% ?) concentrate, prothrombin test. Lipha, ?	Prothrombin level reached between 40 and 15% of initial level.	INVALID (protocol insufficient amount applied is not stated)
14. Acute Dermal LD50 oil concentrates, Lipha, ?	6.4 mg/kg = LD50 rabbits.	SUPPLEMENTARY (males only)
15. Subacute dermal Lipha, ?	15 application for 3 weeks - rabbits MTD = 15 µg/kg/day.	SUPPLEMENTARY (sex ?)
16. Inhalation - 1% Lipha, ?	30 µg/l for 1 hour well tolerated.	SUPPLEMENTARY (no LC50)
17. Sub-acute dermal (0.2% powder) ?, ?	10, 100, 500 mg/kg 5 days/wk, 3 weeks rabbits, 10 mg/kg/day tolerated of 0.2% tracking powder.	INVALID Wrong calculation protocol inadequacy
18. Dermal toxicity (2%) EPA, date ?	<200 mg/kg	SUPPLEMENTARY no LD50 determined
19. Acute oral LD50 (.25%) (rice field rat) Los Banos, Laguna	LD50 40.58 mg/kg (apparently for the active ingredient)	SUPPLEMENTARY protocol unclear

Accession NO's.

238, 848
227, 349
233, 685
210, 145
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