UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: 1,2-Dimethyl-3,5-diphenyl pyrazolium methyl sulfate (Avenge 2A-S)

DATE: November 21, 1974

FROM: TB

001267

TO: Mr. Jesse E. Mayes, Acting Chief
Coordination Branch
Registration Division (WH-567)

Pesticide Petition No. 4G1453 American Cyanamid Co.

Request to increase the temporary tolerances for Avenge 2A-S (difenzoquat methyl sulfate) in or on barley straw from 0.5 ppm to 20.0 ppm, and grain from 0.05 ppm to 0.2 ppm.

Request to extend EPA Temporary Permit No. 241-EXP-64G.

Related Pesticide Petitions: none

For Chemistry/Toxicological Evaluation of Avenge 2A-S see PP #4G1453 review, Feb. 27, 1974, by Robert D. Coberly, Biologist, Toxicology Branch.

New toxicity data submitted in support of request for increasing tolerances:

Chronic Oral Toxicity

2-year, Rat - 70 wk interim report - No dose-related effect observed at the end of 12 months. NEL 2500 ppm. (Study incorrectly designated as "Sub-acute Oral Toxicity in Rats with AC-84,777").

Chronic Oral Toxicity in Mice

18-month - 14 1/2 month interim report - No dose related effects. NEL 2500 ppm.

Teratology Study in Rats (Final)

0, 500, and 2500 ppm administered from Day 6 through Day 15 of gestation. Some anomalies were noted, but none that are considered compound related.

EPA Form 1320-6 (Rev. 6-72)

Dominant Lethal Study in Rats:

0, 500, and 2500 ppm were administered to 3 groups of 15 male weanling rats, respectively, for 60 days. These males were then mated 1:1 with untreated virgin females, and caesarean sections performed on day 13 of gestation. Mating schedule was repeated with virgin female rats bred 1:1 with the treated or control males for 8 consecutive weeks. Results of this study demonstrated no mutagenic effect for either of the test groups.

3-Generation Reproduction Study in Rats:

Compound failed to demonstrate any effect on reproductive success. However, at the high dose level (2500 ppm) body weights were less than their control counterparts both at birth and at weaning. There were no treatment-related gross pathological visceral changes.

Subacute (21-Day) Dermal Toxicity in Rabbits:

Formulation (AC 84,777)* demonstrated a no-effect level greater than 1000 mg/kg, but less than 2000 mg/kg.

* AC 84,777 refers to Avenge 2A-S formulation.

Findings/Recommendations

TB finds that the data in PP No. 4G1453 supports the safety of the proposed tolerance of Avenge 2A-S in or on barley straw at 20.0 ppm and barley grain at 0.2 ppm. However, TB defers to CB for its metabolism and residue levels in meat, milk, eggs and meat byproducts.

Robert B. Jaeger, Physiologist
Toxicology Branch
Registration Division (WH-567)

cc:
CB
EEEB
Div. File
Br. File
PP No. 4G1453

RBJaeger/ccw 11/21/74
Init: GEWhitmore
Init: CHWilliams
11/21/74

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