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(EDR03R) DATA EVALUATION RECORD PAGE 130 OF 134

1-10-82

CASE GS0097 CHLOROTHALONIL PM 400 ~~08/03/82~~

CHEM 081901 Chlorothalonil (tetrachloroisophthalon

BRANCH EEB DISC 40 TOPIC 05103043

FORMULATION Primary Metabolite of Chlorothalonil

FICHE/MASTER ID RI 0 CHL 02 CONTENT CAT

LeBlanc, Gerald A. 1977. Acute Toxicity of DS3701 (Primary Metabolite of Chlorothalonil) to the Water flea (Daphnia magna). Received February 25, 1980. An unpublished report prepared by EG & G Bionomics for Diamond Shamrock Corp. Accession No. 099247

SUBST. CLASS = S.

DIRECT RVW TIME = (MH) START-DATE END DATE

REVIEWED BY: Daniel Rieder
TITLE: Wildlife Biolo gist
ORG: EEB/HED
LOC/TEL:

SIGNATURE: Daniel Rieder DATE: 1/10/82

APPROVED BY:
TITLE:
ORG:
LOC/TEL:

SIGNATURE: DATE:

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DATA EVALUATION SHEET

1. CHEMICAL: DS-3701

2. FORMULATION

Primary metabolite of Chlorothalonil 4-hydroxy-2,5,6-trichloroisophthalonitrile

3. CITATION

LeBlanc, Gerald A., 1977. Acute Toxicity of ~~DTX-77-0074~~ DS-3701, (the Primary Metabolite of Chlorothalonil) to the water flea (Daphnia magna). Received February 25, 1980. An unpublished report prepared by EG & G Bionomics for Diamond Shamrock Corporation. (Accession Number 099247)

4. REVIEWED BY: Daniel Rieder
Wildlife Biologist
EEB/HED

5. DATE REVIEWED: April 9, 1980

6. TEST TYPE: Acute toxicity to aquatic invertebrates

1. Test Species: Daphnia magna

2. Test Material: DS-3701 (99% pure)

7. REPORTED RESULTS

The 48-hour LC_{50} of DS-3701 for Daphnia magna was calculated to be 26 mg/l with 95% confidence limits of 21 to 31 mg/l.

8. REVIEWERS CONCLUSION

A. Validation Category: ~~Supplemental~~ Core ~~Supplemental~~ for ~~metabolite~~ degradate

B. Discussion

This study was conducted scientifically ~~but does not~~ and fulfills the requirements for an acute toxicity test with DS-3701 for aquatic invertebrates. The results of this test would indicate that DS-3701 is slightly toxic to Daphnia magna.

METHODS/RESULTS

A. Test Procedure

Procedures used in this acute toxicity test were based on protocols in "Methods for Acute Toxicity Tests with Fish, Macroinvertebrates, and Amphibians" (U.S. EPA, 1975). Acetone was used as a solvent and in a solvent control. Nominal concentration of 10, 15, 22, 32, 46, 68 and 100 mg/l were tested in 3 replicate exposure treatments.

B. Statistical Analysis

A 48-hour LC_{50} and its 95% confidence limits were calculated using the moving average angle method.

C. Results

The 48-hour LC_{50} for Daphnids exposed to DS-3701 was calculated to be 26 mg/l with 95% confidence limits of 21 to 31 mg/l. The lowest concentration at which 100% mortality occurred was 68 mg/l, while the highest concentration in which there were no deaths was 10 mg/l. Dissolved oxygen remained at 80 to 94% of saturation. The average percentage mortality was provided, as well as the results for each of the replicates at all test levels.

REVIEWERS EVALUATION

A. Test Procedures

The procedures described in the report comply with EPA guidelines.

B. Statistical Analysis

The data provided was used to generate an LC_{50}.

C. Discussion

The results of this test show that the 48-hour LC_{50} of DS-3701, a metabolite of chlorothalonil, as it affects Daphnia magna is probably between 22 and 32 mg/l. An approximmate 48-hour LC_{50} is 26 ppm.

D. Conclusions

1. Category: Core for metabolite

2. Rationale: N/A

3. Repairability: N/A