

US EPA ARCHIVE DOCUMENT

File No. 128850

DATA EVALUATION RECORD

1. CHEMICAL: Monoammonium-2-amino-4-(hydroxymethyl phosphinyl) butanate
2. FORMULATION: (HOE 39866 OH SL19 A126) Soluble concentrate 200 g/L *19% a.i.*
3. CITATION: R. Fisher. 1983. The effect of HOE 39866 OH SL19 A126 on Lepomis macrochirus (Bluegill) in a static test. Performed by Hoechst AG, Frankfurt, FRG; submitted by American Hoechst Corp., Somerville, NJ; Registration No. 8340-EUP-RN; Accession No. 072967.
4. REVIEWED BY: John J. Bascietto
Wildlife Biologist
Ecological Effects Branch/HED
5. DATE REVIEWED: November 30, 1984
6. TEST TYPE: Freshwater Fish LC₅₀ (acute)
A. Bluegill sunfish, Lepomis macrochirus
7. REPORTED RESULTS: 96-hr LC₅₀ between 56 and 75 mg/l
8. REVIEWER'S CONCLUSIONS: The study is scientifically sound. ~~However~~, EEB is unable to validate the nominal exposures. Since 300 L/200 L (test chambers/solutions) were used, analytical chemistry determinations on each test chamber are necessary to check exposures. They must also provide the % active ingredient *(19%)* in the original test substance.

The study does ^{would} ~~not~~ fulfill a guidelines requirement~~s~~ if one were imposed for a formulation test (19% a.i.).

(repaired by Acc. No. 256761 Tab C2:3)

-8

9. MATERIALS/METHODS:

A. Test Procedure:

Bluegills were obtained from OSAGE Catfisheries, Osage Beach, Missouri, USA. Maintained at 22°C. No mortality over 2 week holding period. At time of testing the fish were about 1 1/2 years old) mean length of 5.5 cm, mean weight = 4.9 g (N = 10)

Deionized filtered tap water was used and reconstituted to EPA "soft"; pH = 7.75. Toxicant was weighed to "precision of .1 mg, diluted to volume and added directly to test chambers - 300 L stainless steel tanks. Test volume was 200 L. Fish were added to chambers at random. They had been previously acclimated to test conditions (temperature = 21.3 - 22.7°C) for 96 hrs and fasted same time period. Biological loading = 0.24 g/L. Ten (10) fish per chamber.

D.O., pH were monitored at 0, 24, 48, 72 and 96 hours for control, high, medium and low levels. Temperature was continuously recorded.

B. Statistical Analysis

None performed

C. Results

LC₅₀ between 56 and 75 mg/L.

Mortality distribution prevented statistical analysis according to the author.

NOEL = 42 mg/L

See tables for all results.

11. REVIEWER'S EVALUATION:

A. Test Procedure:

Substantial deviations from guidelines procedures are:

1. inadequate description of toxicant solution preparation.
2. No analytical chemistry (actual a.i. concentrations) determination (this is required because of number 1 AND #3).

3. 300 L tank/200 L solution used.

4. No indication of % active ingredient.

B. Statistical/Analysis:

N/A

C. Results:

The results obtained are only estimates. The distribution of mortality indicates that the study was not a well planned "definitive" study. These results are to be used cautiously because no actual LC₅₀ is calculated. Also, we cannot validate the exposure. Therefore, even the estimate obtained is of no value.

D. Conclusions

1. Category: Supplemental (core for formulation)
2. Rationale: -Substantial deviations from guidelines (11 A above)
 - no LC₅₀ established
 - ~~exposure not validated~~
 - ~~no % a.i. given~~

} explanations
satisfactory
see
acc. no. 258261
Tab C2:3
3. Repair: -Provide analytical chemistry (actual concentration of a.i.) on each test chamber, measured during this study.
 - provide % a.i. of toxicant used. ✓ (19.1)

} not
necessary
- B

Remains supp. because there is no requirement for formulation test of this kind imposed as of 4-29-85.
- John Caschetto
however this test is core for a formulation of this type.

GLUFOSINATE

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Pages 4 through 10 are not included.

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