3-21-89

DATA EVALUATION RECORD

1. Chemical: GX-071

2. Test Material: 98.0% ai (as indicated in study done within same time period with Daphnia magna)

3. Test Type: 96-hour LC_{50}

   Test Species: Rainbow Trout (Salmo gairdneri)

4. Study ID: Bowman, J.H. (1988) Acute Toxicity of GX-071 to Rainbow Trout (Salmo gairdneri); Report No. 37183; Prepared by ABC Laboratories, Inc., for Griffin Corporation, Rocky Ford Road, Valdosta, Georgia 31603; Accession No. 408475-00.

5. Reviewed By: Curtis E. Laird
   Fishery Biologist
   EEB/EFED
   Signature: Curtis E. Laird
   Date: 3-21-89

6. Approved By: Norman J. Cook
   Supervisory Biologist
   EEB/EFED
   Signature: Norman J. Cook
   Date: 3.21.89

7. Conclusions:

This study appears to indicate that GX-071 is slightly toxic to rainbow trout with a 0-hour LC_{50} > 10 ppm nominal (> 8.5 ppm measured) concentration and a 96-hour LC_{50} > 10 ppm nominal (> 0.21 ppm measured) concentration. This study does not fulfill the requirement of a cold water fish study for any outdoor uses. It can be used, however, to support an indoor use only (cockroach use).

8. Recommendation: N/A

9. Background:

This study was submitted in support of GX-071 registration.

10. Discussion of Individual Test: N/A

11. Material and Methods:

A. Test Animals - Test animals were rainbow trout from Mt. Lassen Trout Farm, Red Bluff, California; Weight = 0.59 g; standard length = 35 mm.

B. Test Design - Fish were tested in 5-gallon glass vessels with 15 liters of test solution; temperature was 12 ± 1 °C; food was withheld 48 hours prior to testing.

C. Dose - Static bioassay using nominal concentrations of 1.0, 1.8, 3.2, 5.6, and 10 ppm (which measured were 0.6, 1.4, 3.3, 4.8, and 8.5 ppm at 0-hour and 0.73, 0.48, 0.20, 0.26, and 0.21 ppm at 96-hours); 10 fish per dose; controls plus acetone controls.

D. Statistical Analysis - Stephan's et al. (1978).

12. Reported Results:

The study author found the 96-hour LC_{50} to be > 10 ppm nominal concentration. A white precipitate was observed in the four highest test concentrations.

13. Study Author's Conclusion/Quality Assurance Measures:

The 96-hour LC_{50} was greater than 10 ppm nominal concentration. All the aquatic toxicity tests conducted by the ABC facilities followed good laboratory practices. ABC's study director for the above test confirms that the study was conducted in compliance with the U.S. EPA Good Laboratory Practice standards; Pesticide Programs (CFR 160).

The study author observed a white precipitate in the four highest test concentrations and concluded the 96-hour LC_{50} exceeds the water solubility of GX-071. The author concluded the solubility of GX-071, based on the analytical results of measured concentration, to be in the range of 0.5 to 0.7 mg/L.

14. Reviewer's Discussion and Interpretation of the Study:

A. Test Procedure - The test procedure appears to comply with the recommended EPA protocol of October 1982. The analytical methodology for determining measured residues requires validation by EFGWB.

B. Statistical Analysis - No statistics were performed due to lack of mortality.

C. Discussion/Results - GX-071 appears to be slightly toxic to rainbow trout with a 0-hour LC_{50} of > 10 ppm nominal (> 8.5 ppm measured) concentration and a 96-hour LC_{50} of > 10 ppm nominal (> 0.21 ppm measured) concentration. No mortalities or abnormal behavior occurred during the study so 10 ppm nominal, and 8.5 ppm measured (0-hour) and 0.21 ppm measured (96-hour), can be considered no-effect levels. Acetone was used as a solvent and appeared to provide 85 percent solubility at 0-hour which corresponds to available product information. However, over the 4-day period GX-071 precipitated out of solution.

Also, analysis of water samples was based on a method provided by the sponsor to the laboratory. This method requires validation by EFGWB.

D. Adequacy of Study:

1) Category: Supplemental

2) Rationale: This study is classified supplemental because the material, GX-071, precipitated out of solution and (even though concentrations were measured) a dose response was not obtained. Another study (e.g., a flow-through study) will be required to support any outdoor uses proposed for registration. However, this study can be used to support an indoor only cockroach use.

3) Reparability: Not repairable

15. Completion of One-Liner for Study: Yes

16. CBI Appendix: N/A

Sulfluramid

Page_____ is not included in this copy.

Pages 4 through 6 are not included.

The material not included contains the following type of information:

____ Identity of product inert ingredients.

____ Identity of product impurities.

____ Description of the product manufacturing process.

____ Description of quality control procedures.

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____ Sales or other commercial/financial information.

____ A draft product label.

____ The product confidential statement of formula.

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The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.

Table 4

Percent Mortality and Water Quality Measurements During the Acute Toxicity Test of GX-071 to Rainbow Trout (Salmo gairdneri)

Nominal Concentration (mg/L)	Percent Mortality Hours				Water Quality 0-Hours			48-Hours			96-Hours		
	24	48	72	96	Temp. °C	D.O.[a] mg/L	pH[b]	Temp. °C	D.O. mg/L	pH	Temp. °C	D.O. mg/L	pH
Control	0	0	0	0	12	8.4	7.6	12	7.7	7.2	11	7.6	7.4
Solvent Control	0	0	0	0	12	8.6	7.7	12	7.5	7.4	11	7.9	7.4
1.0	0	0	0	0	12	8.7	7.6	12	7.3	7.4	11	7.2	7.3
1.8	0	0	0	0									
3.2	0	0	0	0	12	8.7	7.6	12	7.2	7.3	11	6.9	7.3
5.6	0	0	0	0									
10	0	0	0	0	12	8.6	7.6	12	7.2	7.3	12	6.9	7.3

[a]Dissolved oxygen concentrations - Dissolved Oxygen Probe (YSI Model 54).

[b]pH - pH Probe (Corning Model 476182) used with a Corning Model 125 pH and mV meter.

NOTE: Dissolved oxygen saturation corrected for altitude at the test temperatures of 11 and 12 °C is 10.6 and 10.3 mg/L, respectively.