12-10-78

113501

STUDY VALIDATION

Data Review Number: ES-H-1

Test: Aquatic Invertebrate LC50

Species: Daphnia magna

Results: 48-hr LC50 = 28 mg/1
95% confidence interval = 21-37 mg/1
No discernible effect level @ 48-hrs. 8.2 mg/1

Chemical: CGA-48988 technical (94.4% a.i.)
(Ridomil)

Title: Acute Toxicity of CGA-48988 To the Water Flea (Daphnia magna). Report # BW-78-12-364

Accession No: 236854

Study Date: 8-10 December 1978

Researcher: Gerald A. LeBlanc and George A. Cary;
EG&G Bionomics, Aquatic Toxicology Laboratory.

Registrant: CIBA-GEIGY Corporation

Validation Category: Core

Category Repairability: N/A

Study Abstract: The study followed acceptable protocol except where noted. Daphnids were less than or equal to 24 hrs old at the start of the test. Reconstituted hard water was used for the test solution. Acetone was used as a solvent to help dissolve the test material. The maximum amount of acetone used for the highest concentration was not reported. Temperature was maintained at 22 ± 1°C. DO and pH were reported and appeared to be within acceptable limits for the hardness reported. Statistics used Stephan's computer programs.

Unlike other Bionomics daphnia studies this study was conducted at 22°C using hard water. The reason for the change in water temperature and chemical characteristics is not understood. Bionomics usually uses soft water at a temperature of 17°C.

If the temperature and water chemistry were altered to reduce the toxicity, a difference of 10x would be the maximum change expected. A toxicity of 2.8 mg/l is an acceptable figure for Daphnia. The temperature of 22°C is only 2° from the new recommended (ASTM) temperature. Thus the temperature is marginally acceptable.

The only other aspect of this test that may be questionable is that a surface film and precipitate was reported in the highest two concentrations. This fact was overlooked because six lower concentrations were tested. An abnormality was not reported for these lower concentrations.

This is the second test submitted to this Agency for this technical material. The results of both tests closely agree with each other.

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