

US EPA ARCHIVE DOCUMENT

## DATA EVALUATION RECORD

1. **CHEMICAL:** Molinate.  
Shaughnessey No. 041402.
2. **TEST MATERIAL:** Ordram:Propanil 3:3E; a formulated product; Lot No. NDH-3031; a b liquid.
3. **STUDY TYPE:** Freshwater Invertebrate Static Acute Toxicity Test. Species Tested: magna.
4. **CITATION:** Burgess, D. 1986. Acute Toxicity of Ordram:Propanil 3:3E to Daphnia Laboratory Project No. 35226. Prepared by Analytical Bio-Chemistry Labora Columbia, MO. Submitted by Stauffer Chemical Company, Richmond, CA. EPA MR 416136-06.
5. **REVIEWED BY:**  
  
Mark M. Mossler, M.S.      **Signature:**  
Associate Scientist II  
KBN Engineering and                      **Date:**  
Applied Sciences, Inc.
6. **APPROVED BY:**  
  
Louis M. Rifici, M.S.                      **Signature:**  
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Henry T. Craven, M.S.                      **Signature:**  
Supervisor, EEB/HED  
USEPA    **Date:**
7. **CONCLUSIONS:** This study is scientifically sound and meets the guideline requirem the conditions of the test, the 48-hour LC<sub>50</sub> of Ordram:Propanil 3:3E for Daphnia mg/l (based on nominal concentration of formulated product). Therefore, Ordram: classified as slightly toxic to Daphnia magna. The NOEC was 10 mg/l based concentration of formulated product.
8. **RECOMMENDATIONS:** N/A.
9. **BACKGROUND:**
10. **DISCUSSION OF INDIVIDUAL TESTS:** N/A.
11. **MATERIALS AND METHODS:**
  - A. **Test Animals:** Daphnia magna (<24 hours old) were obtained from in-house cu The cultures were kept in well water and fed algae at least every th supplemented with a suspension of fish food.

- B. **Test System:** Aged well water with the characteristics listed in Table 1 (a used as test dilution water. Vessels used in the test were 250-ml g containing 200 ml of well water (control) or test solution. The vessels temperature controlled area ( $20^{\circ}\pm 2^{\circ}\text{C}$ ) on a 16-hour daylight photoperiod intensity was maintained at 50-70 ft-candles (1 ft-candle = 10.764 lux). dawn and dusk simulations were used.

Although not stated in the report, the test protocol states that the daph fed during the course of the study.

- C. **Dosage:** Forty-eight-hour static test. Based on a preliminary test, five concentrations (5.6, 10, 18, 32, and 56 mg/l) and a dilution water contro single working stock of the test material was prepared in deionized water concentra-tions made were based on total product.
- D. **Design:** Two beakers were used for each concentration and ten daphnids were beaker. All concentrations were observed once at 24 and 48 hours for m abnormal effects such as surfacing, clumping together, and lying on the chambers. The temperature, pH, and dissolved oxygen (DO) were measured control at the beginning of the test and in the control, low, mid concentrations at the end of the test.
- E. **Statistics:** The 48-hour median lethal concentration ( $\text{LC}_{50}$ ) and associated confidence interval (CI) were calculated using a computer program dev Stephan et al. (1978).

12. **REPORTED RESULTS:** The author stated that the stock solution used was a suspensio mortality responses of Daphnia magna are given in the Appendix (attached). occurred in the control. The 48-hour  $\text{LC}_{50}$ , based on nominal concentrations, was CI = 18-32 mg/l). The slope was not given due to the method of analysis u probability). Sublethal effects were observed in the concentrations greate therefore, the no-observed-effect concentration (NOEC) was 10 mg/l after 48 hours

Oxygen saturation after 48 hours ranged from 86 to 90% of saturation. The pH from 8.3 to 8.5. The temperature remained  $20^{\circ}\text{C}$  throughout the test.

13. **STUDY AUTHOR'S CONCLUSIONS/QUALITY ASSURANCE MEASURES:**  
The author presented no conclusions.

Quality Assurance and Good Laboratory Compliance Statements were included in indicating that the study was conducted in accordance with FIFRA Good Laborat Standards set forth in 40 CFR Part 160.

14. **REVIEWER'S DISCUSSION AND INTERPRETATION OF STUDY RESULTS:**

- A. **Test Procedure:** The test procedures were generally in accordance with prot recommended by the guidelines, but deviated from the SEP as follows:

The test temperature was not monitored continuously as recommended.

The hardness of the dilution water was 225-275 mg/l as  $\text{CaCO}_3$ . Dilution wat hardness of less than 200 mg/l is recommended.

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The DO and pH were not measured in the test concentrations at initiat

The method used to transfer daphnids to test solutions was not desc report.

First instar Daphnia magna used in tests should be from the fou broods of a given parent. The author did not indicate which bro source of the test animals.

- B. **Statistical Analysis:** The reviewer used EPA's Toxanal Program to cal the LC<sub>50</sub> value and obtained the same results (see attached printout).
- C. **Discussion/Results:** The author states that the stock solution (20 mg was a suspension.

The reviewer noted that surface foam was absent from the test so preliminary tests of other studies with this material (MRID Numbers and 416136-04), foam was present in concentrations greater than 1 seems odd that foam was not observed during this study.

The 48-hour LC<sub>50</sub> of 24 mg/l (based on nominal concentration of formul product) classifies Ordram:Propanil 3:3E as slightly toxic to Daphni NOEC, based on the lack of mortality, was 10 mg/l based on concentration of formulated product.

D. **Adequacy of the Study:**

- (1) **Classification:** Core for the formulated product.
- (2) **Rationale:** N/A.
- (3) **Repairability:** N/A.

15. **COMPLETION OF ONE-LINER FOR STUDY:** Yes, 6-6-91.