

US EPA ARCHIVE DOCUMENT

3-21-89  
MURID ACC 136-16  
gdr 71-2

DATA EVALUATION RECORD

1. Chemical: GX-071
2. Test Material: 99% (technical a.i.)
3. Test Type: Avian Eight-Day Dietary LC50  
Test Species: Mallard Duck (Anas Platyrhynchos)
4. Study ID: Grimes, J. and Jobber, M. (1986) GX-071 - A  
Dietary LC50 Study with the Mallard; Project No.  
207102A; Prepared by Wildlife International  
Ltd. for Griffin Corporation, P.O. Box 1847,  
Valdosta, GA 31603-1847; Accession No. 406126
5. Reviewed By: Curtis E. Laird  
Fishery Biologist  
EEB/EFED  
Signature: *Curtis Laird*  
Date: 3-21-89
6. Approved By: Norman J. Cook  
Supervisory Biologist  
EEB/EFED  
Signature: *Norman Cook*  
Date: 3.21.89
7. Conclusions:  

This study indicates GX-071 is highly toxic to mallard duck with an LC50 of 165 ppm. This study does fulfill the requirement in support of registration for an avian dietary LC50 study.
8. Recommendation: N/A
9. Background:  

This study was submitted in support of GX-071 registration.
10. Discussion of Individual Test: N/A

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11. Material and Methods:

- A. Test Animals - Test animals were 9 day old mallard ducks from Whistling Wing, Hanover, IL 61041.
- B. Test Design - Birds were tested indoor in pen constructed of galvanized steel wire and sheeting; pen size = 72 x 90 x 26 cm; temperature was 72 + 2 °F; humidity was 65%; photoperiod was 17L/7D.
- C. Dose - Nominal dietary concentrations were used: 10 birds per dose level; 6 dose level plus control (0, 56.2, 100, 178, 316, 562, and 1000 ppm).
- D. Statistical Analysis: Stephan's Computer Program

12. Reported Results:

The study author found the eight-day dietary LC<sub>50</sub> value to be 165 ppm.

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

The eight-day dietary LC<sub>50</sub> was 165 ppm. This study was conducted in accordance with Good Laboratory Practices as published by the U.S. Environmental Protection Agency's Office of Pesticide Programs (FEDERAL REGISTER, Volume 48, No. 230, November 29, 1983, 53946-53969).

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

- A. Test Procedure - The test procedure complied with the recommended EPA protocol of October 1982.
- B. Statistical Analysis - The binomial test shows the eight-day dietary LC<sub>50</sub> to be 165 ppm.
- C. Discussion/Results - GX-071 is highly toxic to mallard duck with LC<sub>50</sub> of 165 ppm.
- D. Adequacy of Study:
  - 1) Category: Core
  - 2) Rationale: N/A
  - 3) Reparability: N/A

15. Completion of One-Liner for Study:

16. CBI Appendix: N/A

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98 records replaced

Laird GX-071 Mallard Duck 03-14-89

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CONC.	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (PERCENT)
1000	10	10	100	9.765625E-02
562	10	10	100	9.765625E-02
316	10	10	100	9.765625E-02
178	10	6	60.00001	37.69531
100	10	0	0	9.765625E-02
56.2	10	0	0	9.765625E-02

THE BINOMIAL TEST SHOWS THAT 100 AND 316 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS, BECAUSE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS GREATER THAN 95 PERCENT.

AN APPROXIMATE LC50 FOR THIS SET OF DATA IS 165.4497

WHEN THERE ARE LESS THAN TWO CONCENTRATIONS AT WHICH THE PERCENT DEAD IS BETWEEN 0 AND 100, NEITHER THE MOVING AVERAGE NOR THE PROBIT METHOD CAN GIVE ANY STATISTICALLY SOUND RESULTS.

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