3-21-89

MRID 406126-16

gdln 71-2

DATA EVALUATION RECORD

1. Chemical: GX-071

2. Test Material: 99% (technical a.i.)

3. Test Type: Avian Eight-Day Dietary LC_{50}

   Test Species: Mallard Duck (Anas Platyrhymchos)

4. Study ID: Grimes, J. and Jober, M. (1986) GX-071 - A Dietary LC_{50} 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 LC_{50} of 165 ppm. This study does fulfill the requirement in support of registration for an avian dietary LC_{50} study.

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 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_{50} value to be 165 ppm.

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

The eight-day dietary LC_{50} 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_{50} to be 165 ppm.

C. Discussion/Results - GX-071 is highly toxic to mallard duck with LC_{50} 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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COMMAND ME...do updatemodify command update
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     98 records replaced
     Laird  GX-071  Mallard Duck  03-14-89
     ************************************************************************
     CONC.     NUMBER          NUMBER          PERCENT         BINOMIAL
               EXPOSED         DEAD            DEAD            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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