

6-7-79
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Validation Sheet

Formulation: 95.06%
Chemical Name: Rhodia I prodione Technical
Validator: Ray Matheny
Date: 6/7/79
Test Type: Fish Acute Toxicity LC₅₀
Test I.D. #: UCES Proj. No. 11506-48-02

Citation: Calmbacher, C.W., et al., May 31, 1978. The Acute Toxicity of RP 26019 Technical Assay 95.06%. Lot # 77103-01 to the Bluegill Sunfish (Lepomis macrochirus). Prepared for Rhodia, Inc. by Union Carbide Environmental Services, Union Carbide Corp. (within Accession No. 234810, 9/1/78).

Validation Category: Core

Result:	<u>Species</u>	<u>Test</u>	<u>Confidence Limits</u>
	Bluegill Sunfish	Fish Acute LC ₅₀ : 6.3 mg/l*	(5.2 - 7.7)

* As determined by the Spearman-Kärber Estimator method

Validation Category Rationale: Using the moving average method, this test was validated @ 6.2 mg/l (5.0-7.9). Satisfies core data requirements.

Category Repairability/Rationale: None necessary.

Abstract: Standard test procedures were used: reconstituted water has a pH of 7.29, water hardness of 46 mg/l as CaCO₃, total alkalinity of 29 mg/l as CaCO₃. Five concentrations and solvent control were used. Concentrations were: 1.0, 1.8, 3.2, 5.6 and 10.0 mg/l. Ten fish per concentration showed the mortalities at the three highest levels 1, 2 and 10, respectively. There were no mortalities in the control or solvent control groups. The average water temperature of the dilution water was 22.7 ± 0.7° C. The DO for the test groups ranged from 8.6 to 1.4 mg/l. Fish exposed to 1.8 mg/l and higher became irritated and exhibited abnormal surfacing behavior with gulping of air. At the 5.6 mg/l concentration fish showed erratic swimming and dark discoloration.

Rhodia Iprodione Technical

R. Matheny

6/8/79

Fish Acute Toxicity - 96 hr LC₅₀ : Bluegill Sunfish

U C ES Proj. No. 11506-48-02

79/06/08. 12.37.50. TERMINAL: 24, P 20
 UOFM CYBER 74 NOS 1.2 (05/24-BL).
 USER NUMBER: ZZZ6944, USEPA
 TERMINAL: 24, P 20/TTY
 RECOVER /SYSTEM: BASIC, OLD, A78LC50
 READY.
 9000 DATA 5
 9001 DATA 10.0, 5.6, 3.2, 1.8, 1.0
 9002 DATA 10, 10, 10, 10, 10
 9003 DATA 10, 2, 1, 0, 0
 RUN

79/06/08. 12.40.17.
 BASIC PROGRAM A78LC50

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*****
CONC.      NUMBER      NUMBER      PERCENT      BINOMIAL
            EXPOSED      DEAD        DEAD        PROB.(PERCENT)
10          10          10          100          9.76563E-2
5.6         10          2           20.          5.46875
3.2         10          1           10.          1.07422
1.8         10          0            0           9.76563E-2
1           10          0            0           9.76563E-2
  
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THE BINOMIAL TEST SHOWS THAT 3.2 AND 10 CAN BE
 USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT
 CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL
 ASSOCIATED WITH THESE LIMITS IS 98.8281 PERCENT.

AN APPROXIMATE LC50 FOR THIS SET OF DATA IS 6.72118

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-----RESULTS CALCULATED USING THE MOVING AVERAGE METHOD
SPAN      G      LC50      95 PERCENT CONFIDENCE LIMITS
2          .167754      6.21008      5.04934      7.94656
  
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-----RESULTS CALCULATED USING THE PROBIT METHOD
ITERATIONS  G      H      GOODNESS OF FIT PROBABILITY
9           .311605      1      .244093
  
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SLOPE = 6.68099
 95 PERCENT CONFIDENCE LIMITS = 2.95155 AND 10.4104

LC50 = 6.11927
 95 PERCENT CONFIDENCE LIMITS = 4.80815 AND 7.90265
