

DATA EVALUATION RECORD

4 acetone in mixture
study of
E. P. Rice

1. Chemical: Maquat MQ 416M
2. Test Material: Alkyl (50% C₁₄, 40% C₁₂, 10% C₁₆)

dimethyl benzyl ammonium chloride	20%	069105
Octyl decyl dimethyl ammonium chloride	15%	069165
Dioctyl dimethyl ammonium chloride	7.5%	069166
didecyl dimethyl ammonium chloride	7.5%	069149
Total		50.0% A.I.
3. Study Type: 96-Hour LC₅₀
Species Tested: Rainbow Trout
4. Study ID: Surprenant, D.C. (1986) Acute Toxicity of Maquat MQ 416M; Report No. BW-86-12-2263; Prepared by Springborn Bionomics, Inc. for Mason Chemical Company, Chicago, IL; Acc. Nos. 401298-01, -02, and -03.
5. Reviewed By: Curtis E. Laird
Fishery Biologist
EEB/HED
Signature: _____
Date: _____
6. Approved By: Norman J. Cook
Head, Section II
EEB/HED
Signature: _____
Date: _____
7. Conclusions:

This study indicates Maquat MQ 416M is moderately toxic to rainbow trout with an LC₅₀ of 1.6 ppm. This study does fulfill the requirement in support of registration for a coldwater fish study.
8. Recommendations: N/A
9. Background:

This study was submitted in support of Maquat MQ 416M registration.
10. Discussion of Individual Test:

This study was conducted using 10 fish per dose level based on a telephone conversation with D. Surprenant of Springborn Bionomics, Inc. on November 9, 1987.



11. Materials and Methods:

- a. Test Animals - Test animals were rainbow trout (Salmo gairdneri) from a commercial supplier in California: Weight = 0.11 g: SL = 25 mm.
- b. Test Design - Fish were tested in 18.6 liters glass aquarium with 15 liters of test solution: temperature was 13 °C.
- c. Dose - Static bioassay using nominal concentrations plus negative control (0, 0.80, 1.3, 2.2, 3.6, 6.0, and 10 ppm).
- d. Design - Ten fish per dose level: six dose levels plus control.
- e. Statistics - Stephan's 1977.

12. Reported Results:

The study author found the 96-hour LC₅₀ to be 1.6 ppm. The no-effect level was < 0.80 ppm.

13. Study Author's Conclusions:

The 96-hour LC₅₀ was 1.6 ppm. The data contained in this report were audited by the Quality Assurance Unit to assure compliance with the protocols, Standard Operating Procedures, and the pertinent EPA Good Laboratory Practice Regulations.

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

- a. Test Procedures - The test procedures comply with the recommended EPA protocol of October 1982.
- b. Statistical Analysis - The statistics were verified with Stephan's computer program.
- c. Discussion/Results Maquat MQ 416M is moderately toxic to rainbow trout with an LC₅₀ of 1.6 ppm.
- d. Adequacy of Data
 1. Category: Core
 2. Rationale: N/A
 3. Repairability: N/A

15. Completion of One-Liner: Yes

16. CBI Appendix: N/A

Lead Number NO 4101 rainbow trout 11-09-87

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CONC.	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL 95% CONFIDENCE
1.0	10	10	100	1.788610E-11
2.2	10	10	100	1.788610E-11
4.4	10	10	100	1.788610E-11
10.7	10	10	100	1.788610E-11
25	10	0	0	1.788610E-11

THE BINOMIAL TEST SHOWS THAT 1.0 AND 2.2 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 1.549881

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.
