

US EPA ARCHIVE DOCUMENT

DATA EVALUATION RECORD

1. CHEMICAL: Cuprous oxide plus triphenyltin hydroxide
2. FORMULATION: Rabamarine, which is a mixture of 2 formulated products and contains 36.5% cuprous oxide and 8.7% triphenyltin hydroxide.
3. CITATION: Sousa, J. (1981) Acute Toxicity of Kansai Rabamarine to the Rainbow Trout; received 7/21/81 under 46197-1; unpublished report prepared by E G & G Bionomics for M & T Chemicals, Inc, Rahway, New Jersey (in Acc # 245649).
4. REVIEWED BY: Stephen M Hopkins  
Plant Physiologist  
EEB/HED
5. DATE REVIEWED: 9/25/81
6. TEST TYPE: Fish acute LC<sub>50</sub> -- Rainbow trout
7. REPORTED RESULTS: The testing laboratory demonstrated that the 96hr LC<sub>50</sub> of Rabamarine to the rainbow trout is 120 ppb product, with 95% confidence limits of 99-160 ppb. This 120 ppb of product contains approximately 44 ppb of cuprous oxide and 10 ppb of triphenyltin hydroxide.
8. REVIEWER'S CONCLUSIONS: This study is scientifically sound, and meets EPA requirements for a fish acute LC<sub>50</sub> study using the formulated product.

## Testing Laboratory Report

### A. Test Procedure

The procedure generally followed the EPA proposed guidelines of July 10, 1978. Some specifics of note include:

Weight of fish - 0.98 g average  
Number of fish - 10 per treatment level  
Test vessel size - 20 liter glass jars containing 15 liters each  
Temperature - 12 + 1°C  
Loading - 0.66g/liter  
Dilution water - Reconstituted deionized water  
Treatment levels - 36, 60, 100, 170, and 280 ppb plus untreated and N,N-dimethylformamide controls  
Test initiation - February 10, 1981  
Test material - The test material was a mixture containing:  
16 parts of solution A (57% cuprous oxide), and  
9 parts of solution B (23.8% triphenyltin hydroxide).  
The final mixture contained 36.5% cuprous oxide and 8.7% triphenyltin hydroxide.

### B. Statistical Analysis

Mortality was analyzed by the moving average angle method.

### C. Results

<u>Concentration</u>	<u>Mortality at 96hrs</u>
280 ppb product	100%
170	80
100	30
60	0
36	0
controls	0

The author calculated that the 96hr LC<sub>50</sub> of Rabamarine to the rainbow trout is 120 ppb product, with 95% confidence limits of 99-160 ppb. 60 ppb was a no-effect level.

## Reviewer's Evaluation

### A. Test Procedure

The procedure generally complied with the 1978 EPA guidelines.

### B. Statistical Analysis

Mortality was analyzed by the probit method, the results of which agreed with the findings of the testing laboratory.

### C. Results/Discussion

The testing laboratory demonstrated that the 96hr LC<sub>50</sub> of Rabamarine to the rainbow trout is 120 ppb product, with 95% confidence limits of 99-160 ppb. This 120 ppb of product contains approximately 44 ppb of cuprous oxide and 10 ppb of triphenyltin hydroxide.

### D. Conclusion

1. Category: Core for formulated product
2. Rationale: NA
3. Repairability: NA