

US EPA ARCHIVE DOCUMENT

1-EEB-08C
6/26/98

MRID No. 438646-20

DATA EVALUATION RECORD
§ 72-3 - ACUTE LC₅₀ TEST WITH AN ESTUARINE/MARINE SHRIMP

1. **CHEMICAL:** Omadine® Sulfonic Acid **PC Code No.:** 088002

2. **TEST MATERIAL:** Pyridine-N-oxide-2-sulfonic acid (98.5%)
(Omadine® sulfonic acid)

3. **CITATION:**
Authors: R.L. Boeri, P.L. Kowalski, and T.J. Ward
Title: Acute Toxicity of Omadine® Sulfonic Acid
(Pyridine-N-oxide-2-sulfonic acid) to the
Mysid, *Mysidopsis bahia*

Study Completion Date: April 8, 1994
Laboratory: T.R. Wilbury Laboratories, Inc.,
Marblehead, MA
Sponsor: Olin Corporation, New Haven, CT
Laboratory Report ID: 37-OL
MRID No.: 438646-20
DP Barcode: D239429

4. **REVIEWED BY:** Mark Mossler, M.S., Toxicologist,
Golder Associates Inc.

Signature: *Mark Mossler* **Date:** 6/25/98

APPROVED BY: Pim Kosalwat, Ph.D., Senior Scientist,
Golder Associates Inc.

Signature: *P. Kosalwat* **Date:** 6/25/98

5. **APPROVED BY:**

Signature: **Date:**

6. **STUDY PARAMETERS:**

Age or Size of Test Organism: <24 hours
Definitive Test Duration: 96 hours
Study Method: Flow-through
Type of Concentrations: Mean measured

7. **CONCLUSIONS:** This study is scientifically sound and fulfills the guideline requirements. The 96-hour LC₅₀ for mysid shrimp was determined to be 70.3 ppm ai, which classifies Omadine® sulfonic acid as slightly toxic to the mysid shrimp.

Results Synopsis:

LC₅₀: 70.3 ppm ai **95% C.I.:** 61.6 - 81.6 ppm ai
NOEC: 19.4 ppm ai **Probit Slope:** N/A

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Mossler Omadine sulfonic acid Mysidopsis bahia 5-5-98

CONC.	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (PERCENT)
128	20	20	100	9.536742E-05
74	20	7	35	13.1588
50.8	20	5	25	2.069473
32.2	20	1	5	2.002716E-03
19.4	20	0	0	9.536742E-05

THE BINOMIAL TEST SHOWS THAT 50.8 AND 128 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 81.528

RESULTS CALCULATED USING THE MOVING AVERAGE METHOD

SPAN	G	LC50	95 PERCENT CONFIDENCE LIMITS	
3	6.572961E-02	70.2991	61.61294	81.59221

RESULTS CALCULATED USING THE PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT PROBABILITY
5	.1256013	1	.152779

SLOPE = 5.719187
95 PERCENT CONFIDENCE LIMITS = 3.692291 AND 7.746083

LC50 = 71.31741
95 PERCENT CONFIDENCE LIMITS = 61.7116 AND 83.87515

LC10 = 42.76969
95 PERCENT CONFIDENCE LIMITS = 31.62622 AND 50.82053

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