11/5/81

DATA EVALUATION RECORD

1. Chemical: Acetochlor

2. Formulation: Mon-097 95.6% a.i.

3. Citation:

Griffen, J., and C.M. Thompson, (1981). Acute Toxicity of MON-097 (AB-81-181) to Bluegill Sunfish (Lepomis macrochirus). Unpublished study prepared by Analytical Bio-Chemistry Laboratories, Inc. on 23 Sept. 1981 for Monsanto Company submitted 10-27-81 under assession No. 246128.

4. Reviewed By:

J. Tice
Fish & Wildlife Biologist HED/EEB.

5. Date Reviewed: 11/5/81

6. Test Type:

Static Acute 96-hr. LC_{50} for Bluegill Sunfish.

7. Reported Results:

96-hr. LC_{50} for MON-097 = 1.3 mg/l (1.0-1.8 mg/l)
The 96-hr. no effect level is 1.0 mg/l.

8. Reviewers Conclusions.

This studyis scientifically sound and does fulfill guideline requirement for a warm-water fish study with a 96-hr. LC_{50} of 1.3 mg/l, Acetochlor is moderately toxic to bluegill sunfish.

Materials/Methods

Test procedures -

Methods used were there published in Standard methods and Methods of Acute toxicity tests with Fish, Macroinvertebrates and Amphibians. Fish used were obtained from a fish hatchery in Seymour, Indiana. Testing was conducted in 5 gal. glass vessels containing 15L of soft reconstituted water. Water temperature was maintained at 22 ±21°C .

Statistical Analysis -

The author used STEPHANS' Program to compute the 24, 48, 72 and 96 hr. LC_{50}. The results were reproduced in the test report. The 96 hr. statistical analysis is reproduced below.

Reviewers Conclusions:

The procedure used very closely followed recommended protocol and the test adeuately represent the totoxicity of MON 097 to Bluegills.

Validation Category: Core

ACUTE TOXICITY BIOASSAY

Test Material: MON-097 Test Species: Bluegill Sunfish Lab No.: 27815 Exposure Period: 96 hr	Laboratory: Analytical BioChemistry La Aquatic Toxicology Divisio 7200 ABC Lane, P.O. Box 10 Columbia, MO 65205

CONC.	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB.(PERCENT)
10	10	10	100	.09765625
5.6	10	10	100	.09765625
3.2	10	10	100	.09765625
1.8	10	10	100	.09765625
1	10	0	0	.09765625

THE BINOMIAL TEST SHOWS THAT 1 AND 1.8 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.8046875 PERCENT.

AN APPROXIMATE LC50 FOR THIS SET OF DATA IS 1.341640801365

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.