72-1 Bluegill acute w/ T.E.P

DATA EVALUATION REPORT

ECOLOGICAL EFFECTS BRANCH

1. Chemical: Tilt

   Shaughnessy No: 122101

MRID# 00132925

2. Formulation: 3.6E (41.8% a.i.)

3. Study ID: Sousa, Joseph V. 1983. Acute Toxicity of Tilt 3.6E to Bluegill (Lepomis macrochirus). Prepared by EG&G Bionomics for Ciba-Geigy Corporation. Data Acc. # 072209, Reference 6.

4. Study Type: 96-hour LC50 with Bluegill

5. Review By: Daniel Rieder
   Wildlife Biologist
   EED/HEB

   Daniel Rieder
   Date: 11/17/84
   Review Time 3 Hrs.

6. Reported Conclusions:

   96-hour LC50 = 9 ppm (41.8% a.i.)
   95% C.L. 6.7 to 12 ppm
   NOEL < 2.4 ppm (all fish were lethargic at this test level)

   Reviewer Evaluation

   96-hour LC50 = 3.5 ppm measured 100% a.i.
   95% C.L. = 2.8 ppm to 5 ppm
   (Bionomial Test)

7. Reviewer's Conclusions: This study is scientifically sound and fulfills guideline requirements for a warmwater LC50. It shows that Tilt is moderately toxic to bluegill.

8. Methods and Materials:

Test Material: Tilt 3.6E 41.8%
(Test Concentrations were measured)

Test Organisms: Bluegill, 10 per level
mean wet weight 0.47 g (0.27 - 0.74)
total length 38 mm (33 - 44)

Test Conditions: Containers - 19.6 l glass jar with
15 liters of test solution.
Untreated control used
Temperature - 22 ± 1° C
Light - 16 hrs on, 8 hrs off

See Attached report for details

9. Results:

Measured Concentrations ppm	No. Tested	Mortality
8	10	10
5	10	10
2.8	10	1
1.8	10	0
1.0	10	0
Control	10	0

10. Statistical Analysis:

Stephans computer program generated the LC50 by binomial probability.

11. Reviewer's Evaluation:

Since the test concentrations were measured and an LC50 in ppm a.i. can be generated, this study fulfills guideline requirements for a 96-hour study with a technical test material. The results show Tilt to be moderately toxic to bluegill.

12. Conclusion:

Category: Core for technical a.i. and
Core for formulated product (3.6E) if necessary.

122101 DATA ACC NO:072209 REFERENCE 6 TILT CGA-64250 BLUEGILL LC50

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CONC. Measured	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB.(PERCENT)
8	10	10	100	.0976563
5	10	10	100	.0976563
2.8	10	1	10	1.07422
1.8	10	0	0	.0976563
1	10	0	0	.0976563

THE BINOMIAL TEST SHOWS THAT 2.8 AND 5 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 3.51972

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.

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