(9-22-82)

DATA EVALUATION RECORD

1. CHEMICAL: Cyromazine
(N-Cyclopropyl-1,3,5-triazine-2,4,6-triamine)

2. FORMULATION: Technical
95% a.i.

3. CITATION: Schupner, J.K., A.G. Vilkas, and B.J. Buck. 1981. The acute toxicity of CGA-72662 (Technical Grade) to the Channel Catfish. Prepared by Union Carbide - Environmental Services. Submitted by CIBA-GEIGY, Greensboro, N.C. for Reg. No. 100-AGE under Accession No. 070912.

4. REVIEWED BY: John Bascietto
Wildlife Biologist
EEB/HED

5. DATE REVIEWED: 9/22/82

6. TEST TYPE: 96-hr. LC_{50}

A. Test Species - Channel Catfish
Ictalurus punctatus

7. REPORTED RESULTS: The 96-hr LC_{50} of CGA-72662 to the channel catfish was not determined. There were no mortalities when tested to an analyzed concentration of 92.4 mg/l.

8. REVIEWER'S CONCLUSION

The NOEL = 91.6 mg/l. The 96-hr. LC_{50} is greater than 100 mg/l (nominal) and greater than 91.6 mg/l (analytical). The study is scientifically sound but does not fulfill the intent of the (proposed) Registration Guidelines.

With a 96-hr LC_{50} > 100 mg/l (nominal) and > 91.6 mg/l (analytical), CGA-72662 is considered slightly to practically non-toxic to Channel Catfish of the 7-month age class.

9. Materials/Methods

A. Test Procedure: procedure was only generally in compliance with protocols recommended by the (proposed) Registration Guidelines. Notable deviations from said protocols were:

- fish were older and larger then preferred
  av. weight = 7.92 g. (n=10)
  " length = 107 mm
- Biological loading = 2.64 g/l
- 5 fish per vessel, with 2 replicate vessels
- aeration was employed on test because of size of fish and biological loading, however analytical concentrations were determined, so as to rectify this factor.
- Channel catfish is generally not considered an appropriate warmwater fish indicator species.

B. Statistical Analysis - none was performed due to lack of mortality.

10. Results -

Mortality

Range - Finder

Dose (mg/l) (Nominal)	% mortlaity at 96-hr
0 (control)	0
1	0
5	0
10	0
50	0
100	0

Definitive Study -

Dose (mg/l) (Analytical)	% Mortality at 96-hr
0 (control)	0
10.8	0
16.6	0
29.8	0
51.5	0
91.6	0

CHEMISTRY -

Dilution H_2O prior to test

Temp (°C)	pH	Conductivity (umhos/cm)	Hardness*	Alkalinity*
20.1-22.4	7.28	150	42	30

* as $CaCO_3$

Test water - control	D.O. (mg/l)	pH
0 HR	9.1	7.61
24 "	7.5	7.34
48 "	8.4	7.59
72 "	8.0	7.43
96 "	8.4	7.52

11. Reviewer's Evaluation

A. Test Procedures - procedures were reasonable considering the test species. All protocols and procedures were based on scientifically sound principles for such a test. However, EEB does not normally recommend to test Channel Catfish because of the problems with unstandardized protocols, and we cannot compare this test to others done differently. Since no control nor experimental mortality occurred we do not object to the procedures.

B. Statistical Analysis - none performed

C. Results -

Since the range-finder employed nominal doses of up to 100 mg/l and since no mortalities resulted in that test nor in the definitive test, we assume that the 96-hr LC_{50} is geater than 100 mg/l.

It is not, however, clear as to why the same nominal doses were tested in both the range-finder and definitive studies, since the range-finder found no mortality at the highest dose tested; i.e., 100 mg/l. It, therefore, makes little sense to repeat the same doses in the definitive study, as this certainly would not yield an LC_{50} - this practice is discouraged, although they would not have to determine an $LC_{50} > 100$ mg/l with an exact value. The doses used in the definitive test are considered inappropriate and certainly not "definitive" in term of results.

D. Conclusions

1. Category: Supplemental

2. Repair: none possible

3. Rationale:

- not a recommended indicator species
- biological loading excessive
- 5 fish per vessel with duplicate vessels were employed for each dose level
- generally, an unstandardized protocol was used, due to the modifications.
- no 96-hr LC_{50} is established ("definitive" test is a misnomer - it repeated the range-finder test and did not yield a "definitive" LC_{50} result).