DATA EVALUATION RECORD
FRESHWATER FISH EARLY LIFE-STAGE TEST
GUIDELINE 72-4(A)

1. CHEMICAL: 2-chloro-4,6-bis(isopropylamino)-s-triazine
PC Code No.: 080808

2. TEST MATERIAL: Propazine
Purity: 98.0%

3. CITATION:

Authors: J. L. Veltri
Title: Analytical analysis of propazine during the early life-stage toxicity test with the sheepshead minnow (*Cyprinodon variegatus*)

Study Completion Date: 09/18/95
Laboratory: ABC Laboratories, Inc.
Laboratory Report ID: ABC Laboratories #41959
Sponsor: Griffin Corporation
MRID No.: 443276-01

4. REVIEWED BY: Thomas M. Steeger, Ph.D., Fishery Biologist, EFED, ERB IV, U.S. EPA

Signature: Thomas M Steeger Date: 10/11/97

5. APPROVED BY: Ann Stavola, Aquatic Biologist, EFED, ERB IV, U.S. EPA

Signature: Ann Stavola Date: 10/15/97

6. CONCLUSIONS: This study reports on the analytical analysis of propazine levels used in a sheepshead minnow early life-stage early-life stage toxicity study with propazine. Mean measured concentrations for the test levels were 0.259, 0.688, 1.34, 2.59, and 5,25 mg/L. These values represented 80, 103, 103, 104, and 105% of the nominal test concentrations of 0.30, 0.65, 1.3, 2.5, and 5.0 mg/L, respectively, with an overall mean of 100 ± 8.0%. Based on the analytical recoveries, the report concluded that the test material appeared to be stable.

7. ADEQUACY OF THE STUDY:

A. Classification: Supplemental

B. Rationale: Study reports on the analytical analysis of propazine and does not provide information directly useful in interpreting the ecotoxicity of propazine to sheepshead minnow.

C. Repairability:

8. MAJOR GUIDELINE DEVIATIONS: none reported

9. MATERIALS AND METHODS:

A. Biological System:

Guideline Criteria	Reported Information
Species: Any of several freshwater fish species, including rainbow trout, brook trout, bluegill, fathead minnow, and channel catfish. See SEP for complete listing.	*Cypinodon variegatus*
Source	not reported
Age at beginning of test: Embryos 2 to 24 hours old.	not reported
Replicates: Minimum of 20 embryos per replicate cup, 4 replicates per concentration. Minimum of 30 fish per treatment for post-hatch exposure.	not reported
Post Hatch: % of embryos that produce live fry must be ≥ 50% in each control; % hatch in any control embryo cup must be no more than 1.6 times that in another control cup.	not reported
Feeding: Fish should be fed at least twice daily. Fish should not be fed for at least 24 hr prior to termination on day 32.	not reported
Counts: At a minimum, live fish should be counted 11, 18, 25, and 32 days after hatching.	not reported
Controls: Avg. survival at end of test must be ≥ 80%. Survival in any control chamber must not be < 70%.	not reported

Guideline Criteria	Reported Information
Controls: Negative control and carrier control (when applicable) are required.	Dilution water control and DMF-vehicle blank

Comments:

B. **Physical System:**

Guideline Criteria	Reported Information
Test Water: 1) May be natural or reconstituted; 2) Natural water should be sterilized with UV and tested for pesticides, heavy metals, and other possible contaminants. 3) Hardness of 40 to 48 mg/L as $CaCO_3$ and pH of 7.2 to 7.6 is recommended.	not reported
Test Temperature: Depends upon test species; should not deviate by more than 2°C from appropriate temperature.	not reported
Photoperiod: Recommend 16L/8D.	Not reported
Dosing Apparatus: Intermittent flow proportional diluters or continuous flow serial diluters should be used. A minimum of 5 toxicant concentrations with a dilution factor not greater than 0.5 and controls should be used.	Not reported

Guideline Criteria	Reported Information
Toxicant Mixing: 1) Mixing chamber is recommended but not required; 2) Aeration should not be used for mixing; 3) It must be demonstrated that the test solution is completely mixed before intro. into the test system; 4) Flow splitting accuracy must be within 10%.	Not reported
Test Vessels: All glass or glass with stainless steel frame.	Not reported
Embryo Cups: 120 ml glass jars with bottoms replaced with 40 mesh stainless steel or nylon screen.	Not reported
Flow Rate: Flow rates to larval cups should provide 90% replacement in 8-12 hours. Flow rate must maintain DO at above 75% of saturation and maintain the toxicant level.	Not reported
Aeration: Dilution water should be aerated to insure DO concentration at or near 100% saturation. Test tanks and embryo cups should not be aerated.	Not reported

Comments: No comments.

C. Chemical System:

Guideline Criteria	Reported Information
Concentrations: Minimum of 5 concentrations and a control, all replicated, plus solvent control if appropriate. - Toxicant conc. must be measured in one tank at each toxicant level every week. - One concentration must adversely affect a life stage and one concentration must not affect any life stage.	-- Control, vehicle control, 0.30, 0.65, 1.3, 2.5, and 5.0 mg a. i./L. -- Toxicant concentration test on days 0, 7, 14, 21, 28, and 35 and 36
Other Variables: 1) DO must be measured at each conc. at least once a week; 2) Freshwater parameters in a control and one concentration must be analyzed once a week.	
Solvents: Should not exceed 0.1 ml/L in a flow-through system. Following solvents are acceptable: dimethylformamide, triethylene glycol, methanol, acetone, ethanol.	Text implies 0.4 ml DMF/4 L diluant; thus, 0.1 ml/L

Comments:

10. REPORTED RESULTS:

Guideline Criteria	Reported Information
Data Endpoints must include: - Number of embryos hatched; - Time to hatch; - Mortality of embryos, larvae, and juveniles; - Time to swim-up (if approp.); - Measurement of growth; - Incidence of pathological or histological effects; - Observations of other effects or clinical signs.	Not reported

Guideline Criteria	Reported Information
Raw data included? (Y/N)	Yes

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Effects Data:

This study reports on the analytical analysis of propazine levels used in a sheepshead minnow early life-stage early-life stage toxicity study with propazine. Mean measured concentrations for the test leves were 0.259, 0.688, 1.34, 2.59, and 5.25 mg/L. These values represented 80, 103, 103, 104, and 105% of the nominal test concentrations of 0.30, 0.65, 1.3, 2.5, and 5.0 mg/L, respectively, with an overall mean of 100 ± 8.0%. Based on the analytical recoveries, the report concluded that the test material appeared to be stable. At the time of this review, there were no data available on the biological effects of propazine on sheepshead minnows. This study appears to be scientifically sound; however, it does not provide any biological data useful in meeting Guideline 72-4 requirements. This study is classified as supplemental.

12. COMPLETION OF ONE-LINER FOR STUDY: