

DATA EVALUATION RECORD
ALGAE OR DIATOM EC₅₀ TEST
GUIDELINE 122-2 OR 123-2 (TIER I OR II)

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

2. TEST MATERIAL: Propazine

Purity: 98.0%

3. CITATION

Authors: S. L. Hicks; J. B. Bussard; D. W. Gledhill

Title: Acute toxicity of propazine to
Selenastrum capricornutum Printz

Study Completion Date: 04/19/95

Laboratory: ABC Laboratories, Inc.

Sponsor: Griffin Corporation

Laboratory Report ID: ABC Laboratory #41962

DP Barcode: D237791

MRID No.: 442873-08

4. REVIEWED BY: Thomas M. Steeger, Fishery Biologist, EFED,
ERBIV

Signature: Thomas M Steeger

Date: 10/2/97

5. APPROVED BY: Nicholas E. Federoff, Wildlife Biologist, EFED,
ERB IV

Signature: N.E. Federoff

Date: 10/9/97

6. STUDY PARAMETERS

Scientific Name of Test Organism: *Selenastrum capricornutum*

Definitive Test Duration: 120 hours

Type of Concentrations: Mean measured/Nominal

7. CONCLUSIONS: This study is scientifically sound and does fulfill the 123-2(A) guideline requirements for acute toxicity tests for algae. The 120-hr EC₅₀ was estimated to be 0.029 mg/L. After 120 hours, the no-observed effect concentration was 0.012 mg/L based on the absence of a growth inhibition effect.

Results Synopsis

EC₅₀: 0.029 ppm ai

95% C.I.: 0.019 - 0.038 ppm ai

NOEL: 0.012 ppm ai

Slope: 2.22

8. ADEQUACY OF THE STUDY

A. Classification: Core

B. Rationale: Methodology was consistent with FIFRA



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A. Classification: Core

B. Rationale: Methodology was consistent with FIFRA guidelines; data are well presented and verifiable.

C. Repairability:

9. GUIDELINE DEVIATIONS

1.

2. (etc.)

10. SUBMISSION PURPOSE:

11. MATERIALS AND METHODS

A. Test Organisms

Guideline Criteria	Reported Information
<u>Species</u> <i>Skeletonema costatum</i> <i>Anabaena flos-aquae</i> <i>Selenastrum capricornutum</i> <i>Navicula pelliculosa</i>	<i>Selenastrum capricornutum</i>
<u>Initial Number of Cells</u> 3,000 - 10,000 cells/ml	2.6×10^3 cells/ml
<u>Nutrients</u> Standard formula, e.g. 20XAAP	macronutrient stock solution/micronutrient stock solution recipes given

B. Test System

Guideline Criteria	Reported Information
<u>Solvent</u>	dimethylformamide (DMF)
<u>Temperature</u> Skeletonema: 20°C Others: 24-25°C	$24 \pm 2^\circ\text{C}$
<u>Light Intensity</u> Anabaena: 2.2 K lux (+15%) Others: 4.3 K lux (+15%)	$4,310 \pm 650$ Lux

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Guideline Criteria	Reported Information
<u>Photoperiod</u> Skeletonema: 14 h light, 10 h dark or 16 h light, 8 h dark Others: Continuous	Continuous
<u>pH</u> Skeletonema: approx. 8.0 Others: approx. 7.5	Range: 7.2 - 8.7

C. Test Design

Guideline Criteria	Reported Information
<u>Dose range</u> 2X or 3X progression	(2X progression)
<u>Doses</u> at least 5	0.013, 0.025, 0.050, 0.10, and 0.20 mg/L
<u>Controls</u> negative and/or solvent	Control and vehicle blank (DMF)
<u>Replicates per dose</u> 3 or more (4 or more for Navicula)	triplicate
<u>Duration of test</u> 120 hours	120 hours
Daily observations were made?	Yes
<u>Method of Observations</u>	Cellular counts (hematocytometer and an Olympus Model BH-2 microscope)
<u>Maximum Labeled Rate</u>	1.2 lb ai/acre

12. REPORTED RESULTS

Guideline Criteria	Reported Information
Quality assurance and GLP compliance statements were included in the report?	Yes

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Guideline Criteria	Reported Information
Initial and 120 h cell densities were measured?	Yes (Initial cell counts performed only on the control and vehicle blank replicates)
Control cell count at 120 hr $\geq 2X$ initial count?	Yes (846X)
Initial chemical concentrations measured? (Optional)	Yes
Raw data included?	Yes

Dose Response

Dose (mg ai/L)	Cell Density ($\times 10^4$ cells/ml)	% Inhibition	120-Hour pH
Control	220	--	8.1
Solvent Control	280	--	8.7
0.012	280	0.0	8.1
0.022	110	50	7.8
0.044	74	66.0	7.8
0.090	58	73.6	8.0
0.180	5.7	97.4	7.5

Other Significant Results:

Statistical Results

Statistical Method: ANOVA (Proc GLM); multiple means comparison test (Dunnett's)

EC₅₀: 0.029 ppm 95% C.I.: 0.019 - 0.038 ppm

Slope: 2.22 NOEC: 0.012 ppm

13. Verification of Statistical Results

Statistical Method: TOXANAL (PROBIT METHOD ITERATIONS)

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EC₅₀: 0.021 ppm

95% C.I.: _____ ppm

Slope: 2.48

NOEC: 0.012 ppm

Adjusted for active ingredient: All results based on the mean measured test concentrations.

EC₅₀: 0.029 ppm ai

95% C.I.: 0.019-0.038 ppm ai

NOEC: 0.012 ppm ai

14. REVIEWER'S COMMENTS: