

US EPA ARCHIVE DOCUMENT



10. GUIDELINE DEVIATIONS

1. Constant temperature measurement of waterbath not mentioned or carried out?

11. SUBMISSION PURPOSE: See 9.

12. MATERIALS AND METHODS

A. Test Organisms

Guideline Criteria	Reported Information
Species	<i>Daphnia magna</i>
Age(lifestage), size or weight	Neonates <24 hours old
Source or Supplier	ABC Laboratory Cultures

B. Acclimation

Guideline Criteria	Reported Information
Acclimation Period	Culture conditions identical to test conditions-daphnids used had been in culture 15D
Signs of disease or injury	All daphnids appeared healthy
Treatments for disease	No treatments
Feed Regime	Daphnids were fed daily with 1 of two algae species in suspension along with dry yeast/fish food supplement. No feeding done during exposure.
Pretest Mortality	No mortality

C. Test System

Guideline Criteria	Reported Information
Source of dilution water	Hard blended water composed of wellwater and reverse osmosis water, aged prior to use. Sediment capture and reverse osmosis filtration used.
Water Temperature Control	Waterbath at 20±2°C
Initial pH and Range	8.3 Range:8.3-8.4
Initial Dissolved Oxygen Range	7.4-7.7 48 hr Range: 7.0-7.7
Total Hardness	130-160 mg/L as CaCO <sub>2</sub>

Guideline criteria	Reported Information
<b>Test Aquaria</b> 1. <u>Material</u> : 2. <u>Size</u> : 3. <u>Fill volume</u> :	250 ml Glass beakers containing 200 ml of test solution.
<b>Type of Dilution System</b>	Static
<b>Flow Rate</b>	N/A
<b>Biomass Loading Rate</b>	5 Daphnids/200 ml
<b>Photoperiod and Illumination Level Maintained</b>	16D/8N at 607-611 lux(56-57 footcandles)
<b>Solvents (if used)</b>	No solvents used

#### D. Test Design

Guideline criteria	Reported Information
<b>Range Finding Test</b>	Range test: 5 daphnids at 10, 100, and 1000 mg/L, No mortality observed.
<b>Nominal Concentrations of Definitive Test and number of Replicates/Concentration</b>	Dilution control and 100 mg/L 6 replicates/test group
<b>Number of Test Organisms</b> Total for All Groups Number/Concentration level Number/Replicate Vessel	60 Daphnids total 30 Daphnids/test level 5/replicate vessel
<b>Method of test organisms assignment to test vessels</b>	Impartial distribution
<b>Water Parameter Measurements</b> 1. Temperature Measurement 2. DO and pH Measurement	Measured at 0 and 48 hours.
<b>Chemical Analysis Methodology</b>	0 and 48 hour composite samples(all beakers) were measured using HPLC methods

13. REPORTED RESULTS

A. General Results

Guideline Criteria	Reported Information
Quality assurance and GLP compliance	Q/A statement included. OECD guidelines followed.
Control Mortality	0 %
Recovery Range for Chemical Mortality	97% Recovery

Concentration (ppm)		Number of Organisms	Cumulative Number Dead	
Nominal	Mean Measured		Hour of Study	
			24	48
Control	N/A	30	0	0
100 mg/l	104 mg/L	30	0	0

Other Significant Results:

B. Laboratory's Statistical Results

Method:

48 or 96-hr EC<sub>50</sub>: >104 ppm ai

95% C.I.:N/A

Probit Slope:N/A

NOEC:104 ppm ai

14. AGENCY VERIFICATION OF STATISTICAL RESULTS No statistical verification necessary.

15. REVIEWER'S COMMENTS: The study was generally conducted according to accepted Agency testing methodology. The composite of test solution measurements is not generally recommended as it masks inconsistency between replicates. The waterbath should be measured continuously, to insure that no significant temperature departures occurred during the exposure period. ABC did not report whether this procedure was included. The sulfonic acid degradate of alachlor appears to be nearly nontoxic to *Daphnia magna* under the test conditions used in this study. The study is acceptable for reregistration purposes.