DATA EVALUATION RECORD

1. CHEMICAL: Naphthaleneacetic Acid

2. FORMULATION: Technical (98% Active)


4. REVIEWED BY: Leslie Touart
   Fisheries Biologist
   EEB/HED

5. DATE REVIEWED: 12/29/81

6. TEST TYPE: Aquatic Invertebrate 48-hour EC50

   A. TEST SPECIES: Daphnia magna

7. REPORTED RESULTS: The 48-hour LC50 and corresponding 95% confidence interval for the water flea exposed to Naphthaleneacetic Acid were estimated by binomial probability to be 360 (220-590) mg/l.

8. REVIEWERS CONCLUSIONS: The study is not scientifically sound and does not fulfill the requirement for an acceptable aquatic invertebrate acute toxicity study with technical material.
Materials/Methods

Test Procedures


Statistical Analysis

Mortality data were analyzed with the Stephan program.

Discussion/Results

<table>
<thead>
<tr>
<th>Nominal Concentration (mg/l)</th>
<th>Percentage (24 hr)</th>
<th>Mortality (48 hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>980</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>590</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>350</td>
<td>7</td>
<td>33</td>
</tr>
<tr>
<td>220</td>
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</tr>
<tr>
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</tbody>
</table>

All test solutions of NAA contained undissolved chemical throughout the study period.

Reviewer's Evaluation

A. Test Procedures

Protocol generally followed the recommended procedures in the EPA proposed guidelines of 1978. However, adequate steps were not taken to insure maximum solubilization of the test material. A different solvent (e.g., acetone) or method (e.g., homogenation) could have allowed all the test material to enter solution.

B. Statistical Analysis

Appropriate for the data generated.

C. Discussion/Results

The reported conclusions are unacceptable due to the uncertainty of the actual test concentrations. The solubility of NAA in water is greater than 300 ppm, and in optimal conditions a precipitate should not occur in test solutions containing less than 300 ppm. In test solutions where a precipitate occurs, the actual exposure level is unknown unless chemical analysis of the solution is made.

D. Conclusions

2. Rationale: Test solutions contained undissolved chemical.
3. Repairability: None.