US EPA ARCHIVE DOCUMENT

VALIDATION CATEGORY: Supplemental

RESULTS: The acute toxicity of PP581 was determined in Freshwater at 13°C. The toxicant was dissolved in DMSO and it was reported that a level of less than 10 mg/L of DMSO was used in the test vessels. The following mortality figures were determined:

24 hr. LC$_{50}$ = 0.155 mg/L
48-hr. LC$_{50}$ = 0.09 mg/L
96-hr. LC$_{50}$ = 0.051 mg/L

The no effect level was determined to be 0.015 mg/L.

VALIDATION CATEGORY RATIONALE: See preceding test ES-F

REPAIRABILITY: See preceding test ES-F.

% air not given
nominal used even though measured data was available
Additional Comments

1. The exposure concentrations (measured and nominal) and survival:

<table>
<thead>
<tr>
<th>Survivors 96-hr</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>10</th>
<th>10</th>
<th>10</th>
<th>10</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal</td>
<td>0.22</td>
<td>0.15</td>
<td>0.10</td>
<td>0.068</td>
<td>0.047</td>
<td>0.033</td>
<td>0.022</td>
<td>0.015</td>
<td>0.010</td>
</tr>
<tr>
<td>Mean</td>
<td>0.182</td>
<td>0.125</td>
<td>0.103</td>
<td>0.055</td>
<td>0.029</td>
<td>0.023</td>
<td>0.0215</td>
<td>0.0110</td>
<td>0.0092</td>
</tr>
</tbody>
</table>

Ten fish were used per concentration level.

2. A flow-thru system was utilized. The LC₅₀'s were determined via a geometric mean survival period method:

\[ GMSP = \exp \left( \sum_{i=1}^{N} \frac{N_i}{\ln(1 - q_i) + \frac{1}{N_i}} \right)^{\frac{1}{N}} \left( \frac{1}{\ln(1 - q_i) + \frac{1}{N_i}} \right)^{\frac{N_i}{N}} \]

where \( N_i \) is number fish which die at time \( t_i \) and \( \sum_{i=1}^{N} \frac{N_i}{N} \) is the total fish in the test. Here total is ten.

3. Control tests were reported run but no survivorship information is given.

4. The lowest recorded Oxygen level was 87% of saturated, the pH range was 7.6-7.8.

5. Toxic symptoms included keeling and bleeding gills.

6. The fish ranged in weight from 4.9 to 6.8 with mean of 6.0 gm.

7. The 96-hr. LC₅₀ calculated by the reviewer using measured concentrations was 0.045 mg/L (Regression Analysis).