

1-25-84

DATA EVALUATION RECORD

1. Chemical: EL-107
2. Formulation: 92.4% active ingredient
3. Citation: Lake, S.G., D.W. Grothe and P.C. Francis. December 1982. The acute toxicity of EL-107 (Compound 121607) to rainbow trout (Salmo gairdneri) in a static test system. Study F07482. Prepared by Lilly Research Lab., Greenfield, Indiana. Submitted to Elanco Chemical Co. Indianapolis, Ind. EPA Accession 250793.
  
4. Reviewed by: Elizabeth E. Zucker  
Wildlife Biologist  
EEB/HED
  
5. Date Reviewed: January 25, 1984
6. Test Type: Acute toxicity to coldwater fish species
  - A. Test Species: Rainbow trout (Salmo gairdneri)
  
7. Reported Results:

The 96 hour no-observed effect level of EL-107 was  $\geq$  1.1 mg/l.
  
8. Reviewer's Conclusions

This study is scientifically sound, but may not be used to fulfill the guidelines requirement for an acute toxicity test on a coldwater fish species using the technical product. This is because insolubility of the toxicant and/or aeration of the test system led to fish being exposed to EL-107 concentrations (1.0 mg/l) that were significantly less than nominal concentrations (100 mg/l).

## Materials/Methods

### Test Procedures

Trout were hatched in-house and held in the laboratory for 97 days prior to testing. For the definitive study, a total of 30 fish (in 3 replicate groups) were exposed to each of 2 treatment levels (0 and 100 mg/l EL-107). Other test specifics of note include:

Fish size: Mean wet weight -  $1.15 \pm 0.29$ g  
Mean total length -  $43.4 \pm 3.6$  mm  
Test vessels - 18.9 liter glass jars containing  
15L test solution

Diluent - Hardness - 120 mg/l ( $\text{CaCO}_3$ )  
Alkalinity - 145 mg/l ( $\text{CaCO}_3$ )  
Conductivity - 240 umhos/cm  
Water was continuously aerated

Fish were not fed 48 hours prior to testing  
D.O, pH and temperature were measured daily in each test solution  
A 200 ml water sample was collected from each vessel at the test's  
initiation and termination. Samples were analyzed for EL-107.  
Fish were observed daily for signs of toxicity.

### Statistical Analysis

There were no mortalities, thus an analysis was not conducted.

### Results/Discussion

There were no physical signs of toxicity in control or treated fish.

The temperature of the test solutions was  $13.0 \pm 0.0^\circ\text{C}$  and pH ranged from 7.9 to 8.5. D.O. concentrations averaged 11.5 mg/l (100% saturation).

Because of the low water solubility of EL-107, actual concentrations in the 100 mg/l treatment ranged from 1.0 to 1.1 mg/l.

### Reviewer's Evaluation

#### A. Test Procedures

This study was performed under conditions that complied substantially with current guidelines with the following notable exceptions:

1. Due to low solubility of the toxicant and/or aeration of the test system, fish were exposed to concentrations of EL-107 significantly lower than nominal concentrations
2. Temperature was slightly higher than recommended and not monitored continuously in one test vessel.

B. Statistical Analysis

There were no mortalities, thus analysis is not necessary.

C. Results/Discussion

The results of this study can only be used to support registrations of EL-107 where expected aquatic environmental residues approach 1 ppm or lower.

D. Conclusions

1. Category: Supplemental
2. Rationale: Due to low solubility of the toxicant and/or aeration of the test system, fish were only exposed to 1 ppm EL-107 during the study.
3. Repairability: None