

1-23-84

Data Evaluation Record

1. Chemical: EL-107
2. Formulation: 92.4% active ingredient
3. Citation: Lake, S.G. and C.C. Kehr. December 1982. The toxicity of EL-107 (Compound 121607) to Bobwhite in a 5-day dietary study. Study No. A01082. Prepared by Lilly Research Laboratories, Greenfield, Indiana. Submitted to Elanco Chemical Co., Indianapolis, Ind. EPA Accession No. 250793.
4. Reviewed by: Elizabeth E. Zucker
Wildlife Biologist
EEB/HED
5. Date Reviewed: January 23, 1984
6. Test Type: Avian 8-day dietary study
 - A. Test Species: Bobwhite quail (Colinus virginianus)
7. Reported Results:

The 8 day LC₅₀ was >0.5% EL-107 dietary concentration.
8. Reviewer's Conclusions

This study is scientifically sound and may be used to fulfill the guidelines requirement for an avian dietary study on an upland game species. With an 8-day LC₅₀ in excess of 5,000 ppm, technical EL-107 is considered practically non-toxic to bobwhite quail.

Materials/Methods

Test Procedures

Quail were hatched in-house and conditioned in the laboratory for 12 days prior to testing. Birds were randomly assigned to pens. There were 5 birds per pen and 2 pens per treatment group.

Diets were mixed at levels of 0; 0.0062; 0.02; 0.056; 0.18 and 0.5%. Birds had free access to treated diets for 5 days and then all group recieved basal diets for another 3 days. Water was available ad libitum.

Individual body weights were measured at the beginning of the study, on day 5 and the study's termination. Mean body weight and body weight gain + S.D. were calculated for treatment and control groups for the 5-day treatment and 3-day recovery phases. Food consumption was measured by pen during the treatment and recovery phase. Birds were observed daily for toxic symptoms.

Brooder pens were maintained at a temperature of 37°C with 24 hours of light each day.

Statistical Analysis

None were performed because there were no mortalities at the highest test level. Body weight gain values were evaluated using Dunnett's 't'-test.

Results/Discussion

One of 10 control birds died on day 7. One bird from the 0.056% treatment group died on day 8. On day 2, a bird from the 0.18% group died, followed by another bird from the same group dying on day 5. The authors contend that the deaths were unrelated to treatment.

No signs of toxicity were observed in any of the birds in the study. There was no statistical difference detected in mean body weight gains between control and treatment groups. Food consumption was similar for control versus treatment groups.

Assays of diets showed toxicant levels to be at least 83% of nominal concentrations.

Reviewer's Evaluation

A. Test Procedures

This study was performed under conditions that complied substantially with current guidelines.

B. Statistical Analysis

None of the 10 birds in the highest treatment group died, thus analysis was not necessary.

C. Results/Discussion

Food consumption was not reduced in any of the treatment groups. Thus it seems that all birds, including those at the highest level were exposed to nominal concentrations of the toxicant. Thus, it it can be assumed that the LC₅₀ is greater than 5,000 ppm.

D. Conclusions

1. Category: Core
2. Rationale: N/A
3. Repairability: N/A