419688-01

MRID No. ~~416273-03~~

DATA EVALUATION RECORD

1. **CHEMICAL:** Pyrethrin I
Shaughnessey Number: 069001

2. **TEST MATERIAL:** Pyrethrin Extract ; Task force Blend FEK-99 57.57% purity.

3. **STUDY TYPE:** Avian Dietary LC_{50} Test.
Species Tested: Bobwhite quail (Colinus virginianus).

4. **CITATION:** Grimes, Jennie, Lynn, S.P. and Smith, G.J., 1991. A Dietary LC50 Study with Pyrethrin Extract in the Northern Bobwhite Quail. Wildlife International Ltd., Project No.: 326-101.

5. **REVIEWED BY:**

Richard W. Felthousen
EFED/EEB

Signature: Richard W. Felthousen
Date: September 3, 1991

6. **APPROVED BY:**

Al Vaughan, Acting Head,
Section 2
EFED/EEB

Signature: Allen W. Vaughan
Date: 9.9.91

Harry Craven
Supervisor, EEB/HED
USEPA

Signature:
Date:

7. **CONCLUSIONS:**
The study was conducted so as to conform to Good Laboratory Practice and the results represent the toxicity of Pyrethrin Extract to the bobwhite quail.

8. **RECOMMENDATIONS:**

9. **BACKGROUND:** Data submitted to satisfy Reregistration requirements.

10. **DISCUSSION OF INDIVIDUAL TESTS:** N/A.

11. MATERIALS AND METHODS:

A. Test Animals: The birds used in the study were 10-day-old bobwhite quail (Colinus virginianus) hatched at Wildlife International. All test birds were phenotypically indistinguishable from wild birds. The birds were acclimated to laboratory conditions from the day they hatched until test initiation.

B. Test System: All birds were housed indoors in wire pens measuring approximately 72 X 90 X 23 cm. Lighting was provided by fluorescent lights on a 16L:8D photoperiod. Each pen was assigned 10 birds at random. Maximum and minimum temperatures, as well as the relative humidity of the animal room were recorded daily. The average room temperature during the test period was 25.3°C with an average relative humidity of 50%. The birds were exposed to approximately 130 lux of illumination.

C. Dosage: 8-day dietary LC_{50} test. All dosages and the LC_{50} value are reported as parts per million (ppm) active ingredient (a.i.). The test consisted of a geomatric series of five concnetrations and four control groups. Nominal dietary concentrations were 562, 1000, 1780, 3160 and 5620 parts per million. Each group was fed the test or control ration for five days. Following the five day exposure all groups were given untreated feed for three days.

D. Design:
The test diets were prepared by mixing the test substance into the diet with corn oil. The concentration of corn oil in the treated and control diets was 2%. All dietary concnetrations were adjusted to 100% active ingredient based upon the reported purity of the test subsatnce.

Test diets were fed to the chicks for five consecutive days. After this five-day test period, treated diets were removed and birds were offered untreated feed for a three-day recovery period.

Body weights by group were mearsured at the initiation of the test, on Day 5 and at the termination of the test on Day 8. Average daily food consumption was recorded for each group for the five-day test period, and the three-day recovery period.

All birds were observed daily to ascertain the presence (or absence) of clinical signs indicative of test material effect.

E. **Statistics:** The pattern of mortality in this study did not require statistical evaluation.

12. **REPORTED RESULTS:**

The LC_{50} of the test material in this study was determined to be greater than 5620 ppm a.i., the highest concentration tested. No mortality was observed for any of the test or control groups. The no observed effect level was 3160 ppm a.i. based on a reduction in body weight gain at 5620 ppm a.i.

13. **STUDY AUTHOR'S CONCLUSIONS/QUALITY ASSURANCE MEASURES:**

The report stated that the study was conducted in conformance with Good Laboratory Practice regulations. Quality assurance audits were conducted and the final report was signed by the Quality Assurance Officer.

14. **REVIEWER'S DISCUSSION AND INTERPRETATION OF STUDY RESULTS:**

A. **Test Procedure:** The test procedures were in accordance with Subdivision E - Hazard Evaluation: Wildlife and Aquatic Organisms, ASTM and SEP guidelines except for the following deviations:

Body weights were measured by group. Individual body weights should have been measured.

B. **Statistical Analysis:** N/A

C. **Discussion/Results:**

The study is scientifically sound and meets the intent of the guidelines.

The LC50 is greater than 5620 ppm and the no observed effect level is 3160 based on reduced body weight gains.

D. **Adequacy of the Study:**

(1) **Classification:** Core
(2) **Rationale:** Satisfies requirement.
(3) **Repairability: N/A**