

US EPA ARCHIVE DOCUMENT

MRID No.: 433129-01

**DATA EVALUATION RECORD
AVIAN SINGLE-DOSE LD₅₀ TEST
GUIDELINE 71-1(A)**

1. **CHEMICAL:** Algaesil

Shaughnessey #: 072501 (silver)

2. **TEST MATERIAL:** *Colinus virginianus*
Purity: 0.80% (colloidal silver as elemental)

3. **CITATION:** *Campbell, Susan M. and Beavers, Joann B.*
Laboratory: Wildlife International Ltd.
Sponsor: Mason Chemicals
Laboratory Report ID: Project No. 371-102
Any Other Study ID: MRID No. 433129-01

4. **REVIEWED BY:**

Curtis E. Laird
Biologist
EEB/EFED
US EPA

Signature: *Curtis E. Laird*

Date: 5-3-95

5. **APPROVED BY:**

Norman J. Cook
Head, Section 2
EEB/EFED
US EPA

Signature: *Norman J. Cook*

Date: 05-03-95

6. **CONCLUSIONS:** This study indicates Algaesil is practically nontoxic to bobwhite quail with an LD₅₀ >2250 mg/kg. This study does fulfill the guideline requirements in support of reregistration for an avian acute oral LD₅₀ study.
7. **ADEQUACY OF THE STUDY:** This study is classified as core for a formulated product. The percent ai was 0.80%.
8. **RATIONAL FOR CLASSIFICATION:** The study was conducted with a formulated product.



9. MATERIALS AND METHODS:

A. Test Organisms: Bobwhite quail

Guideline Criteria	Reported Information
Species: A wild waterfowl species, preferably the mallard (<i>Anas platyrhynchos</i>), or an upland game bird species, preferably the bobwhite (<i>Colinus virginianus</i>).	Bobwhite quail
Age at beginning of test: At least 16 weeks old.	18 weeks
Supplier	Top Flight Quail Farm, Belvidere, New Jersey
Acclimation period: At least 15 days.	4 weeks

Comments: All birds appeared to be in good health at test initiation.

B. Test System: Batteries of pens (78 x 51 x 20 to 25 cm)

Guideline Criteria	Reported Information
Pen facilities adequate?	Yes
Photoperiod: 10-hr light : 14-hr dark is recommended.	8-hours light and 16-hour darkness
Diet was nutritious and appropriate for species?	Yes
Feed withheld at least 15 hours prior to dosing?	Yes

Comments:

C. Test Design:

Guideline Criteria	Reported Information
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Range finding test?	Not Reported
Definitive Test Nominal concentrations: At least five, in a geometric scale, unless LD ₅₀ > 2000 mg AI / kg.	5 nominal concentrations: 292, 486, 810, 1350, and 2250 mg/kg
Controls: water control or vehicle control (if vehicle is used)	deionized water control
Number of birds per group: 10 (strongly recommended)	10 (five males and five females)
Vehicle: Distilled water, corn oil, propylene glycol, 1% carboxymethylcellulose, or gum arabic.	deionized water
Amount of vehicle per body weight: Constant volume/weight % of body weight, not to exceed 1% (1ml/100g).	N/A
Observations period: At least 14 days.	14 days

Comments:

10. **REPORTED RESULTS:**

Guideline Criteria	Reported Information
Individual body weights measured at beginning of test, on day 14 and at end of test if extended beyond 14 days?	day 0, 3, 7, and 14
Mean feed consumption measured at beginning of test, on day 14, and at end of test if extended beyond 14 days?	Yes, day 0-3, 4-7 and 8-14

Guideline Criteria	Reported Information
Control Mortality: Not more than 10%	0%
Raw data included?	Yes
Signs of toxicity (if any) were described?	No sign of toxic effects

Mortality:

Nominal Dosage (mg/kg)	Control	292	486	810	1350	2250
Measured Dosage (mg/kg)	N/A	N/A	N/A	N/A	N/A	N/A
No. dead / no. exposed	0	0	0	0	0	0

Other Significant Results: N/A

Reported Statistical Results: The 14-day study indicates the LC₅₀ to be greater than 2250 mg/kg based on visual inspection. There was no mortality in the control or test group.

Statistical Method: Stephan's

LD₅₀: >2250 mg/kg 95% C.L.: N/A mg/kg

NOEL: 2250 mg/kg Probit Slope: N/A

Comments:

11. Verification of Statistical Results:

Statistical Method: Visual inspection due lack of mortality

LD₅₀: >2250 mg/kg 95% C.L.: N/A mg/kg

NOEL: 2250 mg/kg Probit Slope: N/A

Adjusted for active ingredient: Adjustment was made for LD₅₀ value only.

LD₅₀: > 18 mg ai/kg 95% C.L.: N/A mg/kg

NOEL: 18 mg ai/kg

12. GUIDELINE DEVIATIONS:

1. Photoperiod was 8 hours per day instead of 10 hours per day.

13. COMPLETION OF ONE-LINER FOR STUDY: Yes 9-6-94