

MRID No.: 433129-02

DATA EVALUATION RECORD
WATERFOWL DIETARY LC₅₀ TEST
GUIDELINE 71-2(B)

1. **CHEMICAL:** Common name: Algaesil, MRID No.: 433129-02
2. **TEST MATERIAL:** Algaesil, Wildlife # 2652, Purity: 0.8% (colloidal silver as elemental)
3. **CITATION:** Campbell, Susan M. & Beavers, Joann B.
Laboratory: Wildlife International Ltd.
Sponsor: Mason Chemicals
Laboratory Report ID: 371-101
Any Other Study ID: MRID No. 433129-02
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. **CONCLUSION:** This study indicates algaesil is practically nontoxic to mallard duckling with an LC₅₀ > 5620 ppm. This study does fulfill the guideline requirements for an avian dietary LC₅₀ study for a formulated product.
7. **ADEQUACY OF THE STUDY:** Core for a formulated product.
8. **RATIONAL FOR CLASSIFICATION:** This study was conducted with a formulated product.



9. MATERIALS AND METHODS:A. Test Organisms:

Guideline Criteria	Reported Information
Species: A wild waterfowl species, preferably the mallard (<i>Anas platyrhynchos</i>).	mallard duckling
Age at beginning of test: 5-10 days old (preferably 5).	10 days old
Supplier	Whistling Wings, Hanover, Illinois
Acclimation period	8 days

Comments: N/A

B. Test System:

Guideline Criteria	Reported Information
Pen size: about 70 x 100 x 24 cm	72 x 90 x 25.5 cm
Brooder temperature: about 35°C (95°F)	31 ± 1°C
Room temperature: 22-27°C (71-81°F)	26.6 ± 1.2°C
Relative humidity: 30-80%	78% ± 12%
Adequate ventilation?	Not Reported
Photoperiod Minimum of 14 h of light.	16 hours light and 8 hours darkness
Diet: A commercial waterfowl feed.	Wildlife International bird starter

Comments:

none

C. Test Design:

Guideline Criteria	Reported Information
Range finding test?	Not Reported
Definitive Test Nominal concentrations: Four minimum, 5 or 6 strongly recommended, in a geometric scale, unless $LC_{50} > 5000$ ppm.	Yes, 5 concentrations: 562, 1000, 1780, 3160, and 5620 ppm

Guideline Criteria	Reported Information
Controls: Control group tested with diet containing the maximum amount of vehicle used in treated diets?	Yes
Number of birds per group: 10 (strongly recommended)	10
Vehicle: Distilled water, corn oil, propylene glycol, 1% carboxymethylcellulose, or gum arabic.	corn oil and acetone
Vehicle amount (% of diet by weight): Not more than 2%.	2% corn oil and acetone was allowed to volatilize
Test durations: 5 days with treated feed and at least 3 days observation with "clean" feed.	Yes
No mortality during last 72 hr of observations?	No mortality

Comments: none

10. REPORTED RESULTS:

Guideline Criteria	Reported Information
Body weights measured at beginning and end?	Yes
Estimated consumption per pen reported for pretreatment, treatment, and observation periods?	Yes
Control Mortality: Not more than 10%	none
Raw data included?	Yes
Signs of toxicity (if any) were described?	Yes

Mortality:

[illegible]

1000									0
1780									0
3160									0
5620									0

Other Significant Results: On day five, there was a slight reduction in body weight at 3160 ppm and 5620 ppm when compared to control.

Statistical Results:

Statistical Method: Stephan's probit analysis was intended but due to lack of mortality no calculations was necessary. LC_{50} value was determined by visual inspection.

LC_{50} : >5620 ppm 95% C.I.: N/A

NOEC: 1780 ppm Probit Slope: N/A

Comments: none

11. Verification of Statistical Results:

Statistical Method:

LC_{50} : >5620 ppm 95% C.I.: N/A

NOEC: 1780 ppm Probit Slope: N/A

Adjusted for active ingredient: Optional if % AI is over 80.

LC_{50} : > 44.96 ppm AI 95% C.I.: N/A

NOEC: 14.24 ppm AI

12. GUIDELINE DEVIATIONS:

1.

2.

13. COMPLETION OF ONE-LINER FOR STUDY: Yes 8-9-94