

US EPA ARCHIVE DOCUMENT

12-15-94

MRID No.: 159771

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

1. **CHEMICAL:** Nabam PC Code No.:014503

2. **TEST MATERIAL:** Nabam yellow liquid Purity: 30%

3. **CITATION**

Authors: Beavers, Joann B.
Title: Nabam: An Acute Oral Toxicity Study with the Bobwhite
Study Completion Date: February 3, 1986
Laboratory: Wildlife International, Maryland
Sponsor: ALCO Chemical Corporation
Laboratory Report ID: 211-103
MRID No.: 159771

4. **REVIEWED BY:** Conchi Rodríguez, Biologist EEB,EFED

Signature: *Conchi Rodriguez* Date: 12/15/94

5. **APPROVED BY:** Harry Craven, Supervisory Biologist EEB, EFED

Signature: *Harry T. Craven* Date: 12/15/94

6. **STUDY PARAMETERS**

Scientific Name of Test Organism: *Colinus virginianus*
Test Organisms Age/Size: Approximately 21 weeks
Definitive Study Duration: 14 days

7. **CONCLUSIONS:**

Results Synopsis

LD₅₀: >2250 mg ai/kg
NOEL: 292 mg ai/kg

8. **ADEQUACY OF THE STUDY**

A. **Classification:** Core

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9. **GUIDELINE DEVIATIONS:** No guideline deviations

10. **SUBMISSION PURPOSE:**

11. **MATERIALS AND METHODS**

A. Test Organisms

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>).	<i>Colinus virginianus</i>
Age at beginning of test: At least 16 weeks old.	Approximately 21 weeks
Supplier	Fritts' Quail Farm, Phillisburg, New Jersey
Acclimation period: At least 15 days.	21 days

B. Test System

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

C. Test Design

Guideline Criteria	Reported Information
Range finding test?	Not reported "dosages were established based upon known toxicity data"
Definitive Test Nominal concentrations: At least five, in a geometric scale, unless LD ₅₀ > 2000 mg ai / kg.	292, 486, 810, 1350, and 2250 mg/kg
Controls: Water control or vehicle control (if vehicle is used)	Diluent control used
Number of birds per group: 10 (strongly recommended)	10
Vehicle: Distilled water, corn oil, propylene glycol, 1% carboxymethylcellulose, or gum arabic.	Distilled water
Amount of vehicle per body weight: Constant volume/weight % of body weight, not to exceed 1% (1ml/100g).	0.8%
Observations period: At least 14 days.	14 days

12. REPORTED RESULTS

Guideline Criteria	Reported Information
Quality assurance and GLP compliance statements were included in the report?	Yes
Individual body weights measured at beginning of test, on day 14 and at end of test if extended beyond 14 days?	Yes
Mean feed consumption measured at beginning of test, on day 14, and at end of test if extended beyond 14 days?	Yes
Control Mortality: Not more than 10%	0%
Raw data included?	Yes
Signs of toxicity (if any) were described?	Yes, sign of toxicity were described.

Mortality

Nominal Dosage (mg/kg)	Control	296	486	810	1350	2250
Measured Dosage (mg/kg)	--	--	--	--	--	--
No. dead / no. exposed	0/10	0/10	0/10	0/10	0/10	0/10

Other Significant Results: Toxicity signs were the following:

At 292, 486 and 810 mg/kg there were no signs of toxicity.

At 1350 mg/kg: * regurgitation of one male after dosing
* ruffled appearance on one female (day 3)
* lethargy and ruffled appearance in one male (day 4 and 6)

At 2250 mg/kg: * lethargy and ruffled appearance all birds (Day 1 to 7)

At 486 mg/kg and higher there was a weight reduction trend or weight loss during the first 3 days.

At 810, 1350, and 2250 mg/kg there was reduction in feed consumption during the first 3 days.

Reported Statistical Results

Statistical Method: No Statistical Method Required

LD₅₀: > 2250 mg/kg

NOEL: 292 mg/kg based on effects on weight gain at 486 mg/kg

13. Verification of Statistical Results

No verification of statistical results is necessary.

14. **REVIEWER'S COMMENTS:** The study is scientifically sound and fulfill the guideline requirements for an Acute Avian Oral study. The LD50 is >2250 mg/kg. The NOEL is 292 mg/kg based on effects on weight gain at 486 mg/kg.