

US EPA ARCHIVE DOCUMENT

DATA EVALUATION RECORD
§ 71-2(A) -- Upland Game Bird DIETARY LC₅₀ TEST

1. **CHEMICAL:** Glyphosate Acid PC Code No.: 417300

2. **TEST MATERIAL:** Glyphosate acid Purity: 95.6%

3. **CITATION**

Authors: Johnson, Alison J. And Dawe, I. Suzanna
Title: Dietary LC50 To The Bobwhite Quail
Study Completion Date: February 3, 1997
Laboratory: Huntingdon Life Sciences Ltd.
Sponsor: Zeneca Ag Products
Laboratory Report ID: ISN 395963857

MRID No.: 443206-2128 ^{CEL} 3-3-00

4. **REVIEWED BY:** Curtis E. Laird, Fishery Biologist, EHB, EFED

Signature: *Curtis E. Laird* **Date:** 2-11-99

5. **APPROVED BY:** Tom A. Bailey, Chief, EHB, EFED

Signature: *Tom A. Bailey* **Date:** 2-17-99

6. **STUDY PARAMETERS**

Scientific Name of Test Organism: *Colinus virginicanus*
Age of Test Organisms at Test Initiation: 10 days old
Definitive Study Duration: Eight days

7. **CONCLUSIONS:** This study indicates glyphosate acid is practically nontoxic to bobwhite quail with an LC50 greater than 5,200 ppm. This study does fulfill the guideline requirements for an avian acute dietary LC50 study in support of registration.

Results Synopsis

LC₅₀: >5,200 ppm ai
 NOEL: 5,200 ppm ai

95% C.I.: N/A ppm ai
 Probit Slope: N/A

8. **ADEQUACY OF THE STUDY**

A. **Classification:** Core

B. **Rationale:** N/A

C. **Repairability:** N/A

9. **GUIDELINE DEVIATIONS**

Jan

1. None
10. **SUBMISSION PURPOSE:** This study is submitted in support of registration.
11. **MATERIALS AND METHODS**

A. Test Organisms

Guideline Criteria	Reported Information
Species: Upland Game bird species, preferably the Bobwhite Quail (<i>Colinus virginicanus</i>).	Yes
Age at beginning of test: 10-14 days old.	10 days
Supplier	Production flock, Cambridgeshire, England
Chicks appeared healthy and did not have excessive mortality before the test?	Yes
Acclimation period: As long as possible.	9 days

B. Test System

Guideline Criteria	Reported Information
Pen size: about 35 x 100 x 24 cm	80 X 50 X 60cm
Brooder temperature: about 35°C (95°F)	not given
Room temperature: 22-27°C (71-81°F)	25 to 27 degree C
Relative humidity: 30-80%	33%
Adequate ventilation?	Yes
Photoperiod Minimum of 14 h of light.	14 hours light/10 hours darkness

Guideline Criteria	Reported Information
Diet: A commercial diet for game birds.	Standard HRC chick diet

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.	5 levels
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.	Water
Vehicle amount (% of diet by weight): Not more than 2%	None
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

12. REPORTED RESULTS

Guideline Criteria	Reported Information
Quality assurance and GLP compliance statements were included in the report?	Yes
Body weights measured at beginning and end of study?	Yes
Estimated consumption per pen reported for pretreatment, treatment, and observation periods?	Yes
Control Mortality: Not more than 10%	0%
Raw data included?	Yes
Signs of toxicity (if any) were described?	No

Mortality

Conc. (ppm)		No. of Birds	Cumulative Number of Dead								
Nominal	Mean Measured		Day of Study								
			1	2	3	4	5	6	7	8	
Control	N/A	0	0	0	0	0	0	0	0	0	0
325	N/A	0	0	0	0	0	0	0	0	0	0
650	N/A	0	0	0	0	0	0	0	0	0	0
1300	N/A	0	0	0	0	0	0	0	0	0	0
2600	N/A	0	0	0	0	0	0	0	0	0	0
5200	N/A	0	0	0	0	0	0	0	0	0	0

Other Significant Results: N/A

Statistical Results:

Statistical Method: None due to lack of mortality data

LC₅₀: >5,200 ppm

95% C.I.: N/A ppm

DP Barcode: D249306

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NOEL: 5,200 ppm

Probit Slope: N/A

13. Verification of Statistical Results

Statistical Method: None due to lack of mortality

LC₅₀: >5,200 ppm

95% C.I.: N/A ppm

NOEL: 5,200 ppm

Probit Slope: N/A

Adjusted for active ingredient: (Optional if over 80% ai)

LC₅₀: No ppm ai

95% C.I.: No ppm ai

NOEL: No ppm ai

14. REVIEWER'S COMMENTS: This study indicates glyphosate acid is practically nontoxic to bobwhite quail with an LC50 greater than 5,200 ppm. This study does fulfill the guideline requirements in support of registration for an avian dietary LC50 study.