DP Barcode: D249306 MRID No.:443206-28

DATA EVALUATION RECORD
§ 71-2(A) -- Upland Game Bird DIETARY LC_{50} 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-~~27~~ 28 3-3-00 CEL

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
   LC_{50}: >5,200 ppm ai 95% C.I.: N/A ppm ai
   NOEL: 5,200 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**

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 (Colinus *virginicanus*).	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								
			Day of Study								
Nominal	Mean Measured		1	2	3	4	5	6	7	8
Control	N/A	0	0	0	0	0	0	0	0	0
325	N/A	0	0	0	0	0	0	0	0	0
650	N/A	0	0	0	0	0	0	0	0	0
1300	N/A	0	0	0	0	0	0	0	0	0
2600	N/A	0	0	0	0	0	0	0	0	0
5200	N/A	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

LC_{50}: >5,200 ppm 95% C.I.: N/A ppm

NOEL: 5,200 ppm Probit Slope: N/A

13. **Verification of Statistical Results**

Statistical Method: None due to lack of mortality

LC_{50}: >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)

LC_{50}: 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.