2 6.12.00

MRID No. 443735-07

DATA EVALUATION RECORD
§ 71-2 - UPLAND GAME BIRD DIETARY LC_{50} TEST

1. **CHEMICAL:** Mesotrione PC Code No.: 122990

2. **TEST MATERIAL:** ZA1296 Purity: 96.8%

3. **CITATION:**

Authors:	M. Rodgers, D.M. Cameron, and K. Maltby
Title:	ZA1296: Subacute Dietary Toxicity (LC_{50}) to the Bobwhite Quail
Study Completion Date:	November 29, 1995
Laboratory:	Huntingdon Life Sciences Ltd., Huntingdon, Cambridgeshire, England
Laboratory Report ID:	ISN 345/951542
Sponsor:	ZENECA Ag Products, Wilmington, DE
MRID No.:	443735-07
DP Barcode:	D245475

4. **REVIEWED BY:** Max Feken, M.S., Environmental Toxicologist, Golder Associates Inc.

Signature: [signature] **Date:** 8/25/98

APPROVED BY: Pim Kosalwat, Ph.D., Senior Scientist, Golder Associates Inc.

Signature: P. Kosalwat **Date:** 8/25/98

5. **APPROVED BY:**

Signature: [signature] **Date:** 6/12/00

6. **STUDY PARAMETERS:**

Scientific Name of Test Organism: *Colinus virginianus*
Age of Test Organisms at Test Initiation: 10 days
Definitive Study Duration: 8 days

7. **CONCLUSIONS:** This study is scientifically sound and fulfills the guideline requirements for an acute dietary toxicity test using the bobwhite. The LC_{50} was >5,200 ppm (>4770 ppm mean measured concentration), which classifies ZA1296 as practically non-toxic to the bobwhite quail.

(1)

Results Synopsis:

LC_{50}: >5200 ppm nominal
>4770 ppm mean measured
95% C.I.: N/A

NOEC: 5200 ppm nominal
4770 ppm mean measured
Probit Slope: N/A

8. **ADEQUACY OF THE STUDY:**

A. Classification: Core

B. Rationale: N/A

C. Repairability: N/A

9. **GUIDELINE DEVIATIONS:** The brooder temperature was not reported.

10. **SUBMISSION PURPOSE:**

11. **MATERIALS AND METHODS:**

A. Test Organisms

Guideline Criteria	Reported Information
Species: An upland game bird species, preferably the bobwhite (*Colinus virginianus*).	*Colinus virginianus*
Age at beginning of test: 10-14 days old.	10 days old
Supplier	D.R. and R.E. Wise, Monkfield, Bourn, Cambridgeshire, UK
Chicks appeared healthy and did not have excessive mortality before the test?	Yes
Acclimation period: As long as possible.	3 days

B. Test System

Guideline Criteria	Reported Information
Pen size: about 35 x 100 x 24 cm	80 x 50 x 60 cm
Brooder temperature: about 35°C (95°F)	Not reported
Room temperature: 22-27°C (71-81°F)	Mean Min. 22°C Mean Max. 25°C
Relative humidity: 30-80%	Mean relative humidity of 47%
Adequate ventilation?	Yes
Photoperiod Minimum of 14 h of light.	14 hours of light per day
Diet: A commercial gamebird diet.	Standard HRC diet supplied by Parker Brothers Ltd.

C. Test Design

Guideline Criteria	Reported Information
Range finding test?	No
Definitive Test **Nominal concentrations:** Four minimum, 5 or 6 strongly recommended, in a geometric scale, unless LC_{50} > 5000 ppm.	163, 325, 650, 1300, 2600, and 5200 ppm, not corrected for purity.
Controls: Control group tested with diet containing the maximum amount of vehicle used in treated diets?	2 control groups, no vehicle
Number of birds per group: 10 (strongly recommended)	10 birds per group
Vehicle: Distilled water, corn oil, propylene glycol, 1% carboxymethylcellulose, or gum arabic.	None

Guideline Criteria	Reported Information
Vehicle amount (% of diet by weight): Not more than 2%	N/A
Test durations: 5 days with treated feed and at least 3 days observation with "clean" feed.	Five day exposure period followed by a 3-day observation period
No mortality during last 72 hr of observations?	Yes

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, group body weights were measured at 0, 5, and 8 days.
Estimated consumption per pen reported for pretreatment, treatment, and observation periods?	Yes, daily from test days 1-5, and 6-8
Control Mortality: Not more than 10%	0%
Raw data included?	Yes
Signs of toxicity (if any) were described?	Yes

Mortality

Conc. (ppm)		No. of Birds	Cumulative Number of Dead			
			Day of Study			
Nominal	Measured		4	6	7	8
Control	<12	20	0	0	0	0
163	152	10	0	0	0	1
325	304	10	1	4	5	5
650	641	10	0	0	1	1
1300	1210	10	0	0	0	0
2600	2410	10	0	0	0	0
5200	4770	10	0	0	0	0

Other Significant Results: There were no signs of toxicity observed in any of the birds at any concentration. Body weight gain and feed consumption values for all treatment groups were similar to those of the control groups. The mortalities found in this study were attributed to pecking by other birds. These mortalities were not considered treatment related since no mortalities were observed in the three highest treatment concentrations. All necropsy examinations were unremarkable.

Statistical Results

Statistical Method: Visual interpretation (based on nominal concentrations)

LC_{50}: >5200 ppm 95% C.I.: N/A

NOEC: 5200 ppm Probit Slope: N/A

13. VERIFICATION OF STATISTICAL RESULTS:

Statistical Method: Visual interpretation (based on measured concentrations)

LC_{50}: >4770 ppm 95% C.I.: N/A

NOEC: 4770 ppm Probit Slope: N/A

14. **REVIEWER'S COMMENTS:** This study is scientifically sound and fulfills the guideline requirements for an acute dietary toxicity test using the bobwhite. The LC_{50} was >5200 ppm (>4770 ppm mean measured concentration), which classifies ZA1296 as practically non-toxic to the bobwhite quail. The NOEC was 4770 ppm, based on the lack of treatment related effects at any treatment level. The study is classified as **Core.**