

US EPA ARCHIVE DOCUMENT

1-27-97



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Isoxaflutole Herbicide Degradate. Bobwhite Quail LC50 study. DP Barcode D224163. Sponsor: Rhone-Poulenc Ag Company. PRAT Case No. 286745. (The PC Code for Isoxaflutole parent is 123000).

FROM: Robert K. Hitch, Ecologist, *Robert K. Hitch Jun 17 97*  
Environmental Risk Characterization Branch  
Environmental Fate and Effects Division (7507C)

THRU: Dr. F. Nicholas Mastrota, Biologist, *F. Nicholas Mastrota*  
Peer Reviewer, ERCB  
Environmental Fate and Effects Division *1-27-97*

THRU: Elizabeth Leovey, Ph.D. Chief, *[Signature]*  
Environmental Risk Characterization Branch  
Environmental Fate and Effects Division. *12/97*

TO: Joanne Miller (PM 23) or Danniell Kenny  
PM Team Reviewer  
Reregistration Division (7505C)

Rhone-Poulenc Corporation has submitted an 8-day dietary LC50 test with the bobwhite quail FIFRA 71-2(A) with RPA 202248 degradate of isoxaflutole. The study is judged "Core" as it determines that the LC50 is greater than 5200 ppm a.i. A Data Evaluation Record (DER) is attached and the citation for the study is as follows:

M. Rodgers (Study Director). 1995. Subacute dietary toxicity (LC50) to the bobwhite quail. Huntingdon Life Sciences Ltd. Lab Report no. RNP 479/9525517.

Attachment: Data Evaluation Record for Bowwhite Quail Study.

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**DATA EVALUATION RECORD**  
**§ 71-2(A) -- UPLAND GAME BIRD DIETARY LC<sub>50</sub> TEST**

1. **CHEMICAL:** RPA 202248                      **PC Code No.:** None. The PC code  
for isoxaflutole  
is 123000

Hydrolysis degradate of  
Isoxalutole herbicide. RPA 202248 is Isoxaflutole with the  
isoxazole ring opened.

2. **TEST MATERIAL:** RPA 202248                      **Purity:** 99.9%

3. **CITATION**

**Authors:** Study Director: M. Rodgers.

**Title:** Subacute dietary toxicity (LC50) to the  
bobwhite quail.

**Study Completion Date:** 8 December 1995.

**Laboratory:** Huntingdon Life Sciences Ltd.

**Sponsor:** Rhone Poulenc Ag Company

**Laboratory Report ID:** RNP 479/952517

**MRID No.:** 439403-02

4. **REVIEWED BY:** Robert K. Hitch, Ecologist,  
Environmental Risk Characterization Branch  
Environmental Fate and Effects Division

Sign: Robert K. Hitch Date: Jan 20 1997

5. **APPROVED BY:** Dr. F. Nicholas Mastrota, Biologist  
Peer Reviewer  
Environmental Risk Characterization Branch

Sign: F. Nicholas Mastrota Date: Jan. 21, 1997

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:**

**Results Synopsis**

LC<sub>50</sub>: >5200 ppm ai

NOEL: 5200 ppm ai

95% C.I.: Not Appropriate

Probit Slope: Not Determined

**8. ADEQUACY OF THE STUDY**

**A. Classification:** Core.

**B. Rationale:** It was determined that the LC50 exceeds 5200 ppm. FIFRA Subdivision E does not normally require testing above 5000 ppm a.i.

**C. Repairability:** N. A.

**9. GUIDELINE DEVIATIONS**

None.

**10. SUBMISSION PURPOSE:****11. MATERIALS AND METHODS****A. Test Organisms**

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

**B. Test System**

Guideline Criteria	Reported Information
<b>Pen size:</b> about 35 x 100 x 24 cm.	50 x 80 x 60 cm
<b>Brooder temperature:</b> about 35°C (95°F)	NA
<b>Room temperature:</b> 22-27°C (71-81°F)	26-28 Degrees C.
<b>Relative humidity:</b> 30-80%	63%
<b>Adequate ventilation?</b>	Yes
<b>Photoperiod</b> Minimum of 14 h of light.	14 h of light
<b>Diet:</b> A commercial diet for game birds.	Standard HRC (Huntington Research Center) Chick Feed

**C. Test Design**

Guideline Criteria	Reported Information
<b>Range finding test?</b>	Not reported
<b>Definitive Test</b> <b>Nominal concentrations:</b> Four minimum, 5 or 6 strongly recommended, in a geometric scale, unless $LC_{50} > 5000$ ppm.	6 concentrations
<b>Controls:</b> Control group tested with diet containing the maximum amount of vehicle used in treated diets?	No vehicle was utilized.
<b>Number of birds per group:</b> 10 (strongly recommended)	10

Guideline Criteria	Reported Information
<b>Vehicle:</b> Distilled water, corn oil, propylene glycol, 1% carboxymethylcellulose, or gum arabic.	None
<b>Vehicle amount (% of diet by weight):</b> Not more than 2%	NA
<b>Test durations:</b> 5 days with treated feed and at least 3 days observation with "clean" feed.	Five Days with treated feed and 3 days with clean feed
<b>No mortality during last 72 hr of observations?</b>	No mortality observed during this period.

12. REPORTED RESULTS

Guideline Criteria	Reported Information
<b>Quality assurance and GLP compliance statements were included in the report?</b>	Yes
<b>Body weights measured at beginning and end of study?</b>	Yes
<b>Estimated consumption per pen reported for pretreatment, treatment, and observation periods?</b>	Yes
<b>Control Mortality:</b> Not more than 10%	0 %
<b>Raw data included?</b>	Yes
<b>Signs of toxicity (if any) were described?</b>	Yes

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		10	0	0	0	0	0	0	0	0	0
Control		10	0	0	0	0	0	0	0	0	0
163		10	0	0	0	0	0	0	0	0	0
325		10	0	0	0	0	0	0	0	0	0
650		10	0	0	0	0	0	0	0	0	0
1300		10	0	0	0	0	0	0	0	0	0
2600		10	0	0	0	0	0	0	0	0	0
5200		10	0	0	0	0	0	0	0	0	0

Other Significant Results:

Statistical Results

Statistical Method:

LC<sub>50</sub>: >5200 ppm

95% C.I.: Not Appropriate

NOEL: 5200 ppm

Probit Slope: Not Appropriate

**13. Verification of Statistical Results**

Statistical Method: No sign of mortality occurred at any dose including 5200 ppm, the highest.

LC<sub>50</sub>: >5200 ppm

95% C.I.: Not Appropriate

NOEL: 5200 ppm

Probit Slope: Not Appropriate

- 14. REVIEWER'S COMMENTS:** This study is judged to be core and acceptable for the purposes of filling FIFRA guideline 71-2 with an upland game bird.