

US EPA ARCHIVE DOCUMENT

DATA EVALUATION RECORD
§ 71-2(B) -- WATERFOWL DIETARY LC₅₀ TEST

1. **CHEMICAL:** Azoxystrobin PC Code No.: 128810

2. **TEST MATERIAL:** ICIA5504 Purity: 96.2%

3. **CITATION**

Author: Barbara Hakin, Alison J. Johnson, Alan Anderson, and I. Suzanne Dawe

Title: ICIA5504: Subacute Dietary Toxicity (LC₅₀) to Mallard Duck

Study Completion Date: November 25, 1992

Laboratory: Huntingdon Research Centre Ltd.,
Cambridgeshire, England

Laboratory Report ID: ISN 295/920941

Sponsor: Zeneca AG Products, Zeneca Inc.,
Wilmington, DE

MRID No.: 436781-11

4. **REVIEWED BY:**

William Erickson
Biologist
EEB/EFED/EPA

Signature: *W. Erickson*

Date: *4/01/96*

5. **APPROVED BY:**

Harry Craven
Section Head 4
EEB/EFED/EPA

Signature: *H. Craven*

Date: *6/21/96*

6. **STUDY PARAMETERS:**

Scientific Name of Test Organism: *Anas platyrhynchos*

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 requirement for an acute dietary toxicity test using mallard ducks. The LC₅₀ was greater than 5200 ppm, which classifies azoxystrobin as practically nontoxic to the mallard duck.

Results Synopsis:

LC₅₀: >5200 ppm

95% C.I.: N/A

NOEL: 2600 ppm

Probit Slope: N/A

8. **ADEQUACY OF THE STUDY:** Core

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DP Barcode:

MRID No.: 436781-11

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4. **REVIEWED BY:** Barbara H. Herbert, B.S., Associate Scientist,
KBN Engineering and Applied Sciences, Inc.

Signature: *Barbara H. Herbert*

Date: 10-19-95

APPROVED BY: Pim Kosalwat, Ph.D., Senior Scientist,
KBN Engineering and Applied Sciences, Inc.

Signature: *P. Kosalwat*

Date: 10/19/95

5. **APPROVED BY:** (Name), Head of Section (#), EEB, EFED

Signature:

Date:

6. **STUDY PARAMETERS**

Scientific Name of Test Organism: *Anas platyrhynchos*

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 mallard ducks. The LC₅₀ was greater than 5200 ppm, which classifies sulfentrazone as practically non-toxic to the mallard duck. The NOEC was determined to be 2600 ppm.

Results Synopsis

LC₅₀: >5200 ppm

NOEL: 2600 ppm

95% C.I.: N/A

Probit Slope: N/A

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9. **GUIDELINE DEVIATIONS:** Only 12 hours of light was provided per day.
10. **SUBMISSION PURPOSE:** New Chemical.
11. **MATERIALS AND METHODS:**

A. Test Organisms

Guideline Criteria	Reported Information
Species: A wild waterfowl species, preferably the mallard duck (<i>Anas platyrhynchos</i>).	<i>Anas platyrhynchos</i>
Age at beginning of test: 5-10 days old (preferably 5).	10 days old
Supplier	The Country Game Farms, Ashford, Kent, England
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 70 x 100 x 24 cm	180 cm x 122 cm
Brooder temperature: about 35°C (95°F)	Not reported
Room temperature: 22-27°C (71-81°F)	Mean daily temperature of 25°C to 29°C
Relative humidity: 30-80%	76%
Adequate ventilation?	Yes
Photoperiod Minimum of 14 h of light.	12 hours light and 12 hours darkness

Guideline Criteria	Reported Information
Diet: A commercial waterfowl feed.	Standard HRC chick diet, no antibiotics or other growth promoters.

C. Test Design

Guideline Criteria	Reported Information
Range finding test?	None Reported
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
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 used
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.	Yes
No mortality during last 72 hr of observations?	No mortality observed during last 72 hr

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, by group
Estimated consumption per pen reported for pretreatment, treatment, and observation periods?	Yes
Control Mortality: Not more than 10%	No mortality
Raw data included?	Yes
Signs of toxicity (if any) were described?	Yes, none observed

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.D.	20	0	0	0	0	0	0	0	0
163	173	10	0	0	0	0	0	0	0	0
325	330	10	0	0	0	0	0	0	0	0
650	643	10	0	0	0	0	0	0	0	0
1300	1290	10	0	0	0	0	0	0	0	0
2600	2550	10	0	0	0	0	0	0	0	0
5200	5290	10	0	0	0	0	0	0	0	0

N.D. = None detected.

Other Significant Results: No abnormal findings were noted on the 20 birds (10 controls, 10 from the 5200 ppm group) examined post-mortem macroscopically. Feed consumption values were similar between treatment and control groups. Over the treatment

period, body weight increase was reduced in the highest treatment group (5200 ppm) when compared to the control groups; however it was comparable to the controls during the post treatment period.

Statistical Results

Statistical Method: None

LC₅₀: >5200 ppm 95% C.I.: N/A

NOEL: 2600 ppm Probit Slope: N/A

13. VERIFICATION OF STATISTICAL RESULTS:

Statistical Method: visual inspection of data

LC₅₀: >5200 ppm 95% C.I.: N/A

NOEL: 2600 ppm Probit Slope: N/A

14. REVIEWER'S COMMENTS: This study is scientifically sound and fulfills the guideline requirement for an acute dietary toxicity test using mallard duck. The LC₅₀ was greater than 5200 ppm, which classifies azoxystrobin as practically non-toxic to the mallard duck.