

US EPA ARCHIVE DOCUMENT

**DATA EVALUATION RECORD
INVERTEBRATE TOXICITY TEST**

- 1. **CHEMICAL:** Azoxystrobin (128810)
- 2. **TEST MATERIAL:** Formulation; 23.7% w/v suspension concentrate
- 3. **CITATION:**

Authors: Yearsdon, H.A. and L.C. Farrelly
 Title: ICIA5504: Investigation into the toxicity of a 250 g l⁻¹ SC formulation to the carabid beetle *Poecilus cupreus*.
 Date: 1994
 Laboratory: Zeneca Agrochemicals, Jealotts Hill Research Station, Bracknell, Berkshire, UK
 Lab. Report #: 94JH151
 Sponsor: Zeneca Agricultural Products, Wilmington, DE
 MRID No.: 436781-69

4. **REVIEWED BY:**

William Erickson
 Biologist
 EEB/EFED

Signature:

W. Erickson

Date:

4/04/96

5. **APPROVED BY:**

Harry Craven
 Section Head 4
 EEB/EFED

Signature:

H. T. Craven
6/21/96

Date:

6. **STUDY PARAMETERS/RESULTS SYNOPSIS:**

Age/size of Test Organism: not specified
 Study Duration: 14 days
 Dosage: 0.22 lb ai/acre
 Significant effects: none

7. **CONCLUSIONS:** The study is scientifically sound.

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

9. **MAJOR GUIDELINE DEVIATIONS:** Not a guideline study.

10. **SUBMISSION PURPOSE:** New chemical.

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11. MATERIALS AND METHODS:

Test Organism:

Guideline Criteria	Reported Information
Species	carabid beetle (<i>Poecilus cupreus</i>)
Age	not specified
No. per rep.	6 (3 males, 3 females)

Test System:

Guideline Criteria	Reported Information
Site	laboratory
Application equipment	calibrated hydraulic track-sprayer fitted with a single Teejet
Test cages	plastic boxes (18 x 12 x 6 cm) filled 1-cm deep with air-dried quartz sand; lid had hole covered with 2-mm nylon mesh
Water content of sand	moistened to 70% of its maximum water-holding capacity by adding deionized water
Temperature	19-21°C
Relative humidity	42-72%
Photoperiod	16 h light/8 h dark

Test Design:

Guideline Criteria	Reported Information
Duration	14 days
Treatment Groups	control (deionized water), azoxystrobin (250 g ai/ha), and a toxic standard (dimethoate, 400 g ai/ha)

Guideline Criteria	Reported Information
Test procedure	immediately before spraying, water capacity was restored to 70%, food (1 blowfly larva per beetle) was added, and any beetles that had buried themselves were returned to the surface
No. replicates	5

*0.22 lb ai/acre

12. REPORTED RESULTS:

General Results:

Guideline Criteria	Reported Information
Quality assurance and GLP compliance statements were included in the report?	yes
Raw data included?	yes

Mortality and Knockdown Effects: Visual assessments were made twice on treatment day and at 24 h, 48 h, and every two days thereafter. Beetles were assessed according to the following five criteria: healthy; moderate knockdown (poor coordination of movement); severe knockdown (little movement); dead; or not visible (condition not assessed). All treated beetles (except some treated with dimethoate as a toxic standard) survived and were assessed as being healthy (i.e., no knockdown) through the duration of the test.

Feeding activity also was assessed at two-day intervals for the first 10 days and at termination of the study. No clear differences in feeding activity were recorded (see table below).

Days after treatment	% larvae eaten	
	control (deionized water)	azoxystrobin (0.22 lb ai/acre)
2	70	73
4	83	80
6	60	70

8	90	87
10	80	90
14	83	80

Statistical analysis: None.

Conclusions: "According to the IOBC Classification Scheme, ICIA5504, formulated as a 250 g l⁻¹ SC and applied at a nominal rate of 250 g ai ha⁻¹ is classified as "Harmless" (Category 1, <30% mortality) to *Poecilus cupreus*."

13. **REVIEWER'S DISCUSSION/CONCLUSIONS:** The study is scientifically sound. At an application rate of 0.22 lb ai/acre, azoxystrobin had no apparent adverse impact on carabid beetles.