5-4-89

DATA EVALUATION RECORD

1. Chemical: Clethodim, RE-45601

2. Test Material: Technical, 87.9%

3. Study Type: Honey bee acute contact LD50

Species tested: Apis mellifera

4. Study ID: Atkins, E.L. 1986. Bee Adult Toxicity Dusting Test (BATDT) Evaluating the Comparative Acute Contact Toxicity of RE-45601; 9433-16, 87.9% Technical (Select) to Honey Bee Worker Adults. Prepared by Dept. of Entomology, Univ. of California, Riverside, CA. Submitted by Chevron Chemical Co., Richmond, CA. EPA Acc. No. 409745-32.

5. Reviewed By:

Allen W. Vaughan
Entomologist
EEB/HED

Signature: Allen W. Vaughan
Date: 5.4.89

6. Approved By

Norman J. Cook
Supervisory Biologist
EEB/HED

Signature: Norman J. Cook
Date: 5.4.89

7. Conclusions:

This study is scientifically sound, and shows clethodim to be nontoxic to honey bees at the highest dosage tested (100 ug/bee). In an acute contact test, the LD50 was determined to be > 100 micrograms per bee. This study fulfills the guideline requirement for an acute contact toxicity test on honey bees.

8. Recommendations: N/A

9. Background: This study was submitted in support of Registration.

10. Discussion of Individual Tests: N/A

11. Materials and Methods:

A. Test animals were worker bees obtained from research colonies.

Test System : Pesticide was blended with a nontoxic dust diluent, attayclay. Dust mixture was distributed over bees in cages using a bell jar duster. Treated bees were

transferred into clean holding cages and provided with 50% honey/water solution.

B. Design: Approximately 100 bees per dose level and control, divided into three reps.

C. Statistics: Due to very low mortality at all levels, no analysis was performed.

12. Reported Results:

The study authors found that clethodim was nontoxic to honey bees (acute contact LD50 > 100 ug per bee).

13. Study Authors' Conclusions/ QA Measures

48-hr. LD50 > 100 ug per bee (nontoxic).

14. Reviewer's Discussion and Interpretation of the Study

A. Test Procedures: Procedures were in accordance with protocols recommended in the guidelines. There were no problems in this regard.

B. Statistical Analysis: Due to very low mortality, no analysis was performed.

C. Discussion/Results: Clethodim is essentially nontoxic to honey bees exposed to direct application.

D. Adequacy of Study:

1. Classification: Core

2. Rationale: Guidelines protocol

3. Reparability: N/A

15. Completion of One-Liner for Study: N/A

16. CBI Appendix: N/A