DATA EVALUATION RECORD

1. Chemical : HOE 039866 (Basta)

20.425 %

2. Test Material : Formulated HOE 039866, 204.25 gm ai/L

3. Study Type : Honey bee acute contact LD_{50} and acute oral LD_{50}

   A. Test Species : Apis mellifera

4. Study ID : Davies, L.G., W.R. Carlile, and P. Bratby. 1985. Report on a laboratory investigation into the toxicity of formulated HOE 039866 (Basta) to honey bees (Apis mellifera). Tests performed by Department of Life Science, Trent Polytechnic, Nottingham, England. Submitted by Hoechst Celanese Corporation, Somerville, NJ. EPA Acc. No. 403456-54.

5. Reviewed By :

   Allen W. Vaughan
   Entomologist
   EEB/HED

   Signature: Allen W. Vaughan
   Date: 6-28-88

6. Approved by :

   Norman Cook
   Head, Section 2
   EEB/HED

   Signature: Norman J. Cook
   Date: 6-28-88

7. Conclusions : This study is scientifically sound, and shows HOE 039866 to be practically nontoxic to honey bees via contact and oral routes. In both cases, the LD_{50} was determined to be greater than 100 micrograms per bee. This study fulfills the guideline requirement for an acute contact toxicity test with honey bees.

8. Recommendations : N/A

9. Background : This study was submitted to support registration.

10. Discussion of Individual Test : N/A

11. Materials and Methods :

    A. Test Animals were worker bees.

    Test System - Contact Test
    One microliter of water solution, containing the test compound, was applied topically on the ventral thorax of the test bee with a microsyringe. After this procedure

the bees were returned to their cages and fed with a 20% aqueous sucrose solution. The cages were stored in a well-ventilated incubator at 25° C. and the treated bees were observed for mortality at 48 hours posttreatment.

Test System - Oral Test

A 0.2 ml volume of a solution of the appropriate concentration of the test material in 20% sucrose in water was presented to each group of 10 bees in a small glass tube inserted into the top cork. A 20% sucrose solution was fed to the bees in the control treatment. Cages were kept in an incubator at 25° C. When the bees had consumed 0.2 ml of the test material, they were given unlimited 20% sucrose water. Treated bees were observed for mortality during 24 hours.

B. Design - 30 bees per dose level, plus controls.

D. Statistics - N/A

12. Reported Results : The contact and oral LD_{50} values of HOE 039866 were more than 100 ug/bee. At this level, HOE 039866 did not induce significant mortality in honey bees.

13. Study Authors' Conclusions/Q.A. Measures :

Same as "Reported Results", above.

Q.A. measures were not reported.

14. Reviewer's Discussion and Interpretation of the Study :

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

B. Statistical Analysis : N/A

C. Discussion/Results : This study is scientifically sound, and shows HOE 039866 to be practically nontoxic to honey bees.

D. Adequacy of Study:

1. Classification: Core
2. Rationale : Guideline protocol for acute contact testing
3. Reparability : N/A

Core for a formulated product as per discussion with A. Vaughan on 11-19-87

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

16. CBI Appendix : N/A