

US EPA ARCHIVE DOCUMENT

CASE GS0178

GLYPHOSATE

PM 25 06/16/83

CHEM 103601

Isopropylamine glyphosate (N-(phosphon

BRANCH EEB DISC 40 TOPIC 05050045

FORMULATION 90 - FORMULATION NOT IDENTIFIED

FICHE/MASTER ID 00026089 CONTENT CAT 01

00026489

Fraser, W.D.; Jenkins, G. (1972) The Acute Contact and Oral Toxicities of CP67573 and Mon2139 to Worker Honey Bees. (Unpublished study received on unknown date under 4G1444; prepared by Huntingdon Research Centre, submitted by Monsanto Co., Washington, D.C.; CCL:093846-R)

SUBST. CLASS = S.

OTHER SUBJECT DESCRIPTORS

SEC: EEB -40-05051045

EEB -40-05050545

DIRECT RVN TIME = (NH) START-DATE 5/6/85 END DATE 5/6/85

REVIEWED BY: Allen W. Vaughan
TITLE: Entomologist
ORG: EEB/HED
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SIGNATURE:

Allen W. Vaughan

DATE: 5/20/85

APPROVED BY:
TITLE:
ORG:
LOC/TEL:

SIGNATURE:

DATE:

DATA EVALUATION RECORD

1. Chemical: CP 67573 (glyphosate)
N-(phosphonomethyl) glycine
2. Test Material: CP 67573 technical, % ai not reported;
MON 2139, formulated product containing
36% CP 67573.

3. Study Type: Honeybee acute contact LD₅₀

Species tested: Apis mellifera

4. Study ID: Fraser, W. D., and Jenkins, G. 1972. The acute contact and oral toxicities of CP 67573 and MON 2139 to worker honeybees. (Unpublished study received on unknown date under 4G1444; prepared by Huntingdon Research Centre, submitted by Monsanto Co., Washington, DC; CDL:093848-R). Fiche/Master ID 00026489.

5. Reviewed By: Allen W. Vaughan
Entomologist
EEB/HED

Signature: *Allen W. Vaughan*
Date: 5/20/85

6. Approved By: ⁴Norman Cook
Head, Section 2
EEB/HED

Signature: *Norman Cook*
Date: 5-21-85

7. Conclusions:

This study is scientifically sound. With a 48-hour contact LD₅₀ greater than 100 micrograms per bee for both technical and formulated product, CP 67573 is considered practically nontoxic to honeybees. Compounds were also nontoxic in oral application (LD₅₀'s greater than 100 micrograms per bee).

This study fulfills the guidelines requirement for an acute contact toxicity determination on honeybees with a technical pesticide.

8. Recommendations:

N/A

9. Background:

This study, an acute toxicity determination for honeybees using the technical pesticide, was identified by EEB as a relevant study for review in the reregistration guidance package (Registration Standard) for glyphosate.

10. Discussion of Individual Test:

N/A

11. Materials and Methods:

- A. Test animals were worker honeybees, Apis mellifera, obtained from an apiarist.

Test system - Tests were carried out at 26 to 27°C in nylon-coated wire mesh tubes 11.5 cm tall and 3.8 cm in diameter, closed by corks at both ends. Ten bees were placed in each cage and fed 20 percent sucrose from glass tubes inserted through the top cork.

- B. Dose:

Contact study: Topical application (1 microliter drop) in acetone.

Oral study: Feeding application (0.2 ml/10 bees) in 20 percent sucrose.

- C. Design:

Ten replicates of 10 bees each per treatment; 1 dose level (100 micrograms/bee) plus control.

- D. Statistics:

As mortality levels were very low in all treatments, no analyses were conducted.

12. Reported Results:

The study author found that 48-hour LD₅₀ values for both contact and oral application of technical material and formulated product were greater than 100 micrograms per bee.

13. Study Author's Conclusion/Q.A. Measures:

48-hour contact LD₅₀ > 100 micrograms/bee.
48-hour oral LD₅₀ > 100 micrograms/bee.

Procedures followed Working Document 13 produced by the U.K. Pesticide Safety Precautions Scheme.

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

Procedures were in accordance with guidelines protocols. There were no major problems in this regard.

B. Statistical Analysis:

Due to low mortality, no analysis was performed.

C. Discussion/Results:

With a 48-hour LD₅₀ > 100 micrograms per bee, CP 67573 is practically nontoxic to honeybees.

D. Adequacy of Study:

1. Classification: Core
2. Rationale: Guidelines; technical material test
3. Repairability: N/A

15. Completion of One-Liner for Study:

N/A

16. CBI Appendix:

N/A

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