RESIDUE CHEMISTRY BRANCH, HED
PETITION REVIEW QUICK FORM

FROM: Peter Gray Chemist
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

THRU: Charles L. Trichilo, Chief
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

TO: Hoyt Jamerson PM 43
Registration Division (TS-767)

and

Toxicology Branch
Hazard Evaluation Division (TS-769)

1. Petition No(s): 2E2760

2. Chemical(s): 1-naphthylethacetic acid

3. Tolerance Proposal (RAC's & Levels): 0.1 ppm in or on sweet cherries

4. Petitioner: IR-4 and Agricultural Experiment Stations of Oregon & Washington

5. Tolerance Expression: 1-naphthylethacetic acid

6. Established Tolerances: Listed under 40 CFR 180.155: olives and various fruits at levels 0.05-0.10 ppm

7. Letter(s) of Authorization (if applicable): FMC Corporation, 5/5/82, authorizes use of all FMC data on NAA in conjunction with petition submitted by IR-4

8. Formulation(s): Lignivist Concentrate, EPA Registration No. 379-2131 active ingredient - 5.45% NAA; inert - [redacted]

9. Inerts Status: Cleared under 40 CFR 180.1001(c)

BEST AVAILABLE COPY
10. Manufacturing Process:

11. Proposed Use(s): On mature cherries to prevent cracking of skin. Apply 20 grams NAA per acre (20 grams a.i./ha) to all parts of cherry tree, covering both leaves and fruit. Spray adjuvants such as wetting agents or spreader-stickers are not to be added. The proposed use is restricted to the Pacific Northwest. In treated orchards, a grazing restriction was not indicated in this petition, and the petition should be so amended before acceptance.

12. Plant Metabolism Data on: The metabolism of NAA in plants (citrus, olives, Coleus, wheat, peas and various weed varieties) has been fully discussed in previous reviews (PP # 7E1956, PP # 1E1099).

13. Plant Residues Comprised of: the parent molecule, 1-naphthaleneacetic acid, the aspartic acid conjugate, and the glucose conjugate.

14. Plant Metabolism Data Translatable Here: See #12

15. Nature of Plant Metabolism Data is not adequately defined. The Residue of Concern is: the parent molecule and both conjugated forms (as in #13).

16. Animal Metabolism Data on: Not applicable: no feed items associated with proposed use provided. A grazing restriction is added to label (see #11 above).
17. Animal Residues Comprised of: N/A

18. Animal Metabolism Data Applicable Here: N/A

19. Nature of Animal Metabolism Data is/is not adequately defined. The Residue of Concern is: N/A

20. Analytical Methods (reference or brief description): Part I entails extraction of residues from leaf tissue with ethanol, and hydrolyzing half the extract. Comparing the two samples yields percent conjugated N/A residues. In Part II, cherry tissue (treated 100 ppm N/A) is homogenized; residues are extracted with hexane, evaporated dry with nitrogen, and purified with basic alumina. This extract is passed through alumina column, washed with ether/chloroform, methylated with BF₃ and extracted with n-hexane. This extract is passed thru a silica gel column and analyzed by HPLC. Limit of detection = 0

21. Method Validation (crop recoveries): Recovery of N/A from cherries fortified with 0.04 or 0.05 ppm of N/A ranged from 80-95% with average of 91.7%

22. Method Validation (control values): "less than 0.04 ppm" control values were achieved

23. Residues Determined by Method: less than 0.04 ppm see #20 for method used and #13 for residues determined.

24. Enforcement Methodology is/is not available.
25. Residue Data (crop and residue range (ppm) from Proposed Use):

Crop: 1-naphthleneacetate acid applied to all parts of cherry tree (through coverage) in Corvallis, Oregon and Prosser, Washington, 1981. The application rates -- 1X dosage = 1 ppm, 2X dosage = 2 ppm. Samples of cherries collected 2hrs after application and at intervals of 15 and 30 days after application (PH1 range 2hr-30 days). Residue levels ranged from NDR to 0.04 ppm.

In 1969, data used to obtain Section 18 exemption showed no detectable residues of MTA (less than 0.05 ppm) in PH1 30 days.

26. Residues will not exceed proposed tolerance on (commodities) sweet cherries and will exceed proposed tolerance on (commodities) ________

27. Livestock Feeding Studies on (species): N/A

28. Animal Feeding Levels: N/A

29. Animal Residue Ingestion Levels from Proposed Crop Tolerance Levels (proposed tol. level x % in diet): N/A ppm in beef cattle; N/A ppm in dairy cattle/goats; N/A ppm in hogs; N/A ppm in horses; N/A ppm in sheep; N/A ppm in poultry.

30. Livestock Tolerances are Adequate in (species) N/A, but not adequate in ________
31. Livestock Tolerances Need to be Established: yes/no. If yes (species/levels): Not applicable.

32. Other Comments: The petitioner indicates that this use is restricted to the Pacific Northwest (since all residue data was obtained from this region). However, because of the low rate of application (2 gm a.i./A) and the resulting NDR (<0.04 ppm), we feel this

33. Other Considerations: Use pattern can be expanded to include the other cherry-producing regions (chiefly High 34th and 35th parallels).

34. Additional Data Needed:

35. Recommendations: We recommend for the proposed 0.1 ppm tolerance on sweet cherries, based on toxicological considerations permitting, provided a grazing restriction is added (as stated in #11).

36. Other Comments under Recommendations:

37. Compatibility with Codex Tolerances: No Codex residue limit for NAA on cherries.

cc: RF, Circ, Reviewer, Thompson, TOX, EEB, EFB, FDA, PP
Approved: Quick 01/15/82; Schmitt 10/15/82.