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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
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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-naphthaleneacetic 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-naphthaleneacetic acid
6. Established Tolerances: listed under 40 CFR 180.155 : olives and various fruits at levels 0.05 - 1.0 ppm
7. Letter(s) of Authorization (if applicable): FMC Corporation, 5/5/82, authorizes use of NAA FMC data on NAA in conjunction with petition submitted by IR-4.
8. Formulation(s): Lignostick Concentrate, EPA Registration no. 279-2131
active ingredient - 5.45% NAA ; inerts - [REDACTED]
9. Inerts Status: cleared under 40 CFR 180.1001(c)

INERT INGREDIENT INFORMATION IS NOT INCLUDED

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10. Manufacturing Process:

11. Proposed Use(s): On mature cherries to prevent cracking of skin. Apply 2.0 grams NAA per acre (2.0 grams a.i./p = 1. 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-naphthalenecetic acid, the aspartic acid conjugate and the glucose conjugate
14. Plant Metabolism Data Translatable Here: see #12
15. Nature of Plant Metabolism Data is 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 leafy tissue with etherol, and hydrolyzing half the extract. Comparing
the two samples yields percent conjugated NAA residues. In Part II, cherry tissue (treated
100 ppm NAA) is homogenized; residues are extracted with benzene, evaporated down with
nitrogen, and purified w/basic alumina. This extract is poured through alumina column,
washed with ether/chloroform, methylated w/ BF₃ and extracted with hexane. This
extracted is passed thru a silica gel column and analyzed by HPLC. Limit of detection = 0.01
21. Method Validation (crop recoveries): Recovery of NAA from
cherries fortified with 0.04 or 0.05 ppm of NAA ranged from
80-95% with average of 91%
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-naphthalenetic acid applied to all parts of cherry tree
(thorough coverage) in Corvallis, Oregon and Prosser, Washington

Exposure 1981. The application rates -- 1x dosage = 1ppm,
2x dosage = 2 ppm. Samples of cherries collected

Exposure: 2 hrs after application and at intervals of 15 and 30 days
after application (PHI range 2hr-30 days). Residue

Other Comments: levels ranged from NDR to 0.04 ppm

In 1969, data used to obtain Section 18 exemption showed
no detectable residues of NAA (less than 0.05 ppm) in PHI 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): N/A
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 ai/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 Mich 34% annual production)
34. Additional Data Needed: _____
35. Recommendations: We recommend for the proposed 0.1 ppm tolerance on sweet cherries, pending 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