

6-3-82

RESIDUE CHEMISTRY BRANCH, HED
PETITION REVIEW QUICK FORM

JUN 3 1982

FROM: M. Nelson, Chemist
Residue Chemistry Branch
HED (TS-769)mjn
5/28/82THRU: Charles L. Trichilo, Chief
Residue Chemistry Branch
HED (TS-769)TO: Minor Uses Officer
Registration Division (TS-767) and Toxicology Branch
HED (TS-769)

1. Petitioner: IR-4 and Ag. Exp. Stn. of CA
2. Petition No(s): 2E2668
3. Chemical(s): Chlorpyrifos
4. Tolerance Proposal (RAC's & Levels): figs @ 0.1 ppm
5. Tolerance Expression: Chlorpyrifos and its metabolite
3,5,6-trichloro-2-pyridinol
6. Established Tolerances: 40 CFR 180.242; 21 CFR 193.85 + 561.98
0.05-15 ppm various raw and processed commodities
7. Letter(s) of Authorization (if applicable):
Dow Chemical USA 3/17/82
8. Formulation(s): Lorsban® 4E Insecticide (EPA Reg. No.
464-448) 4 lbs ai/gal. EC formulation
9. Inerts Status: All cleared. 1 (ref. K. Arne review of
3/4/82, PP# 1F2575/FAP# 1H5322)

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10. Manufacturing Process: Described in A. Smith review of 5/3/74,
PP# 4F1445. Technical is $\geq 94\%$ pure, Impurities (≥ 11 in number)
are not expected to present a residue problem.
11. Proposed Use(s): Soil application with incorporation to fig orchard floor
during dormancy. One application (2 lbs ai/A) per year, 7 month
PHI. CA only.
12. Plant Metabolism Data on: Corn and beans (PP# 3F1306);
apples and soybeans (PP# 0F2281). Plant studies summarized
in K. Arne review of 3/4/82, PP# 1F2575/FAP# 1H5322.
13. Plant Residues Comprised of: parent; 3,5,6-trichloro-2-
pyridinol (TCP) and numerous other metabolites (see
discussion in cited K. Arne review)
14. Plant Metabolism Data Translatable Here: #12
15. Nature of Plant Metabolism Data (is)/is not adequately defined.
The Residue of Concern is: chlorpyrifos and TCP
16. Animal Metabolism Data on: rats and lactating cow (PP#
3F1306); lactating goat (PP# 0F2281)
17. Animal Residues Comprised of: parent, TCP, and various
other metabolites (see discussion in cited K. Arne
review)

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18. Animal Metabolism Data Applicable Here: # 16
-
19. Nature of Animal Metabolism Data (is)/is not adequately defined.
The Residue of Concern is: parent plus TCP
-
20. Analytical Methods (reference or brief description):
(1) parent - blender extraction with acid/mixed solvents mixture followed by reflux, Sweep co-distillation cleanup. Analysis by FID-GLC. Sensitivity = 0.01 ppm. In principle, similar to PAM II methodology for measuring chlorpyrifos residues.
(2) TCP - reflux extraction with alkaline methanol. Cleanup by liquid-liquid partitioning and Florisil column. Derivatization with N,O-bis-(trimethylsilyl)acetamide. Analysis by EC-GLC. Sensitivity = 0.1 ppm. In principle, similar to PAM II methodology for measuring TCP residues.
Note: parent and TCP are measured individually by separate methodologies.
21. Method Validation (crop recoveries): Using fortified dried figs:
chlorpyrifos, 0.01 ppm (90% recovery) and 0.05 ppm (88% recovery);
TCP, 0.1 and 0.25 ppm (80% recovery) and 0.5 ppm (84% recovery).
22. Method Validation (control values): Using untreated figs:
chlorpyrifos, < 0.01 ppm ; TCP, < 0.1 ppm
23. Residues Determined by Method: #20 for chlorpyrifos and
TCP
-
24. Enforcement Methodology (is)/is not available.

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25. Residue Data (crop and maximum residue from Proposed Use):

Crop (ppm range): dried figs NDR of chlorpyrifos

(<0.01 ppm) or TCP (<0.1 ppm)

IX rate (2 lbs ai/A) 7 1/2 mo. PHI

1977 crop year - CA

Crop (ppm range): _____

Other Comments: (1) NDR would be expected in fresh figs either;
(2) Storage stability studies with figs validate both chlorpyrifos
and TCP for the entire storage interval (1977 to 1979 or 1980).

26. Residues will not exceed proposed tolerance on (commodities)

figs (or dried figs)

and will exceed proposed tolerance on (commodities) _____

27. Livestock Feeding Studies on (species): N/A. RCB does
not consider figs to be a livestock feed, but see #32.

28. Animal Feeding Levels: N/A

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

30. Livestock Tolerances are Adequate in (species) N/A, _____

_____, but not adequate in _____

_____, _____, _____

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31. Livestock Tolerances Need to be Established: yes no If yes
(species/levels): N/A Already have been.
32. Other Comments: Re #27, we note meat, milk, poultry, and egg
tolerances are established in the event cull pigs were to be fed.
33. Other Considerations: _____
34. Additional Data Needed: _____
35. Recommendations: TOX considerations permitting, we recommend
in favor of the establishment of the proposed tolerance.
36. Other Comments under Recommendations: A geographic restriction
is unnecessary since ca 99% of commercial fig production is
in CA.
37. Compatibility with Codex Tolerances: N/A. See attachment.

cc: RF, Circ, Reviewer, Thompson, Tox, EEB, EFB, FDA, PP#

Approved: Quick 5/28/82
RM

Schmitt 5/28/82

ASL

INTERNATIONAL RESIDUE LIMIT STATUS

5/27/82

CHEMICAL chlorpyrifosPETITION NO 2E2668CCPR NO. 84Codex StatusNo Codex Proposal
Step 6 or aboveProposed U. S. Tolerancesfor 180.342Residue (if Step 9): ✓ChlorpyrifosCrop(s) Limit (mg/kg)none in this countryResidue: chlorpyrifos andits TCP* metaboliteCrop(s)Tol. (ppm)figs0.1CANADIAN LIMITResidue: includesmetab. 3,5,6-trichloro-2-pyridinolMEXICAN TOLERANCIAResidue: —CropLimit (ppm)none in this countryCropTolerancia (ppm)none in this countryNotes: 3,5,6-trichloro-2-pyridinol

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