

US EPA ARCHIVE DOCUMENT

RESIDUE CHEMISTRY BRANCH, HED
PETITION REVIEW QUICK FORM

MAR 24 1983

FROM: Maxie Jo Nelson, Chemist
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

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

TO: H. Jacoby, PM 21
Registration Division (TS-767)

and

Toxicology Branch
Hazard Evaluation Division (TS-769)

1. Petition No(s).: 3F2815
2. Chemical(s): Chlorothalonil (fungicide)
3. Tolerance Proposal (RAC's & Levels): peaches @ 3.0 ppm
(presently there is a peach tolerance @ 0.5 ppm)
4. Petitioner: Diamond Shamrock
5. Tolerance Expression: per Sec. 180.275: chlorothalonil plus
its metabolite 4-hydroxy-2,5,6-trichloroisophthalonitrile
6. Established Tolerances: 40 CFR 180.275 and 21 CFR 193.84
0.1 - 15 ppm various rac's
7. Letter(s) of Authorization (if applicable): N/A
8. Formulation(s): Bravo 500 (EPA Reg. No. 677-313), a flowable
formulation containing 40.4% ai (4.17 lbs/gal. or 500 g/l)
9. Inerts Status: All cleared under Sec. 180.1001 (ref. discussion
in 8/13/80 review, P. Errico, PP# 6F1799)

10. Manufacturing Process: Discussed in R. Schmitt review of 11/27/74, PP# 4E1502, Composition of technical chlorothalonil in PP# 1E2473. Impurities of concern: HCB, 0.05% max.; PCBN, 2.5% max.
11. Proposed Use(s): _____

Apply BRAVO 500 in sufficient water and with proper calibration to obtain uniform coverage of tree canopy. Application through ground equipment is recommended. When concentrate sprays are used or when treating non-bearing or immature trees, the lower rate of BRAVO 500 listed may be used. The following spray volumes are recommended as gallons of spray per acre:

CROP	SPRAY VOLUME (Gallons per Acre)	
	DILUTE	CONCENTRATE
Peach	300	50 to 150

See #32

for comment

CROP	DISEASE	BRAVO 500 RATE PER		APPLICATION DIRECTIONS
		ACRE	100 GALS*	
Peach	Scab	4 1/2 to 6 pts	1 1/2 to 2 pts	Make three applications at 10-14 day intervals beginning at shuck split/fall (first cover). Make additional cover applications at 10-14 day intervals for as long as conditions favor continued increase of scab. DO NOT apply to peaches within 45 days of harvest.

*Volumetric rates to be used only with full dilute spray volume specified on this label for tree and orchard crops.

12. Plant Metabolism Data on: various vegetable crops (corn, tomatoes, potatoes). See 11/17/76 review, W. Cox, PP# 6F1799 for discussion.
13. Plant Residues Comprised of: See #5. Plant residues are mainly surface in nature. Foliar deposits of chlorothalonil do not translocate, and there is no uptake from roots to aerial parts.
14. Plant Metabolism Data Translatable Here: #12
15. Nature of Plant Metabolism Data (is) is not adequately defined. The Residue of Concern is: see #5
16. Animal Metabolism Data on: rats, dogs, cows

17. Animal Residues Comprised of: see #5 (Note: The 4-hydroxy metabolite is a minor component of animal (and plant) residues, but is of concern because of its transfer potential to meat and milk).
18. Animal Metabolism Data Applicable Here: #16, but no feed items are associated with this petition providing #32 is imposed.
19. Nature of Animal Metabolism Data (is) is not adequately defined.
The Residue of Concern is: see #5
20. Analytical Methods (reference or brief description):
Residues of parent (DS-2787) and 4-OH metabolite (DS-3701) were simultaneously extracted with acidified acetone, vacuum filtered, selectively separated via liquid-liquid partitioning, the metabolite converted to its methyl ether derivative and cleaned-up via alumina column chromatography, the parent cleaned-up via Florisil column chromatography, and both separately determined by EC-GLC. By varying the eluents during the Florisil column clean-up, HCB and PCBN (contaminants) can also be isolated for determination by GLC.
Claimed sensitivity: <0.01 ppm DS-2787, <0.01 ppm DS-3701, <0.005 ppm PCBN, <0.003 ppm HCB.
21. Method Validation (crop ^{Peaches} recoveries): chemical/fortifications/recoveries (avg): DS-2787/0.02-5.13 ppm/80-116% (94%); DS-3701/0.02-1.0 ppm/67-102% (85%); PCBN/0.02-0.106 ppm/60-86% (77%); HCB/0.01-0.051 ppm/55-100% (71%).
22. Method Validation (control values): DS-2787: ND-0.11 ppm;
DS-3701, PCBN, HCB: all ND
23. Residues Determined by Method: DS-2787, DS-3701, PCBN, HCB (via #20)
24. Enforcement Methodology (is) is not available.

Field Studies

25. Residue Data (crop and residue range (ppm) from ~~Proposed Use~~):

Crop: Peaches <0.01-5.25 ppm chlorothalonil
ND- 0.02 ppm DS-3701
ND- trace HCB

Crop: ND- 0.033 ppm PCB N

Crop: 4.5-6 pts/A (IX range)
3-12 applications (as needed, allowed)
26-102 day PHI'S (45-day proposed)
8 states (LA, NC, GA, CA, VA, PA, OR, TX)
1982 crop year

Other Comments: Questionable if 3 ppm/45-day PHI would be adequate (cf 3.29 ppm/52-day PHI and 2.86 ppm/50-day PHI field data).

Recommend 3 ppm/60-day PHI or 5 ppm/45-day PHI be proposed.

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

peaches if recommendation in #25 is implemented
and will exceed proposed tolerance on (commodities) _____

27. Livestock Feeding Studies on (species): N/A. There will be no feed item to consider provided #32 is imposed.

28. Animal Feeding Levels: N/A

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

N/A

30. Livestock Tolerances are Adequate in (species) _____, but not adequate in _____

N/A

31. Livestock Tolerances Need to be Established: yes/no. If yes (species/levels): N/A
32. Other Comments: A grazing restriction should be added to the proposed labeling: "Do not allow livestock to graze treated areas."
33. Other Considerations: _____
34. Additional Data Needed: _____
35. Recommendations: Negative as proposed. Revised Sections B and maybe F needed. See #25 and #32 for details.
36. Other Comments under Recommendations: EFB review (C. Fletcher, 3/9/83) was negative. TOX's has not yet been received in RCB.
37. Compatibility with Codex Tolerances: No. Codex and Mexican tolerances are 25 ppm (shorter PHI), too high for our need.

cc: RF, Circ, Reviewer, Thompson, TOX, EEB, EFB, FDA, PP# 3F2815
 Approved: Quick RSQ 3/21/83 ; Schmitt frd 3/21/83

INTERNATIONAL RESIDUE LIMIT STATUS

3/5/85
7.2

CHEMICAL chlorothalonil

PETITION NO 3F2815

Nelson 3/7/83

CCPR NO. 81

Codex Status

Proposed U. S. Tolerances

No Codex Proposal
Step 6 or above

for 180.275

Residue (if Step 9): sum of chloro-
thalonil and 4-hydroxy, -2,5,6-trichloro-1,3-
benzene dicarbonitrile, expressed as chlorothalonil.

Residue: Chlorothalonil
and metabolite*

Crop(s) Limit (mg/kg)

Crop(s) Tol. (ppm)

peaches 25

peaches 3

CANADIAN LIMIT

MEXICAN TOLERANCIA

Residue: _____

Residue: _____

chlorothalonil (presumed)

Crop Limit (ppm)

Crop Tolerancia (ppm)

none (on peaches)

peaches 25

Notes: * 4-OH-2,5,6-trichloroisophthalonitrile