

US EPA ARCHIVE DOCUMENT

RESIDUE CHEMISTRY BRANCH, HED
PETITION REVIEW QUICK FORM

JUL 29 1982

FROM: Maxie Jo Nelson, Chemist
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Hazard Evaluation Division (TS-769) *mjn*

THRU: Charles L. Trichilo, Chief
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TO: R. Taylor, PM Team 25
Registration Division (TS-767)

and

Toxicology Branch
Hazard Evaluation Division (TS-769)

1. Petition No(s):: 2F2717
2. Chemical(s): oryzalin
3. Tolerance Proposal (RAC's & Levels): potatoes - 0.1 ppm
4. Petitioner: Elanco Products Co.
5. Tolerance Expression: oryzalin
(3,5-dinitro-N⁴, N⁴-dipropylsulfanilamide)
6. Established Tolerances: 40 CFR 180.304 0.05-0.1 ppm on
various rac's, including a 0.1 ppm temp. tol. on potatoes (exp 10/5/82)
7. Letter(s) of Authorization (if applicable): N/A
8. Formulation(s): Surflan[®] 75W (EPA Reg. No. 1471-96) and
Surflan[®] A.S. (EPA Reg. No. 1471-112), ^{an aqueous suspension} containing 4 lbs a/gal.
9. Inerts Status: cleared under 40 CFR 180.1001 for
both formulations

10. Manufacturing Process: See R. Loxanger review of 6/18/82, PP# 262612 for discussion. Technical is ca 97-99% pure.

(see L. Probst review of 6/19/80, PP# 062291), cont'd

11. Proposed Use(s): For weed control, apply alone or in tank-mix combo with Sencor 4 or 50W or DF or Lexone 4L or 50W or DF to the soil surface after planting and prior to crop emergence. Application rate is dependent on soil texture and entails 0.75-1 lb ai/A for Surflan and 0.25-0.33 lb ai/A for Sencor/Lexone (ie, metribuzin). Not for use on soils containing >5% organic matter.

Metribuzin is currently registered for postemergence use on potatoes at rates of 0.25-0.5 lb ai/A and for preemergence use at 0.5-1 lb ai/A.

Tolerances for metribuzin residues in or on potatoes (40 CFR 180.332; 21 CFR 193.25 and 561.41) are already established.

12. Plant Metabolism Data on: soybeans (PP# 261201 and 3F1347), wheat and barley (PP# 262612), sweet potato (PP# 8E2075)

13. Plant Residues Comprised of: aryzalin (see discussions in PP# 8E2075)

14. Plant Metabolism Data Translatable Here: #12, especially that on sweet potato (discussed in P. Erice review of 2/3/81, PP# 8E2075)

15. Nature of Plant Metabolism Data (is) is not adequately defined. The Residue of Concern is: aryzalin

16. Animal Metabolism Data on: goats, rats, rabbits, ducks (PP# 261201)

17. Animal Residues Comprised of: Oryzalin and uncharacterized metabolites. Since proposed use results in NDR, we are not pursuing this inadequacy in re. this petition.
18. Animal Metabolism Data Applicable Here: #16
19. Nature of Animal Metabolism Data (is) is not adequately defined, for this pp#
The Residue of Concern is: oryzalin per se
20. Analytical Methods (reference or brief description): EC-GLC; sensitivity of 0.01 ppm. MTO'd in re. PP# 3F1347. See L. Propst review of 6/19/80, PP# 0G2291, for detailed discussion.
[Metribuzin methodology is also discussed in the aforesaid review]
21. Method Validation (crop recoveries): potatoes spiked with
(1) oryzalin at 0.04 ppm gave recoveries of 67-81% ;
(2) metribuzin at 0.06 ppm gave recoveries of 81-92% .
22. Method Validation (control values): NDR (<0.01 ppm)
of oryzalin or metribuzin
23. Residues Determined by Method: see #20
24. Enforcement Methodology (is) is not available.

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

Crop: potatoes NDR of oryzalin; NDR-0.01 ppm of
metribuzin.

1978 crop year 5 potato varieties IX rate
7 field trials: WA, NY, ME, ID, NC, GA, WS
single application, 5-38 days after planting crop,
both medium and coarse textured soils included,
immature and mature tubers collected; TSI = 43-151 days

Other Comments: This same residue data was submitted
in re PP# OG2291 (see L. Propst review of 6/19/80)

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

potatoes

and will exceed proposed tolerance on (commodities) _____

27. Livestock Feeding Studies on (species): cattle, swine,
and hens (PP# 2G2612) and lactating goat (PP# 3F1347)

28. Animal Feeding Levels: 0.2-1.2 ppm (see discussion
in R. Loranger review of 6/18/82, PP# 2G2612)

29. Animal Residue Ingestion Levels from Proposed Crop Tolerance
Levels (proposed tol. level x % in diet): 0.05 ppm in
beef cattle; 0.03 ppm in dairy cattle/goats; 0.05
ppm in hogs; 0.03 ppm in horses; 0.04 ppm
in sheep; 0.02 ppm in poultry.

30. Livestock Tolerances are Adequate in (species) N/A. Proposed
use results in NDR in rac., and sweet potato metabolism
study showed an absence of ¹⁴C in roots (tubers).

INFORMATION WHICH MAY REVEAL THE IDENTITY OF A PRODUCT IMPURITY IS NOT INCLUDED

31. Livestock Tolerances Need to be Established: yes no. If yes (species/levels): _____

32. Other Comments: #10 cont'd: [REDACTED] TOX (M. Quate, et al, 6/2/81) has indicated this compound is a mutagen (Ames test).

33. Other Considerations: Potato vines are not considered a feed item. Feed items are cull and excess potatoes (raw or cooked), potato meal, and process residue [ref. Harris Guide].

34. Additional Data Needed: A 0.05 ppm tolerance is already established on sweet potatoes for a similar use. Since NDR (<0.01 ppm) were reported on potatoes, for consistency in the Regs a 0.05 ppm level would be more apropos

35. Recommendations: TOX considerations permitting (see #10 and #32), and contingent upon receipt of a revised Section F (see #34), we could recommend for the establishment of the proposed tolerance.

36. Other Comments under Recommendations: _____

37. Compatability with Codex Tolerances: N/A. See attachment.

cc: RF, Circ, Reviewer, Thompson, TOX, EEB, EFB, FDA, PP# 2F2717
Approved: Quick RML 7/28/82; Schmitt [Signature]
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INTERNATIONAL RESIDUE LIMIT STATUS

CHEMICAL Oryzalin

PETITION NO. 2F2717

CCPR NO. none

Codex Status

Proposed U. S. Tolerances

No Codex Proposal
Step 6 or above

for 180.304

Residue (if Step 9): _____

Residue: oryzalin

Crop(s) Limit (mg/kg)

Crop(s) Tol. (ppm)

none

potatoes 0.1

CANADIAN LIMIT

MEXICAN TOLERANCIA

Residue: _____

Residue: _____

Crop Limit (ppm)

Crop Tolerancia (ppm)

none

none

Notes: