

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MSD/A
0289-t

OCT 16 1985

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: PP#5E3225 [RCB#1459]. Permethrin on Cantaloupes.
Evaluation of Amendment Dated August 30, 1985
(No Accession Number).

FROM: Michael P. Firestone, Ph.D., Chemist
Tolerance Petition Section II
Residue Chemistry Branch/HED (TS-769)

Michael P. Firestone

THRU: John H. Onley, Ph.D., Section Head
Tolerance Petition Section II
Residue Chemistry Branch/HED (TS-769)

John H. Onley

TO: Hoyt L. Jamerson, Minor Uses Officer
Process Coordination Branch
Hazard Evaluation Division (TS-769)

and

Toxicology Branch
Hazard Evaluation Division (TS-769)

Interregional Research Project No. 4 (IR-4) has submitted this amendment, consisting of a cover letter from IR-4 National Coordinator G. Markle to H. Jamerson of EPA, sample storage information, and a revised Section F/proposed tolerance, in response to deficiencies cited in RCB's review of the original request for establishment of a tolerance for residues of permethrin (parent plus metabolites) in/on cantaloupes (see M. Firestone memo of June 4, 1985).

These deficiencies will be restated below followed by IR-4's responses and RCB's comments/conclusions.

Deficiency 3a

Storage stability data were generated on permethrin-fortified cantaloupe "subsamples." Following 6, 10 and 12 months storage (storage conditions not described), recoveries of permethrin (cis and trans) average 75 percent, 82 percent and 78 percent, respectively, from samples fortified at 0.05 to 0.5 ppm.

The petitioner should describe the storage conditions for laboratory fortified samples.

IR-4's Response

All fortified samples were stored frozen at either -10°C or -20°C.

RCB's Comments/Conclusions re: Deficiency 3a

Deficiency 3a is now considered resolved.

Deficiency 3b

Information concerning the storage conditions will need to be clearly specified for all treated cantaloupe samples (i.e., temperature, length of time, condition of sample - whole or homogenized, etc).

IR-4's Response

Complete sample history data are now submitted. All samples were frozen immediately upon harvest and were generally homogenized within about two weeks of arrival at the laboratory. Samples were analyzed from 6 to 18 months after harvest.

RCB's Comments/Conclusions re: Deficiency 3b

Deficiency 3b is now considered resolved.

Deficiency 3c

At the 1X rate, the maximum residue level (parent plus metabolites) uncorrected for method recovery or storage stability was 1.45 ppm (TX field trial reflecting 7 applications). Corrected for method recovery (permethrin - 92%, PBA1c - 69% DCVA - 74%) and storage stability (75%), this maximum value translates to a residue level of 2.15 ppm. Thus, assuming the storage stability data adequately reflect the actual storage conditions for treated cantaloupes, RCB tentatively concludes (pending resolution of deficiencies cited under Conclusions 3a and 3b) that the petitioner will need to submit a revised Section F in which the proposed permethrin tolerance is raised from 2 to 3 ppm.

IR-4's Response

A revised Section F has been submitted in which the proposed permethrin (parent plus the metabolites DCVA and (3-phenoxyphenyl) methanol) tolerance for cantaloupes has been raised to 3 ppm.

RCB's Comments/Conclusions re: Deficiency 3c

Deficiency 3c is now considered resolved.

Recommendation

At this time, RCB recommends for establishment of the proposed 3 ppm permethrin tolerance for cantaloupes, TOX and EAB considerations permitting.

Other Considerations

An International Residue Limit Status sheet is included with this review as Attachment 1.

There is no Canadian limit or Mexican tolerance established for residues of permethrin in/on cantaloupes. Codex has established a 0.1 ppm (parent compound only - indicator compound concept) limit for residues in/on melons (note: cantaloupes are designated as "melons (Cumis melo spp.)" in current Codex classification and as "melons (except watermelon)" in a proposed revision). Since the proposed U.S. tolerance (3 ppm) is 30 times greater than the established Codex limit, RCB concludes that the potential incompatibility is too great to be bridged.

TS-769:RCB:MFirestone:vg:CM#2:Rm810:X77484:10/10/85
cc: RF, Circu, MFirestone, EEB, EAB, FDA, PMSD/ISB, PP#5E3225
RDI: JHOnley, 9/24/85; RDSchmitt, 9/24/85

INTERNATIONAL RESIDUE LIMIT STATUS

CHEMICAL: permethrin

PETITION NO.: 5E3225

CCPR NO.: 120

REVIEWER: Michael P. Firestone
agr 9/23/85

Codex Status

Proposed U.S. Tolerances

No Codex Proposal Step
6 or above

Residue: permethrin and its
metabolites DCVA and
(3-phenoxyphenyl)methanol |

Residue (if Step 9): permethrin
(sum of isomers) (fat soluble residue)

<u>Crop(s)</u>	<u>Limit (mg/kg)</u>
<u>melons</u>	<u>0.1*</u>

<u>Crop(s)</u>	<u>Tol. (ppm)</u>
<u>cantaloupe</u>	<u>3.0</u>

CANADIAN LIMIT

MEXICAN TOLERANCIA

Residue: _____

Residue: _____

<u>Crop(s)</u>	<u>Limit (ppm)</u>
<u>none</u>	

<u>Crop(s)</u>	<u>Tolerancia (ppm)</u>
<u>none</u>	

Notes:
* maximum residue limit type