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

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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: CA-840158. Section 24(c) Registration for postharvest use of iprodione (Rovral) on cherries.

FROM: Sami Malak, Chemist *Sami Malak*
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

THRU: Charles L. Trichilo, Chief
Residue Chemistry Branch
Hazard Evaluation Division (TS-769) *CT*

TO: Mr. Henry M. Jacoby, PM #21
Fungicide-Herbicide Branch
Registration Division (TS-767)

and

Toxicology Branch
Hazard Evaluation Division (TS-769)

The state of California requests a Section 24(c) registration for the use of the fungicide iprodione, trade name: Rovral, for postharvest use on cherries.

A permanent tolerance of 20 ppm is established under 40 CFR 180.399 for the combined residues of the fungicide iprodione [3-(3,5-dichlorophenyl)-N-(1-methyl ethyl)-2,4-dioxo-1-imidazolidinecarboxamide], its isomer [3-(1-methyl ethyl)-N-(3,5-dichlorophenyl)-2,4-dioxo-1-imidazolidinecarboxamide], and its metabolite [3-(3,5-dichlorophenyl)-2,4-dioxo-1-imidazolidinecarboxamide], in or on sweet or sour cherries (PP#2F2596, memo of R. Perfetti, 5/13/82).

The federally registered use permits preharvest multiple applications of iprodione on sweet or sour cherries at 0.5-1.0 lb act/A (0.125-0.25 lb act/100 gallons of spray) as a foliar treatment in 20-400 gallons of water per acre using ground equipment or in 15-20 gallons/A by aerial equipment. Applications are permitted from 5 weeks prior to harvest up to and including the day of harvest (EPA Reg. No. 359-685).

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To prevent fruit decay, the proposed use calls for one postharvest application of iprodione at 1.0 lb act/100 gallons of water to be applied to the fruit as a dip or spray.

The analytical method employed is Rhone Poulenc's Procedure #151 discussed in connection with PP#2F2596 (memo of R. Perfetti, 5/13/82). The method determines the parent, iprodione and its isomer [3-(1-methyl ethyl)-N-(3,5-dichlorophenyl)-2,4-dioxo-1-imidazolidinecarboxamide] referred to as RP 30228; and its metabolite [3-(3,5-dichlorophenyl) 2,4-dioxo-1-imidazolidine-carboxamide] referred to as RP32490. The method has undergone a successful method trial on Kiwi fruit which is listed in PAM II.

Residue data submitted with this application reflect a field test conducted in California during the 1983 growing season in which sweet cherry trees received a preharvest application of iprodione at 0.75 (0.75X) lab act/A. The following day samples of cherries were harvested and sprayed to dripping with iprodione, using a solution of 1200 ppm, equivalent to the proposed dosage of 1 lb act/100 gallons of spray. Analysis for residues were performed by Morse Laboratories, Inc. of Sacramento, California using Rhone Poulenc Agrichemical Procedure #151, in which a nitrogen specific detector was used in place of electron capture detector in a G.C. Method sensitivity is 0.04 ppm. Sample chromatograms are available

Results showed that residues of iprodione per se in or on cherries that received a preharvest treatment only, a postharvest treatment only, and a preharvest plus a postharvest treatments were as follows: 0.72, 3.2 and 5.88 ppm, respectively. No residues of its isomer (RP30228) were detected (<0.04 PP) for all treatments, however, its metabolite (RP32490) was detected at 0.08 ppm and 0.04 ppm reflecting postharvest and preharvest plus postharvest applications, respectively. Control samples had residues of <0.04 ppm.

Residue data submitted in connection with PP#8G2087 accession #097206, showed 0-day residues of iprodione and its isomer, RP30228, and its metabolite, RP32490, could range up to 17.28, 0.06 and <0.05 ppm, respectively from the 1.0 lb act/A (1X application rate when up to 6 applications were made. Adding the expected residues of 3.3 ppm for iprodione that may result from the proposed postharvest use, it is our judgement that total iprodione residues in or on cherries may exceed currently established tolerance of 20 ppm. A level of 30 ppm would be adequate to cover total iprodione residues that may result from current uses as well as the proposed use.

Since no feed items are involved in this use, we conclude that there will be no problem with secondary residues in meat, milk, poultry and eggs.

Conclusions

1. Residues of iprodione and metabolites in or on cherries will exceed currently established tolerance of 20 ppm as a result of the proposed use. A 30 ppm level would be adequate to cover total residues that may result from current uses as well as the proposed use.
2. The analytical method which may be used for enforcement is Rhone Roulenc's Procedure #151 listed in PAM II.
3. There will be no problem with secondary residues of iprodione or metabolites in meat, milk, poultry and eggs.

Note: We have been informed that a Section 18 exemption may be issued for this use. TOX considerations permitting we would have no objections.

cc: Iprodione S.F.
Emergency Response Branch
R.F.
Circu.
Section 24(c)
Reviewer

RDI: E. Zager, 6/1/84; R. Schmitt, 6/1/84
TS-769:RCB:S.Malak:vg CM#2:RM810:X77377:5/6/84