8-4-87 R7

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

AUG 4 1987

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: PP#6F3366/FAP6H5496: Iprodione in or on Potatoes. Amendment of 1/29/87. RCB No. 2226, 2227 Accession Number 400602

FROM: R. W. Cook, Chemist
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

THRU: Charles L. Trichilo, Chief
Residue Chemistry Branch
Hazard Evaluation Diviison (TS-769

TO: L. Rossi, PM 21
Registration Division (TS-767

and

Toxicology Branch
Hazard Evaluation Division (TS-769)

In response to our previous review (see memo of 4/18/86, R. W. Cook), the petitioner Rhone-Poulenc Inc. has submitted an additional potato processing study. Further, the petitioner addresses a deficiency in the expression of tolerance.

Conclusions:

1. Residues of iprodione, its isomer RP-30228 or its metabolite RP-32490 are not expected to concentrate in the processed potato products chips, granules, or flakes. Therefore, food additive tolerances are not required and we concur with the petitioner's request to withdraw the proposed food additive tolerances.

2. Residue data on processed potato waste (wet or dried potato pulp, wet or dry potato peel, or a mixture of these commodities) are required. This data should be submitted within one year.

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Recommendations

We recommend, TOX considerations permitting, and further contingent upon submission of residue data on processed potato waste within one year, for establishment of the requested 0.5 ppm tolerance for combined residues of iprodione, its isomer and metabolite in or on the raw agricultural commodity potatoes. We concur with the petitioner's request to withdraw the previously proposed food additive tolerance at 2.5 ppm, since the submitted residue data indicate that residues do not concentrate in the human food stuffs "potatoes processed (including chips)".

Detailed Considerations

We shall repeat the previous deficiency give the petitioner's response, and finally our comments of conclusions in regard to the deficiency,

> "Residue data from potato processing studies utilizing potatoes bearing residues near the tolerance level are needed to determine the adequacy of the proposed food additive tolerance levels. Exaggerated application rates may be necessary to obtain potatoes with adequate residues for processing studies.

The petitioner responds by submitting an additional processing study conducted in 1986 by Reed D. Smith Associates as a consultant to Rhone-Poulenc. Potatoes in Stockton, CA, were treated with 4 applications of Rovral® 50% WP at 5X and 10X rates, totaling 20 lb ai/A and 40 lb ai/A, respectively. Applications were made beginning 8 weeks prior to harvest and at 14 day intervals thereafter, with a 14 day PHI. Samples were harvested 11-18-86. Other pesticides used were Temik, Ridimil, Pydrin. Potatoes were frozen at 0°F on 11-18-86 and shipped 11-24-86 (in dry ice) for processing.

Potato samples were processed into chips, flakes, and granules. No residue data on processed potato waste (see C. L. Trichilo memo of 2-20-87) are submitted. Flow diagrams of each processing procedure are provided. The processing procedures generally reflect commercial practice. After processing, the samples were frozen and shipped in dry ice to Rhone-Poulenc laboratories for residue analysis by Rhone-Poulenc Analytical Method No. 151. Method No. 151 is the same method as used for previously submitted potato residue data. The method was modified slightly to provide aqueous rehydration for 30 minutes prior to extraction.

Recovery of iprodione, its isomer RP 30228 and its metabolite RP-32490 in potato chips, flakes and granules are reported from 61 to 119% at fortification levels of 0.1 to 2.0 ppm. The limit of detection is 0.05 ppm.

Potato tubers from untreated check plots showed no detectable residue (<0.05 ppm) of iprodione, RP-30228, or RP-32490. Potato tubers from 5X and 10X rates showed 0.17 to 0.32 ppm (corrected for recovery) respectively of iprodione. No residues of RP-30228 or RP-32490 were detected, (<0.05 ppm) in any tuber or processed sample from the 5X or 10X treatments.

In processed chips and granules no detectable residues of iprodione were detected (0.05 ppm). Potatoe flake samples made from tubers (0.32 ppm) from plots treated at 10X (40 lb ai/A) contained 0.16 ppm of iprodione. No RP-30228 or RP-32490 residues were detected in potato flakes. Previously submitted data showed combined residue of 0.39 ppm in chip from tubers bearing 0.06 ppm. We consider the new study showing no concentration of residues in chips to be more conclusive because the tubers in the new study contained residues of up to 0.32 ppm (well above method sensitivity) where the tubers in the earlier study contained residues near the limit of detection. The data from potatoes bearing residues at or near the detection limit are not as reliable.

RCB Comments and Conclusions:

These residue data lead to the conclusion that processed potato flake, granules or chips do not concentrate residue levels above the tolerance level proposed for the raw agricultural commodity, potatoes.

RCB deficiency #2 dealt with the expression of the food additive tolerance in terms of "Potatoes, processed Including Chips" rather than as "Chips" and "Flakes". The deficiency is moot, since we have concluded above that residues in processed potatoes do not exceed the levels in the raw agricultural commodity, potatoes. Therefore, food additive tolerances are not required and we concur with the petitioner's request that the proposed FAP tolerances be withdrawn.

Other Considerations

RCB has recently determined that processed potato waste, or more correctly, potato waste from processing, is an animal feed stuff (see C. L. Trichilo memo of 2/20/87). Accordingly, residue data on potato waste (wet or dried potato pulp, wet or dry potato peel, or a mixture of these commodities) are required to determine the appropriate tolerance level in the animal feed stuff potato waste. Due to the age of the current petition and recent issue date of the potato waste memo (2/20/87), it is appropriate to impose this data requirement as a contingency with a 1 year due date for the requested potato waste residue data.

cc: R.F., Circu, R.W.Cook, PP#6F3366/FAP6H5496, PMSD(ISB), TOX
TS-769:RCB:Reviewer:RWCOOK:vg:CM#2:Rm804:X77484:7/31/87
RDI:R.S.Quick, 7/30/87; R.D.Schmitt, 7/29/87