

US EPA ARCHIVE DOCUMENT



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

2-24-82

FEB 24 1982

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: 82-WA-06. Proposed Section 18 exemption for the use of Bayleton on apples, pears and nectarines

FROM: Edward Zager, Chemist
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THRU: Charles L. Trichilo, Chief
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TO: Emergency Response Section
Registration Division (TS-767)

and

Toxicology Branch
Hazard Evaluation Division (TS-769)

The Washington State Department of Agriculture requests a Section 18 exemption for the use of Bayleton 50 WP (50% active ingredient) to control powdery mildew on apples, pears and nectarines.

Temporary tolerances for residues of Bayleton [1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4,-triazol-1yl)-2-butanone] and its metabolite KWG 0519 (1-(4-chlorophenoxy)-(1,1-dimethylethyl)-1H-1,2,4,-triazol-1-ethanol) have been established at 1 ppm on apples, 4 ppm on apple pomace and at 0.01 ppm on milk, eggs, and the meat, fat and meat byproducts of cattle, goats, hogs, horses, poultry and sheep. These temporary tolerance will expire on Dec. 31, 1982.

PP#2G2638 proposing a temporary tolerance of 4 ppm for residues of Bayleton and its metabolite KWG 0519 in or on nectarines is currently under review.

The proposed use would be identical to that permitted under a Section 18 exemption (82-OR-02, 82-OR-03) issued to Oregon (oral communication, L. Welch 2/19/82). Applications will be made at the rate of 2-4 oz act/A with a maximum of 12 oz act/A/season. Dilute ground sprays will be applied in sufficient water (usually 400 gal/A) for complete coverage to the point of run-off. Concentrate ground sprays will be applied in a minimum of 30 gals of water/A and aerial applications will be made in a minimum of 5 gals of water/acre. There is no PHI. There is a restriction against grazing livestock in treated orchards.

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The metabolism of Bayleton in apples and animals was discussed in the reviews of PP#OG2300 (memo of J. Worthington, 4/10/80) and FAP#1H5282 (memo of J. Wothington, 3/2/81). For the purpose of this Section 18 use we consider the residue of concern in apples, pears, nectarines and animal tissues to be Bayleton and its metabolite KWG 0519.

Residue data for apples submitted in connection with PP#OG2300 reflect 12 residue studies conducted in CA, KS, OR, MI and PA. Six to thirteen applications were made to apples at the rate of 2 oz act/100 gals (2X the maximum proposed rate). On day zero residues of Bayleton and its metabolite KWG 0519 ranged from 0.26 to 0.4 ppm in whole apples. The 1.04 ppm value reflects 13 applications at the 2 oz act/100 gal rate.

Additional residue data were submitted with PP#1F2474/FAP#1H5292. Apples grown in MI, NY, OH, OR and Canada received 5-13 applications at the 2 oz act/100 gals rate. Following six applications residues in whole apples ranged up to 0.65 ppm at zero days.

Whole washed apples which contained a calculated residue level of 0.12 ppm were processed to its fractions. A concentration factor of 4X and 2X was calculated for wet and dry pomace, respectively.

Based on the above data we estimate that residues of Bayleton and its metabolite KWG 0519 will not exceed 1 ppm in or on apples and 4 ppm in apple pomace as a result of the proposed use.

Translating the apple data to pears we estimate that residues of Bayleton and its metabolite KWG 0519 will not exceed 1 ppm in or on pears at a result of the proposed use.

Residue data reflecting applications to peaches in CA and OR (total of 3 studies) were submitted in connection with PP#2G2638.

Following 3-4 applications at the rate of 4 oz act/100 gals (1 lb act/A, 4X the maximum proposed rate residues of Bayleton and its metabolite KWG 0519 ranged from 0.10-3.02 ppm at 0-1 days after the last application.

Translating the above data to nectarines and its metabolite KWG 0519 will not exceed 2 ppm in or on nectarines as a result of the proposed use.

Meat, Milk, Poultry and Eggs

The only livestock feed item involved in this use is apple pomace. The feeding of apple pomace to livestock (beef cattle, finishing lambs) at up to 50% of their diet could result in maximum dietary ingestion level of 2 ppm.

A bovine feeding study was submitted in connection with FAP#1H5282. Lactating cows were fed Bayleton and KWG 0519 in capsules daily at levels of 25 ppm for 28 days. No residues (<0.001 ppm) were noted in milk at the 75 ppm feeding level. Trace residues were noted (<0.0015 ppm) at the 250 ppm feeding level.

No residues were noted (<0.01 ppm) in any tissue at the 25 ppm feeding level. At the 75 ppm and 250 ppm feeding levels residues were noted only in fat and at trace levels (0.0015-0.0024 ppm).

Based on the above study, we conclude that residues of Bayleton and its metabolite KWG 0519 in meat and milk will not exceed the established temporary tolerance of 0.01 ppm.

There are no poultry feed items involved in this use.

Conclusions

1. Residues of Bayleton and its metabolite KWG 0519 will not exceed the established temporary tolerances of 1 ppm on apples and 4 ppm on apple pomace as a result of the proposed use.
2. Residues of Bayleton and its metabolite KWG 0519 will not exceed 1 ppm in or on pears and 2 ppm in or on nectarines as a result of the proposed use.
3. Secondary residues of Bayleton and KWG 0519 in milk and the meat, fat and meat byproducts of cattle, hogs, horses and sheep will not exceed the established 0.01 ppm temporary tolerance.

Recommendation

TOX considerations permitting, we have no objections to the proposed exemption. An agreement should be made with FDA regarding the legal status of the treated apples, pears and nectarines in commerce.

cc: Bayleton S.F.
Section Bayleton 18
R.F.
Reviewer
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TOX

TS-769:RCB:Reviewer:E.Zager:LDT:X77324:CM#2:RM:810:Date:2/23/82
RDI:Section Head:RJH:Date:2/23/82:RDS:Date:2/23/82