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

JUL 29 1988

MEMORANDUM

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: NV-880006. Section 24 (c) Registration.
Diazinon and Piperonyl Butoxide in Ear Tags.
No MRID #. RCB # 4080. *L. Oney*

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THRU: Edward Zager, Section Head *E. Zager*
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TO: G. LaRocca, PM # 15
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Registration Division (TS-767C)

An-Tech International Livestock Products, Inc, has requested a Section 24 (c) registration for the use of Turbo TagTM Insecticide ear tags, containing diazinon (18%) and piperonyl butoxide (2%), to control horn flies in beef and non-lactating dairy cattle in Nevada. Each ear tag weighs 15 grams. NV-880006 calls for application of one ear tag (two per head) when horn fly numbers approach 50 to 100 flies per animal.

The active ingredients are chemically known as O,O-diethyl-O-(2-isopropyl-6-methyl-4-pyrimidinyl) phosphorothioate and butylcarbityl 6-propyl piperonyl ether, respectively.

Tolerances are established for residues of diazinon on a variety of raw agricultural commodities including meat, meat byproducts, and fat of cattle at 0.7 ppm [40 CFR 180.153].

Tolerances are also established for residues of piperonyl butoxide on a variety of raw agricultural commodities including meat, meat byproducts, and fat of cattle at 0.1 ppm (negligible) [40 CFR 180.127].

Diazinon is currently under re-registration (see memo cited below).

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No registration standard for piperonyl butoxide is available or under preparation (personal communication, W. Boodee, 7/26/88).

RCB recently recommended for the amended registration of ear tags, each weighing 15 grams and containing 20% diazinon, on beef and non-lactating dairy cattle (contingent upon clearance of the inerts in that product, EPA # 39039-G, K. Dockter, 5/27/88). Thus, the issue here is whether the established piperonyl butoxide tolerance is adequate to cover its residues from the proposed ear tag use.

Data resulting from spraying piperonyl butoxide formulated in [REDACTED] were discussed in PP9F840 (A. Smith, 8/4/69). Following 2 sprays (1 oz each) of a 2.5% formulation per day to a young male calf for 40 days, average residues (after sacrifice) in the kidney, brain, liver, skeletal tissue, and the heart were <0.005-0.011 ppm. Average residues in fat (omental and skeletal) were 0.026-0.031 ppm. The dosage used was equivalent to 1.42 g piperonyl butoxide per day by this reviewer's calculation. Since each proposed ear tag contains 0.3 g piperonyl butoxide, and residues resulting from the proposed ear tag use are expected to be less when compared to spray treatment, RCB concludes that the established meat tolerances are adequate to cover anticipated piperonyl butoxide residues.

CONCLUSIONS AND RECOMMENDATION

1. RCB previously has concluded that diazinon residues resulting from the use of ear tags, each weighing 15 grams and containing 20% diazinon, on beef and non-lactating dairy cattle will be adequately covered by the established meat tolerance (K. Dockter, 5/27/88, EPA # 39039-G). Thus, the proposed use of ear tags containing 18% diazinon will not pose a residue problem.

2. RCB concludes that the established piperonyl butoxide tolerances on meat, meat byproducts, and fat are adequate to cover the residues resulting from the proposed use of ear tags containing 2% piperonyl butoxide.

RCB recommends for the proposed Section 24 (c) registration provided the inerts in the ear tags are cleared.

cc:Circ, RF, Section 24 (c) F, Cheng, PMSD/ISB
 RDI:FSuhre:7/27/88:RDSchmitt:7/27/88
 TS-769:RCB:CM#2:Rm810:Cheng:7/26/88:1:7/27/88
 DIAZINON\PIPBUTOX.TAG

INERT INGREDIENT INFORMATION IS NOT INCLUDED