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

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MAR 4 1982

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

Subject: PP# 1E2473. Chlorothalonil on mint. Amendment of 12/2/81.

From: Karl H. Arne, Ph.D., Chemist *K.H. Arne*  
Residue Chemistry Branch  
Hazard Evaluation Division (TS-769)

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

To: Patricia Critchlow, P.M. No. 43  
Registration Division (TS-767)

and

Toxicology Branch  
Hazard Evaluation Division (TS-769)

Because of several deficiencies in the original petition we did not make a favorable recommendation (See memo of 5/10/81, K. Arne). For further consideration the following were required:

1. Analyses of the technical material for pentachlorobenzonitrile (PCBN). This request was made earlier in conjunction with PP# 0F2405.
2. A determination by TOX as to whether low levels of hexachlorobenzene in mint oil would be of concern.
3. The petitioner should explain the disparity between residues found as a result of the 1x rate and the high values that result from the 2x rate.
4. Section B or Section F should be revised in such a way that the proposed use is consistent with the proposed tolerance.

Listed below, in order, are the petitioners responses to these deficiencies as well as our comments.

1. The specifications for technical chlorothalonil have been submitted. PCBN may be present at levels of up to 2.5%. While PCBN has shown a tendency to persist longer than chlorothalonil in the environment we do not expect that it will present a residue problem because the PHI is relatively long (80 days) and little PCBN would be applied. Also we do not expect that PCBN

would concentrate into the oil (as chlorothalonil doesn't) and finally that mint oil is greatly diluted when used adds a safety factor. Note: Diamond Shamrock chemist, Mr. Don Stallard also advised us that chlorothalonil residues do not carry over from mint hay to the oil and he would expect similar behavior with the impurity PCBN (Telecon., R. Quick - D. Stallard on 3/2/81).

This deficiency is resolved.

2. TOX has concluded that the expected level of HCB in mint oil is not of concern (memo of 7/8/81, D. Ritter).

This deficiency is resolved.

3. The petitioner has submitted two letters from cooperators who carried out the residue experiments. Dr. R. J. Green of Purdue University suggests several reasons that might account for the discrepancy between residues found as a result of the 1x rate (up to 0.06 ppm) and the 2x rate (up to 2.8 ppm). Most of the reasons given are related to normal variations in growing conditions and therefore do not offer any rationale for disregarding the results of the 2x rate. He also suggests that an error may have been made in the amount of pesticide applied.

A second letter, from R. A. Leavitt of Michigan State University, offers no explanation for the discrepancy.

We are not convinced that the results of the 2x experiment are anomalous and conclude that the proposed tolerance may be exceeded as a result of the proposed use.

To accommodate the high levels found as a result of the 2x rate we recommend that the petitioner propose a tolerance of 2.0 ppm for chlorothalonil on mint hay. We reiterate the conclusion given our original review that no detectable residues are expected in mint oil.

4. A revised Section B in which use is proposed on spearmint and peppermint is included with this amendment. In the original petition the tolerance was proposed for mint hay (which would include both spearmint and peppermint hay) and the use included only spearmint.

This deficiency is resolved.

The use has also been restricted in Section B to the states of Indiana, Michigan and Wisconsin, the only area for which data are submitted.

Recommendation

We recommend against the proposed tolerance. For a favorable recommendation we require the following:

- 1) A revised Section F in which a tolerance of 2.0 ppm is proposed for mint hay.

The Product Manager should also be advised that expansion of the use pattern to include other mint growing areas will require supporting residue data.

TS-769:RCB:K.H.Arne:MCH:CM#2:RM810:X77377:3/4/82

cc: RF, Circ., K. H. Arne, Thompson, TOX, EEB, EFB, FDA, PP# 1E2473

RDI: Quick, 3/2/82; Schmitt, 3/3/82