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

OPP OFFICIAL RECORD
HEALTH EFFECTS DIVISION
SCIENTIFIC DATA REVIEWS
EPA SERIES 361

JUL 16 1993

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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

Subject: PP# 1F4016 - **CYROMAZINE (TRIGARD®)** ON LEAFY VEGETABLES (EXCEPT BRASSICA CROP GROUP.
PP# 2F4053 - **CYROMAZINE (TRIGARD®)** ON CUCURBIT VEGETABLES CROP GROUP.
(MRID # 422243-05) [CBTS #s 11324 and 11327] {DP Barcodes D187702 and D187707}

From: Francis D. Griffith, Jr., Chemist
Chemistry Branch I - Tolerance Support
Health Effects Division (H-7509C)

To: Phillip O. Hutton, PM-18
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and

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Health Effects Division (H-7509C)

Thru: Debra F. Edwards, Ph.D., Chief
Chemistry Branch I - Tolerance Support
Health Effects Division (H7509C)

BACKGROUND

Ciba-Geigy Corporation, Agricultural Division has submitted this amendment consisting of a cover letter dated January 12, 1993, signed by N.B. Carrol and a supplementary Section D (multiresidue data) in response to deficiencies outlined in our reviews for PP# 1F4016 dated December 9, 1992, and for PP# 2F4053 dated December 23, 1992, by F.D. Griffith, Jr. In the cover letter the petitioner claims these data were submitted as part of the petitions for cyromazine on carrots and tomatoes. The deficiencies are the same for both reviews and will be repeated below in the body of this review as they appeared in our reviews, followed by the petitioner's response, then CBTS comments. Our conclusion and recommendation follow.

EXECUTIVE SUMMARY OF RESIDUE CHEMISTRY DEFICIENCIES

- None -



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CONCLUSION

CBTS Conclusion on Residue Analytical Methods

The petitioner has submitted the requested multiresidue method (MRM) recovery data for cyromazine and its metabolites using FDA protocols I through IV. The data are acceptable and have been forwarded to the EPA lab and to FDA for more review and publication in a future edition of the PAM I, Appendix I. The deficiencies are resolved. There are no remaining chemistry deficiencies for PP# 1F4016 and PP# 2F4053.

RECOMMENDATION

There being no remaining residue chemistry deficiencies for PP# 1F4016, TOX considerations permitting, CBTS recommends for the requested cyromazine and its principal metabolite melamine tolerance at 10 ppm on/in the leafy vegetables (except Brassica) crop group.

There being no remaining residue chemistry deficiencies for PP# 2F4053, TOX considerations permitting, CBTS recommends for the requested cyromazine and its principal metabolite melamine tolerance at 2 ppm on/in the cucurbit vegetables crop group.

DETAILED CONSIDERATIONS

RESIDUE ANALYTICAL METHODS

Deficiency (From PP#2F4053 and PP# 1F4016)

- 5b. CBTS reiterates that the petitioner needs to submit recovery data for cyromazine and melamine thru the FDA multiresidue methods. We suggest the petitioner provide these data using FDA Pesticide Analytical Manual Vol-I, Appendix II, Protocols A through E.

Petitioner's Response (MRID # 422243-05)

The petitioner submitted multiresidue method (MRM) recovery data for cyromazine and its melamine and 1-methylcyromazine metabolites in a study titled "Determination of Cyromazine and Its Major Metabolites By U.S. Food and Drug Administration (FDA) Multiresidue Protocols I, II, III, and IV" by R.K.Williams dated March 1, 1990 and coded ABR-88136.

CBTS Comments

While CBTS had suggested the MRM recovery data be generated using the newer MRM Protocols A through E, the petitioner informed us that he started generating these data in December 1987, using the guidance that at that time petitioners should use Protocols I through IV for MRM recovery data. For the chemicals tested for MRM recovery we agree

with the petitioner that the same recovery data would be generated whether Protocols I through IV, or Protocols A through E were used.

Cyromazine and its metabolites were not recovered through Protocol IV using fluorescence detection, nor through the charcoal clean-up column in Protocol II. There was no recovery through the florisil clean-up columns as described in Protocol I due to the lack of sensitivity of cyromazine and its metabolites on an EC detector. CBTS notes the chromatography of cyromazine and its metabolites is not good and it is difficult to ascertain whether or not they would be present in the various sample extracts. Recovery data were presented through 5 GC columns using EC and N/P detectors. FPD detectors were not used as the compounds contained neither phosphorous nor sulfur.

When analyzed through Protocol III cyromazine, per se, was recovered when the 2% DEGS column was used. Melamine and 1-methylcyromazine were not recovered at ppm from tomatoes and lettuce using the method for Protocol III.

The petitioner has presented requested MRM recovery data for cyromazine and its metabolites using FDA MRM protocols. Acceptable MRM recovery data were generated. These data will be forwarded to EPA's lab and to FDA for more thorough review and publication in a future edition of PAM-I, Appendix I. CBTS concludes that the deficiency 5b. in PP# 1F4016 and PP# 2F4053 is resolved. No additional cyromazine and its metabolites MRM recovery data are required.

There being no remaining residue chemistry deficiencies for PP# 1F4016 and PP#2F4053, TOX considerations permitting, CBTS recommends for the requested cyromazine and its principal metabolite melamine tolerance at 10 ppm on/in the leafy vegetables (except Brassica) crop group, and at 2 ppm on/in the cucurbit vegetables crop group.

cc:R.F., Circu., Reviewer (FDG), PP#1F4016, PP#2F4053.

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