

2/13/95

Memorandum

Subject: PP#6F3333/FAP#2H5640: Cyromazine on Tomato. Amendment of 06/10/94. CBTS#'S 14906 AND 15026. MRID#'s 432742-01, 432742-02, and 432742-03. DP Barcode#'S D221239 and D211324.

PP#6F3329: Cyromazine on Carrot. Amendment of 06/10/94. CBTS# 14906. No MRID#'s. DP Barcode# D221239.

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The petitioner, CIBA-GEIGY, has submitted an amendment dated 06/10/94 in response to PP#6F3329 and PP#6F3333/FAP2H5640. The petitioner had previously proposed tolerances for the combined residues of cyromazine (N-cyclopropyl-1,3,5-triazine-2,4,6-triamine), its metabolite, melamine (1,3,5-triazine-2,4,6-triamine), and where necessary, its metabolite 1-methylcyromazine, all expressed as cyromazine:

PP#6F3329: carrots, 3.0 ppm¹, milk, 0.03 ppm¹, meat, fat, and meat by-products of cattle, goats, hogs, horses, and sheep, 0.1 ppm¹, liver and kidney of cattle, goats, hogs, horses, and sheep, 0.1 ppm²

PP#6F3333: tomatoes, 0.5 ppm¹, processed tomato products, excluding juice, 1.2 ppm¹, dry tomato pomace, 1.6 ppm¹

¹ cyromazine plus melamine

² cyromazine plus melamine plus 1-methylcyromazine)

In addition, the petitioner proposed the removal of the restriction "from chicken layer hens and chicken breeder hens only" from existing tolerance for cyromazine (§180.414(b)) and melamine (§180.414(c)) on poultry meat, fat, and meat by-products. [These proposed tolerances reflect revisions in the Sections F for these petitions, and are not necessarily the originally proposed tolerances.]

The petitioner now requests the withdrawal of PP#6F3329 (carrot). (See letter dated 06/10/95, N. Beth Carroll, Regulatory Manager, Ciba-Geigy Corporation, PP#6F3329). The petitioner is still

pursuing the use on tomato (PP#6F3333/FAP2H5640) and has submitted a cover letter dated 06/10/94, data responses (MRID#'s 432742-01, 432742-02, and 432742-03), and revised Sections B and F to address deficiencies in PP#6F3333 (tomato). CBTS will only address the deficiencies cited for tomato (PP#6F3333/FAP2H5640) in this memorandum.

Conclusions:

Deficiency 3a cited in PP#6F3333 (See memo of 04/02/93, R Lascola) is still outstanding and must be satisfied before CBTS can make a recommendation for tolerances.

Recommendations:

CBTS cannot recommend for the requested tolerances in tomatoes, tomato pomace (wet and dried), and processed tomato products (except juice) for the reason stated under deficiency 3a (See memo of 04/02/93, R Lascola) below. Once the method validation for 1-methylcyromazine for the proposed enforcement method in meat is successfully completed by ACL, and toxicological considerations permitting, CBTS can recommend for the proposed tolerances in tomatoes, tomato pomace (wet and dried), and processed tomato products (except juice). Before initiating a pesticide method validation request for 1-methyl cyromazine in meat, the petitioner must verify that the analyst performing the ILV on the proposed enforcement method had no prior experience with this method, that the analytical equipment, columns, reagents, and other materials needed to run the method were different from those used to develop the method, and that there was no contact with persons responsible for the development of the method other than as allowed by USEPA PR Notice 88-5.

Note to PM: The requested carrot and meat tolerances were submitted under PP#6F3329. Our understanding is only the tolerance request for carrots was withdrawn. Therefore, the petitioner's response to deficiency 3a should be submitted under PP#6F3329.

Detailed Considerations:

Deficiency 2a, memo of 04/02/93, R. Lascola:

CBTS is not willing to translate the results of storage stability studies for cyromazine and melamine in eggs to liver, meat, and milk. The petitioner has indicated that storage stability studies are currently underway for cattle meat, liver, and milk (p 18 of MRID# 422243-03). Since samples were stored up to 1 year, CBTS will need to receive the results of that study before concluding its review of ruminant metabolism. The deficiencies listed in Conclusion 1c of PP#6F3329, and Conclusion 3 of PP#6F3333 have not been satisfied.

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Petitioner Response, 06/10/94:

The petitioner has submitted MRID#432742-03 {"Residue Stability Study for Cyromazine, Melamine, and 1-Methylcyromazine in Meat, Milk, and Eggs Under Freezer Storage Conditions", dated April 26, 1994.} in response. Two samples of each matrix were fortified (10 or 50 ppm) with either cyromazine, melamine, or 1-methylcyromazine. These samples were analyzed at 0-day, 2-, 13-, 18-, and 24-month intervals. The results of this study show that cyromazine, melamine, and 1-methylcyromazine in beef muscle, beef liver, milk, and eggs are stable at -20C for a minimum of 24 months.

CBTS Comments/Conclusions:

Deficiency 2a is now resolved.

Deficiency 2b, memo of 04/02/93, R. Lascola:

If the storage stability studies described in Conclusion 2a are acceptable, and indicate that cyromazine and melamine (and 1-methylcyromazine for liver) are stable in liver, meat, and milk, then CBTS can conclude that the metabolism of cyromazine in ruminants has been adequately described. The major residues in milk, meat, and meat by-products (except liver and kidney) would be cyromazine and melamine. The major residues in liver and kidney would be cyromazine, melamine, and 1-methylcyromazine.

Petitioner Response, 06/10/94:

The petitioner has submitted MRID#432742-03 {"Residue Stability Study for Cyromazine, Melamine, and 1-Methylcyromazine in Meat, Milk, and Eggs Under Freezer Storage Conditions", dated April 26, 1994.} in response. The results of this study show that cyromazine, melamine, and 1-methylcyromazine in beef muscle, beef liver, milk, and eggs are stable at -20C for a minimum of 24 months.

CBTS Comments/Conclusions:

Deficiency 2b is now resolved.

Deficiency 3a, memo of 04/02/93, R. Lascola:

Analytical Methods. The recovery data, chromatograms, and other data submitted in this report indicate that the proposed method, AG-584A, may be adequate for the determination of 1-methylcyromazine in liver and kidney. However, the petitioner has not submitted an independent laboratory validation, as required under PR 88-5. This must be submitted before this method can be sent to EPA's Beltsville laboratories for a petition method validation. CBTS cannot accept this method at this time.

Petitioner Response, 06/10/94:

The petitioner has submitted an "independent" validation of the proposed enforcement analytical methodology AG-584A. (MRID#432742-02). According to the petitioner this method validation was performed in-house by the company using an analyst with no prior experience with this method.

CBTS Comments/Conclusions:

The petitioner must verify that not only the analyst had no prior experience, but also that the analytical equipment and columns, standards, reagents, and any other materials needed to run the method, are different from those used to develop the method, and that there was no contact with persons responsible for the development of the method, other than that allowed by USEPA PR Notice 88-5.

Deficiency 3a is still outstanding. This data requested above must be submitted before this method can be sent to EPA's Beltsville laboratories for a petition method validation. CBTS cannot accept this method at this time. The petitioner's response to this deficiency should be submitted under PP#6F3329.

Deficiency 4b, memo of 04/02/93, R. Lascola:

CBTS concludes that the tomato field trial and processing studies were carried out adequately. However, the residue data suggest that 7- and 14-day PHI's have little effect on overall residue levels. Therefore, new tolerances based on 0-day PHI data must be proposed. The petitioner should submit a revised Section F with the following tolerances proposed for the combined residues of cyromazine and melamine:

Tomatoes	1.0 ppm	
Tomato pomace, wet and dried	2.5 ppm	
Processed tomato products (except juice)		2.5 ppm.

In addition, the petitioner must submit a revised Section B removing the 7-day PHI restriction and explicitly stating that there is no pre-harvest interval associated with this use.

Petitioner Response, 06/10/94:

Revised Section B and F dated 06/10/94 have been submitted.

The petitioner has revised Section B with a 0-day PHI.

The petitioner has revised Section F with the following tolerances proposed for the combined residues of cyromazine and melamine (calculated as cyromazine):

Tomatoes	1.0 ppm	
Tomato pomace, wet and dried	2.5 ppm	
Processed tomato products (except juice)		2.5 ppm.

The petitioner has revised Section F with the following tolerances proposed for the residues of cyromazine only:

Meat, fat, and meat by-products (including liver and kidney) of cattle, goats, hogs, horses, and sheep	0.05 ppm
Milk	0.02 ppm

The petitioner has revised Section F with the following tolerances proposed for the residues of melamine (calculated as cyromazine):

Meat, fat, and meat by-products (including liver and kidney) of cattle, goats, hogs, horses, and sheep	0.05 ppm
Milk	0.02 ppm

The petitioner has revised Section F with the following tolerances proposed for the residues of 1-methylcyromazine (calculated as cyromazine):

Liver and kidney of cattle, goats, hogs, horses, and sheep	0.05 ppm
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The petitioner has requested the term "from chicken layers hens and chicken breeder hens only" be removed from 40 CFR §180.414 (b) and (c). The established 0.05 ppm tolerances the residues of cyromazine and melamine in poultry remain unchanged:

Amend 40 CFR §180.414(b):

fat, poultry	0.05 ppm	
meat, poultry	0.05 ppm	
meat by-products of poultry		0.05 ppm

Amend 40 CFR §180.414(c):

fat, poultry	0.05 ppm	
meat, poultry	0.05 ppm	
meat by-products of poultry		0.05 ppm

CBTS Comments/Conclusions:

Deficiency 4b is now resolved.

Note to PM: When §180.414(b) and (c) are revised, the commodity terms meat, fat, and meat by-products (including liver and kidney) for poultry and for cattle, goats, hogs, horses, and sheep, should be combined since the established tolerances for poultry and the proposed tolerances for the other livestock are identical.

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Deficiency 5b, memo of 04/02/93, R. Lascola:

The petitioner has not adequately demonstrated the long-term stability of cyromazine and its metabolites in frozen animal matrices; however, in the submitted animal feeding study, samples were stored for up to 18 months. CBTS awaits the results of an appropriate storage stability study before concluding on the adequacy of this feeding study and the proposed animal tolerances. The deficiencies outlined in Conclusions 4b and 4c of PP#6F3329, and Conclusions 6b and 6c of PP#6F3333, have not been satisfied.

Petitioner Response, 06/10/94:

The petitioner has submitted MRID#432742-03 {"Residue Stability Study for Cyromazine, Melamine, and 1-Methylcyromazine in Meat, Milk, and Eggs Under Freezer Storage Conditions", dated April 26, 1994.} in response. The results of this study show that cyromazine, melamine, and 1-methylcyromazine in beef muscle, beef liver, milk, and eggs are stable at -20C for a minimum of 24 months.

CBTS Comments/Conclusions:

Deficiency 5b is now resolved.

Deficiency 5c, memo of 04/02/93, R. Lascola:

If the requested storage stability studies are acceptable, and indicate that cyromazine and its metabolites are stable in animal matrices, CBTS will conclude that the feeding study is acceptable. However, CBTS calculates the dietary burden to be higher than the petitioner has estimated. Based on these exposure levels, the petitioner should propose revised tolerances, as follows:

Amend §180.414(b) [residues of cyromazine alone] to include...
Meat, fat, and meat by-products of cattle, goats, hogs,
horses, and sheep. 0.05 ppm
Milk 0.05 ppm

Amend §180.414(c) [residues of melamine alone] to include...
Meat, fat, and meat by-products of cattle, goats, hogs,
horses, and sheep. 0.05 ppm
Milk 0.05 ppm

Create §180.414(e), for tolerances of 1-methylcyromazine (1-methyl-N-cyclopropyl-1,3,5-triazine-2,4,6-triamine), calculated as cyromazine, in

Liver and kidney of cattle, goats, hogs, horses, and
sheep. 0.05 ppm

Petitioner Response, 06/10/94:

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The petitioner has withdrawn the request to establish a tolerance on carrot. The exclusion of carrot from the dairy and beef cattle diets greatly reduces the need expressed previously by CBTS to increase petitioner's proposed milk tolerances of 0.02 ppm for cyromazine and 0.02 ppm for melamine to 0.05 ppm. The petitioner agrees with CBTS that the other tolerances for meat and meat by-products should be established at 0.05 ppm, and not at the petitioner's proposal of 0.1 ppm.

CBTS Comments/Conclusions:

The revised proposed tolerances has been discussed above under CBTS comments/conclusions for Deficiency 4b.

Deficiency 5b is now resolved.

cc: J. Stokes, RF, Circu, PP#6F3329, PP#6F3333
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