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

JAN 18 1995

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM:

SUBJECT: PP#3G4250: New Chemical EUP: Flumioxazin: Results of Method Validation for Parent in/on Soybean Seed, Forage, and Hay.

FROM: Joel Garbus, PhD., Chemist
Tolerance Petition Section III
Chemistry Branch-Tolerance Support (7509c)

THROUGH: P. V. Errico, Head
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Health Effects Division (7509c)

TO: J. Miller / D. Kenny, PM-23
Registration Division (H7505c)

Valent U.S.A. Corporation, Walnut Creek, CA, has petitioned for temporary tolerances for the herbicide flumioxazin (V-53482) in or on soybean seed and soybean forage at 0.01 ppm. CBTS in its review of this petition recommended that soybean hay also be included in the tolerance request at 0.01 ppm.

CBTS requested a method validation for flumioxazin in/on soybean seed, forage, and hay (J. Garbus, memo, 6/30/94) using the petitioner's independently validated method: Regulatory Enforcement Method for the Determination of Residues of V-53482 in Soybean Crops and its Processing Fractions.

The Analytical Chemistry Laboratory (D. Swineford, memo, 12/30/94) has validated the method as meeting the requirements of an enforcement method provided that some revisions be made in the description of the method. (See below)

Provided that the petitioner revises the method incorporating the comments and suggestions of the ACL as, given below and submits the revised method to the Agency as a proposed enforcement method, CBTS recommends that the method be accepted as an enforcement method for flumioxazin residues in/on soybean rac's. Specifically, the petitioner should:

1. Clarify what is meant by "repeat the extraction and filtration." What specific steps are involved in this repetition? Does this mean an additional

overnight extraction? Note that ACL obtained satisfactory recoveries using a single overnight extraction (Doug Swineford, personal communication, 1/10/94). The petitioner should clarify this point.

2. As an overnight extraction adds substantially to the total analysis time, can the extraction procedure be shortened?

3. The size of the Buchner funnel used in filtration should be given. ACL used a 20 cm funnel.

4. The method states that a fortified control "must" be analyzed along with each set of samples. The results obtained with the fortified controls are to be used to correct results of analytical samples for recoveries. Such a use of fortified controls is precluded in tolerance enforcement methods. The petitioner should explain why running fortified controls is necessary.

ACL obtained satisfactory recoveries without the use of fortified controls. If appropriate, the petitioner can revise the formula for the calculation of results so as not to use values obtained with fortified samples.

5. The petitioner should provide the Analytical Standards Repository, RTP, with an analytical standard and advise CBTS that the standard has been provided.

6. Directions should be given for the preparation of analytical standard solutions.

Method Validation Report

Method: Method for the Determination of Residues of V-53482 in Soybean Crops and its Processing Fractions.

Commodity	Chemical Added	PPM Added	PPM Found	Recovery
Soybean Seed	Control	0.0	N.D.	
		0.0	N.D.	
Soybean Seed	Flumioxazin	0.01	0.088	88.0%
		0.01	0.0106	106%
Soybean Seed	Flumioxazin	0.02	0.0163	81.5%
Soybean Hay	Control	0.0	N.D.	
		0.0	N.D.	
Soybean Hay	Flumioxazin	0.01	0.091	91%
		0.01	0.061	61.0%
Soybean Hay	Flumioxazin	0.02	0.0169	84.5%
		0.02	0.0195	97.5%
Soybean Forage	Control	0.0	N.D.	
		0.0	N.D.	
Soybean Forage	Flumioxazin	0.01	0.0115	115%
		0.01	0.0115	115%
Soybean Forage	Flumioxazin	0.02	0.0187	93.5%
		0.02	0.0205	103%

N.D. = < 0.005 ppm (the limit of detection by visual inspection)

Comments

Modifications to method (major or minor): See Comments

Special precautions to be taken: None

Source of analytical reference standards: Valent Corp.

If derivitized standard is used, give source: N/A

Instrumentation for quantitation: GC/ NP Detector

Instrumentation for confirmation: N/A

If instrument parameter differ from those given in method, list parameters used: N/A

Commercial sources for any special chemicals or apparatus: N/A

Additional Comments See Comments

Comments

Extraction

After the first extraction, 10 minutes shaking, overnight digestion, and additional shaking and filtration, the analyst is directed to repeat the extraction and filtration. What is involved in this repetition?

An overnight extraction adds substantially to the total analysis time. Can the extraction procedure be shortened?

The size of the Buchner funnel used in filtration should be given.

Use of Fortified Controls

The method states that a fortified control "must" be analyzed along with each set of samples. The use of fortified controls to correct analytical results for recoveries is precluded in tolerance enforcement methods.

Standards

Standards were not available from EPA Standards Repository as of 9/08/94. The petitioner should provide the Repository with an analytical standard. (Note: ACL states that attempts to contact the Repository were unsuccessful. CBTS' attempts to contact the Repository have also been unsuccessful.)

No directions are given for preparing analytical standard solutions.

cc: R.F.; Circ.; MTO F; Garbus; PP#3G4250
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