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

CONFIDENTIAL

DEC 9 1992

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: PP#1G04006 (CBTS #10847; Barcode #D184411). DE-498 on Soybeans. Review of DowElanco's Phone Memo regarding Data Requirements for a Permanent Tolerance.

FROM: Nancy Dodd, Chemist Nancy Dodd
Tolerance Petition Section II
Chemistry Branch I- Tolerance Support
Health Effects Division (H7509C)

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

TO: Joanne Miller, PM #23
Fungicide-Herbicide Branch
Registration Division (H7505C)

and

Toxicology Branch II- Herbicide, Fungicide, and Antimicrobial Support
Health Effects Division (H7509C)

DowElanco submits a memorandum of a telephone conversation held between Dr. Karen Swayze of DowElanco and Nancy Dodd of EPA on September 22, 1992 concerning outstanding Product Chemistry data requirements for a permanent tolerance for DE-498 on soybeans. DowElanco requests that EPA verify the contents of the memo.

DowElanco's phone memo dated 10/5/92 and N. Dodd's phone memo dated 10/15/92 are attached.

Conclusion

No significant differences exist between these versions of the phone conversation held on 9/22/92.

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Attachment 1: DowElanco phone memo dated 10/5/92
Attachment 2: N. Dodd phone memo dated 10/15/92

cc with Attachments 1 and 2: SF, PP#1G04006, N. Dodd (CBTS), E. Haeberer (CBTS)

RDI:E. Haeberer:12/07/92:R. Loranger:12/07/92
H7509C:CM#2:Rm804F:X305-5681:N. Dodd:nd:12/08/92

DowElanco
9002 Purdue Road
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Quad III/2
October 5, 1992

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U.S. Environmental Protection Agency
Room 266A, Crystal Mall 2
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Arlington, VA 22202

DowElanco

Attention: Joanne I. Miller (PM-23)

RE: **DE-498 (flumetsulam)**
CB-TS Review of August 20, 1992
"PP#1G04006 (CBTS #9845; Barcode #D178112). DE-498 and DE-498/Trifluralin on Soybeans. Amendment dated 7/14/92. (MRID #'s 424070-00, 424070-01, 424070-02, 424070-03, and 424070-04)."
Follow-Up Phone Call Clarification

On September 22, 1992, DowElanco after receiving permission from Team 23, contacted Nancy Dodd in Chemistry Branch I - Tolerance Support asking for clarification of some of the issues addressed in the DowElanco submission dated July 14, 1992 and responded to by EPA in the CB-TS review of August 20, 1992. After checking internally, Ms. Dodd returned a call to Dr. Karen Swayze, Manager of DowElanco Formulations Analytical Lab with the responses to the questions raised by DowElanco. The communication and responses are summarized below:

CBTS's Conclusion re: § 61-1 in the August 20, 1992 Review Stated:

"b) CBTS concludes that "Compound B" is adequately defined as "DE-498 Intermediate dimer, molecular weight 650" for purposes of the temporary tolerance. For a permanent tolerance, further identification may be desired." and

CBTS's Conclusion re: § 62-1 in the August 20, 1992 review stated:

"a) Deficiency § 62-1(a) is resolved for purposes of a temporary tolerance. [Refer to § 61-1(b) above.] For a permanent tolerance, further identification of "DE-498 Intermediate dimer, molecular weight 650" may be desired."

DowElanco Response

The identification of compound B has been extremely difficult due to the unstable nature of the compound. DowElanco has been continuing work on isolation of this compound using preparative high performance liquid chromatography and through enhancement of the concentration of this compound through investigation of alternative process parameters. We have obtained evidence using LC/MS that compound B is a hydrated intermediate dimer of DE-498 with a molecular weight of 668.

EPA Response

Ms. Dodd indicated that this information regarding the structure of compound B would be adequate for permanent tolerance.

CBTS's Conclusion re: § 62-1 in the August 20, 1992 review stated:

"b) Deficiency § 62-1(b) as stated above remains outstanding."

Attention: Joanne I. Miller (PM-23)
DE-498 (flumetsulam)
CB-TS Review of August 20, 1992
"PP#1G04006 (CBTS #9845; Barcode #D178112). DE-498 and
DE-498/Trifluralin on Soybeans. Amendment dated 7/14/92.
(MRID #'s 424070-00, 424070-01, 424070-02, 424070-03, and 424070-04)."
Follow-Up Phone Call Clarification

DowElanco Response

Deficiency § 62-1(b) refers to converting the five batch analysis data for compound A and compound B to weight % from area %. In response to the comments regarding compound A; DowElanco has obtained, using preparative chromatography, a small amount of compound A that will be used to obtain a response factor for this compound. The data for the five batches will be recalculated using this response factor.

In response to comments regarding compound B; DowElanco asked for clarification on how to generate a response factor for an unstable material. Numerous attempts to obtain material to use for a standard of compound B have been unsuccessful due to the instability of this compound. DowElanco requests that the response factor for DE-498 be used to calculate weight % from area % for compound B.

EPA Response

Ms. Dodd responded that use of area % for compound B would be acceptable for permanent tolerance.

CBTS's Conclusion re: § 62-3 in the August 20, 1992 review stated:

"Deficiency § 62-3 as stated above remains outstanding."

DowElanco Response

Deficiency § 62-3 refers to submission of analytical methods for compound A, compound B and "total inorganic residue" and precision and accuracy data for compound A, compound B, "total inorganic residue" and water. DowElanco will submit analytical methods for compound A, compound B and total inorganic residue and will submit precision and accuracy data for compound A, total inorganic residue and water. DowElanco requested clarification on what type of precision and accuracy data would fulfill the requirement for compound B.

EPA Response

Ms. Dodd indicated that precision data obtained using the area % method would be acceptable to fulfill this requirement. Data on the accuracy of DE-498 analysis could be used to address the accuracy of the compound B analysis.

Please contact me at (317) 870-7269 or Dr. Swayze at (317) 873-7896, if EPA has any questions or sees discrepancies regarding the conversations with Nancy Dodd.

Sincerely,
DowElanco

Dennis H. Lade

Dennis H. Lade, Ph.D.
Product Registration Manager

DHL/taf
ltr88

CONFIDENTIAL ATTACHMENT 2

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

CONFIDENTIAL

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

OCT 15 1992

MEMORANDUM

SUBJECT: Product Chemistry Requirements for DE-498 on Soybeans. Memorandum of Telephone Conversation.

FROM: Nancy Dodd, Chemist Nancy Dodd
Chemistry Branch I- Tolerance Support
Health Effects Division (H7509C)

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

TO: Chemistry Branch Files

DowElanco called on 9/22/92 for guidance regarding outstanding Product Chemistry requirements for a permanent tolerance for DE-498 on soybeans. These requirements were listed in the 8/20/92 review of PP#1G04006 (N. Dodd, CBTS #9845). I discussed the company's questions with Dr. Mike Flood and Dr. Richard Loranger. The company called again on 9/24/92, at which time I gave Karen Swayze (317-873-7896) the following information:

62-1

a) In the review dated 8/20/92, CBTS indicated that for a permanent tolerance, further identification of Compound B may be desired. However, CBTS now concludes that identification of Compound B as "DE-498 intermediate dimer, molecular weight 650" would be acceptable for a permanent tolerance. Any evidence that the company has to indicate that Compound B is a hydrate should be submitted.

b) In the review dated 8/20/92, CBTS indicated that for a permanent tolerance, the batch analyses for Compounds A and B should be reported as weight % (not area %). However, CBTS now concludes that area % would be acceptable. CBTS expects weight % to approximate area %.

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62-3

a) In the review dated 8/20/92, CBTS indicated that analytical methods for determining Compounds A and B are needed. The company indicated that standards are needed for this, but Compound A is difficult to synthesize because of the pendant DFA group and Compound B is unstable. CBTS concluded that the method which was used to obtain area % could be the analytical method for determining Compounds A and B.

b) In the review dated 8/20/92, CBTS indicated that precision and accuracy of the methods for Compounds A and B are needed. CBTS now concludes that the company can use the precision and accuracy for the active ingredient peak as the precision and accuracy of Compounds A and B.

cc: SF, PP#1G04006, N. Dodd (CBTS), E. Haeberer (CBTS)

RDI:E. Haeberer: 10/13/92:R. Loranger:10/13/92
H7509C:CM#2:Rm804F:X55681:N. Dodd:nd:10/15/92