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BASF Wyandotte Corporation
100 Cherry Hill Road
P.O. Box 181
Parsippany, NJ 07054

Attention: Ms. Melinda M. Schluter

Gentlemen:

Subject: Poast Herbicide (Alfalfa and Soybeans)
EPA Registration No. 7969-58
Pesticide Petition No. 3F2904
Your Application Dated April 25, 1985

This refers to Pesticide Petition No. 3F2904 proposing the establishment of tolerances for the combined residues of the herbicide sethoxydim [2-[(1-ethoxyimino)butyl]-5-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one] and its metabolites containing the 2-cyclohexen-1-one moiety (calculated as the herbicide) in or on the raw agricultural commodities soybean hay at 10 parts per million (ppm), alfalfa hay and forage at 40 ppm, and milk at 0.05 ppm.

The scientific review and evaluation of the toxicology data submitted above have been completed. The following are our comments and/or conclusions.

1. Acute Oral Toxicity Study of Me-MSO in Rats.

   a. The LD_{50} is > 5000 mg/kg.

   b. This study is classified as core minimum. Only males were used in this study; a like number of females should have been used.

   c. The Toxicity Category is IV.

2. Ames Assay of Me-MSO.

   a. The doses selected were sufficient to cause complete cytotoxicity at the highest doses. Typically, there was a sharp cutoff in colony survivability between the 10,000 and 50,000 ug/ plate dose in both the nonactivated and activated systems.

CONCURRENCES

SYMBOL ▶	90315:Taylor:T-9:KENCO:5/28/86:6/3/86:MCF:LF TS-767C						
SURNAME ▶	UKWalker						
DATE ▶	6/4/86						

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Although all of the positive control assays had $\geq$ 3.6-fold increases in revertant colonies compared to the vehicle (water) controls, there was no evidence of increased revertant colonies following dosing with Me-MSO in the nonactivated and activated systems.

b. This study is activated.

3. Metabolism of NP-55 (sethoxydim) in Rats

a. The newly identified metabolite ^{14}C-Na-MSO was found to represent 2.1 percent of the radioactivity in rat urine (the day of sample collection was not given). This metabolite was found in fractions 6 and 7 which also contained M-SO and small quantities of yet another unidentified metabolite. The other metabolites found in the rat urine included M2-SO_2, M1-SO_2, 6-OH-M2-SO_2, and Na-M2-SO_2, with mean radioactivity percentages of 36.1%, 6.6%, 0.7%, and 2.4%, respectively (the mean values are for days 1, 3, and 7; the values were similar on all 3 days).

b. This study is core minimum. Many of the specifics on the study design were missing from this supplemental report because they "had been described in the previous papers RD-8025 and 8148." These deficiencies were compounded by the poor translation and lack of definitions for abbreviations, thus making study review difficult.

c. The primary purpose of this report was to define the previously unidentified metabolite and assess its percentage in rat urine; this purpose was achieved.

Further action on this petition will await completion of scientific review and evaluation of the data submitted December 5, 1985.

Sincerely yours,

Robert J. Taylor
Product Manager (25)
Fungicide-Herbicide Branch
Registration Division (TS-767C)