



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

004966

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Company responses, metsulfuron methyl (Whip)

FROM: Thomas Edwards, Pharmacologist  
Hazard Evaluation Division (TS-769)

*W Thomas Edwards*  
*2-20-86*

TO: Registration Division (TS-767)

THRU: Clint Skinner, Section Chief  
Review Section III

*Clint Skinner*

*3-3-86*

*Ab for URB*  
*3/6/86*

and

Theodore Farber, Chief  
Toxicology Branch, HED (TS-769)

Metsulfuron methyl

Caswell No.: 419H

EPA Registration No.: 4F3127, 352-UGL.

Accession Nos.: 258878, 074002.

Requested Actions: Evaluate metabolism study and company response.

Comments:

A DER of the adequate rat metabolism study (with radiolable in the triazine ring) is attached.

The submitted clarification of possibly neurological effects in the teratological studies in rabbit and rat are accepted as adequate.

The presented discussion of the significance of testicular effects in the 21-day rabbit dermal toxicity study is not considered to be adequate, because all the effects seen were in treated animals and none in controls. The date of EPA Guidelines publication is, of course, irrelevant. Lack of Guidelines has never limited requirement for supplying needed testing. A 21-day study using 5 animals per sex per dose is needed.

The latest revisions of Section F do not affect the X ADI.

*h/jr*

TOXICOLOGY BRANCH DATA REVIEW

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Study Type: Metabolism, rat

Accession No.: 258878

MRID No.:

Sponsor: Du Pont, No. AMR-405-85

Contracting Lab:

Date: 1985

Test Material: [triazine-2-<sup>14</sup>C] Metsulfuron methyl

EPA Evaluation Review: Thomas Edwards 1-5-86  
Thomas Edwards Date

Review Section Approval: Clint Skinner Date

Protocol: See procedures attached.

Results:

The single dose to each animal (two males and two females) was rapidly excreted, mostly in urine (table 1). Any differences between sexes was too small to be meaningful. The average (four animals) total percents excreted were 48.1 percent at 24 hours, 87.7 percent at 48 hours, and 90.2 percent at 96 hours. The percents found after 96 hours in "tissues and carcass" was 0.3 percent and in cage wash, 2.2 percent. Average total percent accounted for at 96 hours was 92.7 percent.

Metsulfuron was largely excreted unchanged (tables 6 and 7). Three metabolites were identified. At least two minor metabolites were not identified (tables 6 and 7). Formulas are shown in figure 2 and proposed pathways are shown in figure 3.

Results are comparable to findings from previous study (Accession No. 072765(9)) in which the phenyl ring was labeled.