

3-7-90

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

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES  
March 1st, 1990

MEMORANDUM

SUBJECT: EPA Reg. No./File Symbol 241-239  
AVENGE

FROM: Olga Odiott *OO*  
Precautionary Review Section *E 3/7/90*  
Registration Support Branch  
Registration Division (H75-05C)

TO: Joanne Miller (PM 23)  
fungicide-herbicide  
Registration Division (H75-05C)

APPLICANT: American Cyanamid Company  
Agricultural Research Division  
P.O. Box 400  
Princeton, NJ 08540

FORMULATION FROM LABEL:

363A	Active Ingredient(s):	% by wt.
	<u>difenzquat methyl sulfate</u>	<u>76.1%</u>
	Inert Ingredient(s):	<u>23.9%</u>
	Total	100.0%

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BACKGROUND: Acute oral and primary eye irritation studies were submitted to comply with the requirements for the Digenoquat Methyl Sulfate Registration Standard. The studies were conducted at American Cyanamid Corporation. HPLD No. 413005-02 and 413005-01.

RECOMMENDATION: RSB/PRS finds the studies acceptable to support registration of 241-239.

The signal word is DANGER, based on eye irritation.

The product's registration jacket does not contain data or reference to data on skin sensitization, acute inhalation or acute dermal as required by the Digenoquat Registration Standard (See III B.1) These studies are required.

### Labeling:

Proposed label changes are satisfactory.

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DATA REVIEW FOR ACUTE ORAL TOXICITY TESTING (§81-1)

Product Manager: (23) Reviewer: O. Odiott  
 MRID No.: 413005-02 Report Date: Oct 9, 1989  
 Testing Facility: American Cyanamid Comp. Report No. A89-195  
 Author(s): Joel E. Fischer  
 Species: albino rat; Sprague-Dawley derived  
 Age: young adult (5-6 weeks) Observation Days (Post  
 Weight:  Exposure): (14); other ( )  
 Source: Charles River Lab. Inc. Wilmington MA  
 Test Material: Difenzoquat; AVERAGE  
 Quality Assurance (40 CFR §160.12): attached.

Conclusion:

- LD50 (mg/kg): Males = 617 (497-766) mg/kg; Females = 373 (266-524) mg/kg; Combined = 485 (372-632) mg/kg.
- The estimated LD50 is .
- Tox. Category: II. Classification: Sublethal

Procedure (Deviations From §81-1):

Results:

Reported Mortality

DOSAGE ( /kg)	(NUMBER KILLED/NUMBER TESTED)		
	Males	Females	Combined
200 mg/kg	0/5	0/5	0/10
400 mg/kg	0/5	3/5	3/10
800 mg/kg	4/5	5/5	9/10

Symptomology & Gross Necropsy Findings:

Decreased activity, salivation, diuresis and prostration  
were observed. At necropsy congested liver and kidneys,  
enlarged intestines full with fluids & vascularized  
stomachs were noted.

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## DATA REVIEW FOR ACUTE EYE IRRITATION TESTING (§81-4)

Product Manager: (23) Reviewer: O. Odiott  
 MRID No.: 413005-01 Report Date: Feb. 7, 1989  
 Testing Laboratory: American Cyanamid Corp Report No. A-87-128  
 Author(s): Joel E. Fisher  
 Species: New Zealand white rabbit  
 Sex: 6 males Weight: \_\_\_\_\_  
 Source: Skipack Farms, Skipack, Pennsylvania  
 Dosage: 0.1 gm  
 Test Material: NIENGE  
 Quality Assurance (40 CFR §160.12): attached.

## Summary:

Tox. Category: I Classification: Guideline

Procedure (Deviation From §81-4): \_\_\_\_\_

## Results:

	Observations (number "positive"/number tested)							
	Hour	Days						
	1	1	2	3	4	7	14	21
Cornea Opacity	0/6	5/6	5/6	5/6	3/6	1/6	1/6	1/6
Iris	0/6	0/6	0/6	0/6	1/6	1/6	0/6	0/6
Conjunctivae Redness	0/6	0/6	2/6	2/6	2/6	1/6	0/6	0/6
Cnemosis	6/6	5/6	3/6	2/6	2/6	2/6	0/6	0/6
Discharge	6/6	5/6	4/6	2/6	2/6	2/6	0/6	0/6
Slight vascularization of the cornea.	0/6	0/6	0/6	0/6	0/6	1/6	1/6	1/6

Comments: \_\_\_\_\_

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AVENGE (DIFENZOQUAT)

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Pages 5 through 7 are not included.

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The material not included contains the following type of information:

- Identity of product inert ingredients.
  - Identity of product impurities.
  - Description of the product manufacturing process.
  - Description of quality control procedures.
  - Identity of the source of product ingredients.
  - Sales or other commercial/financial information.
  - A draft product label.
  - The product confidential statement of formula.
  - Information about a pending registration action.
  - FIFRA registration data.
  - The document is a duplicate of page(s) \_\_\_\_\_.
  - The document is not responsive to the request.
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The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.

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