



ENVIRONMENTAL HYGIENE AND TOXICOLOGY DEPARTMENT

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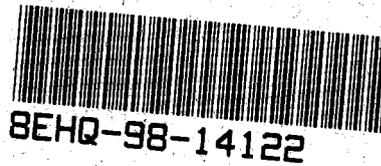
FAX: (203) 495-8531

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

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93 FEB 17 01 21 45

February 4, 1998

Document Control Officer (WH-557)  
Information Management Division  
Office of Toxic Substances  
Environmental Protection Agency  
401 M Street, NW  
Washington, D.C. 20460



Dear Gentlemen:

**RE: SECTION 8(e) NOTICE OF SUBSTANTIAL RISK - TEST REPORT**  
**"Triphenylsulfonium Chloride": Mixture Containing Triphenylsulfonium,**  
**bis(4-(diphenylsulfonio)phenyl)sulfide (doubly charged), S-**  
**phenylthioanthrylium, and diphenyl-4-thiophenyl-sulfonium cations**

As per our memo to dated 1/22/98, a copy of the final report for MB 97-6457.04 Primary Eye Irritation/Corrosion in Rabbits with Triphenyl Sulfonium Chloride Solution is being sent to you for inclusion with our 8(e) submission.

Sincerely yours,

Steven J. Barbee, Ph.D., D.A.B.T., C.I.H.  
Associate Director, Environmental Hygiene & Toxicology

**Contains No CBI**

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OLIN CORPORATION

# MB Research Laboratories, Inc.

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Steinsburg and Wentz Roads  
P.O. Box 178  
Spinnerstown, PA 18968  
phone (215) 536-4110  
fax (215) 536-1816

## VOLUME I

**Study Title** : Primary Eye Irritation/Corrosion in Rabbits

**Test Article** : Triphenyl sulfonium chloride solution Fluka  
catalog #93135

**Data Requirements** : EPA 40 CFR 158.340, Guideline Reference #81-4

**Author** : Daniel R. Cerven, M.S., Study Director

**Study Completed On** : January 28, 1998

**Performing Laboratory** : MB Research Laboratories, Inc.  
Steinsburg and Wentz Roads  
P.O. Box 178  
Spinnerstown, PA 18968

**MB Research Project #** : MB 97-6457.04

**MB Research Protocol #** : 264-03

**Sponsor** : Olin Corporation  
91 Shelton Avenue  
New Haven, CT 06511

**Citation** : Daniel R. Cerven, M.S. (1997)  
Unpublished Report by MB Research  
Laboratories, Inc.

# MB Research Labs

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Study Title : Eye Irritation in Rabbits  
Project # : MB 97-6457.04  
Test Article : Triphenyl sulfonium chloride  
solution Fluka catalog #93135  
Protocol : 264-03

## STATEMENT OF DATA CONFIDENTIALITY CLAIMS

Information claimed confidential on the basis of its falling within the scope of TSCA 40 CFR 790.5 and 7 has been removed to a confidential appendix, and is cited by cross-reference number in the body of the above study.

COMPANY : OLIN CORPORATION  
COMPANY AGENT : \_\_\_\_\_  
TITLE : \_\_\_\_\_  
SIGNATURE : \_\_\_\_\_  
DATE : \_\_\_\_\_

# MB Research Labs

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Study Title : Eye Irritation in Rabbits  
Project # : MB 97-6457.04  
Test Article : Triphenyl sulfonium chloride  
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## GOOD LABORATORY PRACTICES STATEMENT

This study meets the Good Laboratory Practice requirements of EPA 40 CFR parts 792 and 160, FDA 21 CFR Part 58 and as specified in The Testing of Chemicals, published by the Organization for Economic Cooperation & Development (OECD), 1982.

SUBMITTER : OLIN CORPORATION

Mary K. Donohue 3/3/98  
Signature Date

SPONSOR : OLIN CORPORATION

Mary K. Donohue 2/3/98  
Signature Date

STUDY DIRECTOR :

Daniel R. Cerven 2/2/98  
Daniel R. Cerven, M.S. Date  
MB RESEARCH LABORATORIES, INC.

## **MB Research Labs**

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**PROJECT NUMBER :** MB 97-6457.04  
**TEST ARTICLE :** Triphenyl sulfonium chloride solution Fluka catalog #93135  
**SPONSOR :** OLIN CORPORATION  
**TITLE :** Primary Eye Irritation/Corrosion in Rabbits  
**PROTOCOL # :** 264-03

### **A B S T R A C T**

**Objective:** To determine the irritant and/or corrosive effects of a test article when instilled into the rabbit eye. This study was designed to comply with the standards set forth by EPA/TSCA Health Effects Testing Guidelines, 40 CFR Part 798.4500.

**Method Synopsis:** Three healthy New Zealand White rabbits (males), free from evidence of ocular irritation and corneal abnormalities, were dosed with Triphenyl sulfonium chloride solution Fluka catalog #93135. The test article (0.1 ml) was placed into the conjunctival sac of one eye of each rabbit. All animals died within 15 minutes of test article administration. Body weights were recorded pretest.

**Summary:**

All three animals died within 15 minutes of the ocular administration with convulsions as the only predeath physical sign. Necropsy revealed abnormalities of the lungs and dosed eyes, as well as wetness of the nose/mouth area and yellow nasal discharge.

**Conclusion:** The test article produces death in rabbits following ocular administration. The test article is considered to be toxic (40 CFR 798.4500 (b)(1) & (2)).

# MB Research Labs

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Study Title : Eye Irritation in Rabbits  
Project # : MB 97-6457.04  
Test Article : Triphenyl sulfonium chloride  
solution Fluka catalog #93135  
Protocol : 264-03

## OBJECTIVE

To determine the irritant and/or corrosive effects of a test article when instilled into the rabbit eye. This study was designed to comply with the standards set forth by EPA/TSCA Health Effects Testing Guidelines, 40 CFR Part 798.4500.

## TEST ARTICLE

Identity : Triphenyl sulfonium chloride solution Fluka catalog #93135  
Source : Olin Corporation  
Date Received : 12/15/97  
Storage : The test article was stored at room temperature and humidity.  
Description : Clear pale yellow liquid  
Sample Preparation : The test article was used as received.

## TEST DATES

Study Initiation (date protocol signed) : 12/17/97  
Experimental Start Date (1st exposure to test substance) : 12/29/97  
Experimental Term Date (last date data collected) : 12/29/97  
Draft Report Signed (if applicable) : 01/22/98  
Final Report Signed (study completion) : 01/28/98

## EXPERIMENTAL DESIGN

### Test Animals

New Zealand White rabbits were received from Ace Animals, Boyertown, PA on 12/02/97 and quarantined for at least one week. Only animals in apparent good health were made available for study assignment. Prior to being selected for this study, both eyes of each animal were examined according to the Draize technique for any evidence of irritation or abnormalities of the cornea, iris and/or conjunctiva. A hand held auxiliary source of illumination was used to aid in the examination. Three rabbits (males), free from evidence of ocular irritation or abnormalities, were assigned to this study.

The animals were born the weeks of 9/14 through 10/05/97. The pretest body weight range was 2.0 - 2.4 kg. The animals were identified by cage notation and a uniquely numbered metal eartag. The animals were housed 1/cage in suspended cages. Bedding was placed beneath the cages. Fresh Purina Rabbit Chow (Diet #5321) was provided daily. Water was available ad libitum. The animal room, reserved exclusively for rabbits on acute tests, was temperature controlled, had a 12 hour light/dark cycle and was kept clean and vermin free.

## **MB Research Labs**

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### **EXPERIMENTAL DESIGN (continued)**

#### **Dosing**

One eye of each rabbit was dosed. The contralateral eye served as a control. The test article (0.1 ml) was placed by syringe into the conjunctival sac which was formed by gently pulling the lower eyelid away from the eye. After instillation, the lids were held together briefly to insure adequate distribution of the test article.

#### **Type and Frequency of Observations**

Body weights were recorded pretest.

The general health of the animals was monitored on the day of dosing.

#### **Analysis of Data**

The test article produces death in New Zealand White rabbits following ocular administration.

#### **Retention of Data**

The raw data is filed at MB Research by project number. The final report is filed at MB Research by sponsor name and MB project number.

The test article will be returned to the sponsor following submission of the report.

#### **Amendment to the Protocol**

There were no amendments to the protocol.

# MB Research Labs

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Study Title : Eye Irritation in Rabbits  
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## RESULTS AND DISCUSSION

### 2. Systemic Observations

All three animals died within 15 minutes of the ocular administration with convulsions as the only predeath physical sign. Necropsy revealed abnormalities of the lungs and dosed eyes, as well as wetness of the nose/mouth area and yellow nasal discharge.

## CONCLUSION

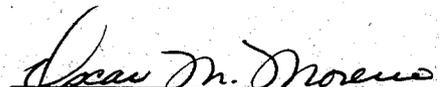
The test article produces death in rabbits following ocular administration. The test article is considered to be toxic (40 CFR 798.4500 (b)(1) & (2)).

## FINAL REPORT

Approved by:

 28 Jan 98  
Daniel R. Cerven, M.S. Date  
Study Director

Reviewed by:

 1/28/98  
Oscar M. Moreno, Ph.D. Date  
President

# MB Research Labs

Study Title : Eye Irritation in Rabbits  
Project # : MB 97-6457.04  
Test Article : Triphenyl sulfonium chloride  
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## RESULTS

### Body Weights and Systemic Observations:

<u>Animal #/Sex</u>	<u>Pretest Body Weights - kg</u>	<u>Post Dose Observations</u>
E9108-M	2.3	Convulsions, Death
E9122-M	2.4	Convulsions, Death
E9123-M	2.0	Convulsions, Death

### Necropsy Observations:

<u>Animal #/Sex</u>	<u>O b s e r v a t i o n</u>
E9108-M	Opacity on cornea
E9122-M	Lungs slightly darker than normal Lungs had scattered red areas Moderate yellow discharge from nasal tract Nose/mouth area moderately wet Opacity on cornea
E9123-M	Lungs slightly darker than normal Lungs had scattered red areas Opacity on cornea

# MB Research Labs

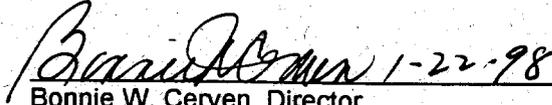
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## QUALITY ASSURANCE EVALUATION

The Quality Assurance Unit (QAU) has reviewed this report and determined that it accurately describes the methods and standard operating procedures used, and that the results contained herein accurately and fully reflect the raw data from this study.

The QAU inspected the necropsy phase of the study on 12/29/97, audited the raw data on 01/07/98 and audited the report on 1/22/98. QAU findings were reported to management and the Study Director on 1/22/98.

  
Bonnie W. Cerven, Director Date  
Quality Assurance Unit  
MB RESEARCH LABORATORIES, INC.