

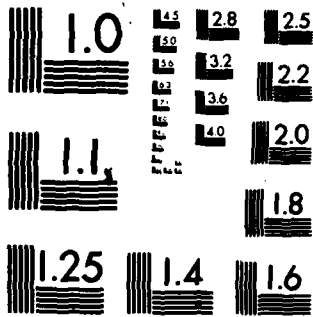
AD-A132 671 TOPICAL HAZARD EVALUATION PROGRAM OF CANDIDATE INSECT  
REPELLENT A13-38426..(U) ARMY ENVIRONMENTAL HYGIENE  
AGENCY ABERDEEN PROVING GROUND MD J V WADE 16 SEP 83  
UNCLASSIFIED USAEHA-75-51-0363-83 F/G 6/20

1/1

NL



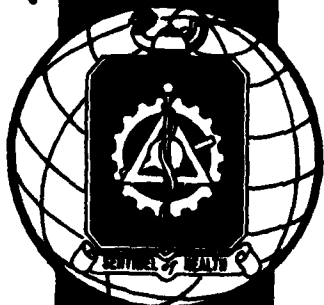
END  
DATE  
FILMED  
10 83  
DTIC



MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

AD-A132 671

(12)

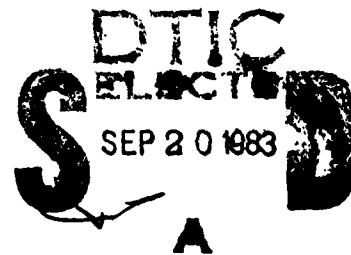


**UNITED STATES ARMY  
ENVIRONMENTAL HYGIENE  
AGENCY**

**ABERDEEN PROVING GROUND, MD 21010**

**A  
E  
H  
A**

TOPICAL HAZARD EVALUATION PROGRAM  
OF  
CANDIDATE INSECT REPELLENT A13-38426a  
US DEPARTMENT OF AGRICULTURE PROPRIETARY CHEMICAL  
STUDY NO. 75-51-0363-83  
FEBRUARY 1982 - MAY 1983



**DTIC FILE COPY**

Approved for public release; distribution unlimited.

**88 09 20 031**

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER 75-51-0363-83	2. GOVT ACCESSION NO. AD-A132 671	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Topical Hazard Evaluation Program of Candidate Insect Repellent AI3-38426a, US Department of Agriculture Proprietary Chemical, Study No. 75-51-0363-83, February 1982 - May 1983	5. TYPE OF REPORT & PERIOD COVERED Final, Feb 1982 - May 1983	
	6. PERFORMING ORG. REPORT NUMBER	
7. AUTHOR(s) John V. Wade	8. CONTRACT OR GRANT NUMBER(s)	
9. PERFORMING ORGANIZATION NAME AND ADDRESS Commander US Army Environmental Hygiene Agency Aberdeen Proving Ground, MD 21010	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
11. CONTROLLING OFFICE NAME AND ADDRESS Commander US Army Health Services Command Ft Sam Houston, TX 78234	12. REPORT DATE February 1982 - May 1983	
	13. NUMBER OF PAGES 6	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)	15. SECURITY CLASS. (of this report) Unclassified	
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) AI3-38426a Eye Irritation Skin Irritation Topical Hazard Evaluation Program USDA Proprietary Chemicals		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Chemical AI3-38426a did not produce primary skin irritation in rabbits. It produced moderate injury to the cornea and, in addition, some injury to the conjunctiva upon application to the eyes of rabbits.		

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)





DEPARTMENT OF THE ARMY  
U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY  
ABERDEEN PROVING GROUND, MARYLAND 21010

REPLY TO  
ATTENTION OF

MSHB-OT/WP

TOPICAL HAZARD EVALUATION PROGRAM  
OF  
CANDIDATE INSECT REPELLENT A13-38426a  
US DEPARTMENT OF AGRICULTURE PROPRIETARY CHEMICALS  
STUDY NO. 75-51-0363-83  
FEBRUARY 1982 - May 1983

1. AUTHORITY.

a. Letter, US Department of Agriculture - Agricultural Research, Southern Region, Insects Affecting Man and Animals Research Laboratory, Gainesville, Florida, 26 February 1982.

b. Memorandum of Understanding between the US Army Environmental Hygiene Agency; the US Army Health Services Command; the Department of the Army, Office of the Surgeon General; the Armed Forces Pest Control Board; and the US Department of Agriculture, Agricultural Research, Science and Education Administrations; titled, Coordination of Biological and Toxicological Testing of Pesticides, effective 23 January 1979.

2. REFERENCE. Toxicology Division Topical Hazard Evaluation Program Procedural Guide, US Army Environmental Hygiene Agency (USAEHA), January 1982.

3. PURPOSE. The purpose of this program is to provide guidance for further entomological testing of candidate insect repellent A13-38426a, US Department of Agriculture (USDA) Proprietary Chemical.

4. SUMMARY OF FINDINGS. Hazard evaluation of the candidate insect repellent A13-38426a, USDA Proprietary Chemical, was conducted by this Agency using New Zealand White rabbits for skin and eye studies. A tabular presentation of animal toxicity data developed at this Agency follows:\*†

\*In conducting the studies described in this report, the investigators adhered to the "Guide for the Care and Use of Laboratory Animals," US Department of Health, Education, and Welfare Publication No. (NIH) 80-23, revised 1978.

†The studies reported herein were performed in animal facilities fully accredited by the American Association for the Accreditation of Laboratory Animal Care.

Approved for public release; distribution unlimited

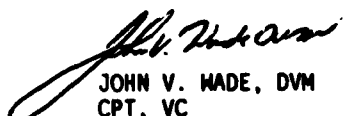
Study No. 75-51-0363-83, February 1982 - May 1983

TABLE. PRESENTATION OF DATA

Test	Results	Interpretation
<b>SKIN IRRITATION STUDIES</b>		
Rabbits		
Single 24-hour application to intact and abraded skin of New Zealand White rabbits.	Chemical A13-38426a did not produce irritation of the intact skin or of the skin surrounding an abrasion.	USAEHA Category I (ref Appendix A)
0.5 mL technical grade chemical applied to each of six rabbits.		
<b>EYE IRRITATION STUDIES</b>		
Rabbits		
Single 24-hour application of 0.1 mL technical grade chemical to one eye of each of nine New Zealand White rabbits. Three of the nine rabbits had the eye flushed with warm water for 1 minute, 25 seconds after application.	Chemical A13-38426a produced moderate injury to the cornea and, in addition, some injury to the conjunctiva. Washing the eye with water did not affect response.	USAEHA Category E (ref Appendix A).

5. CONCLUSION. Chemical A13-38426a did not produce primary skin irritation in rabbits. It produced moderate injury to the cornea and, in addition, some injury to the conjunctiva upon application to the eyes of rabbits. These studies were monitored by the Analytical Quality Assurance Office (see Appendix B).

6. RECOMMENDATION. Disapprove USDA Proprietary Chemical A13-38426a for further entomological testing in the form provided (under the provisions of the Memorandum of Understanding, para 1b, this report). If its repellent properties are significantly superior to the current standard repellent (M-DET), it should be resubmitted in a purified form or at the intended usage concentration. This is based on the favorable response obtained in skin irritation studies.

  
JOHN V. WADE, DVM  
CPT, VC  
Laboratory Animal  
Veterinary Officer  
Toxicology Division

APPROVED:

  
MAURICE H. WEEKS  
Chief, Toxicology Division

TOPICAL HAZARD EVALUATION PROGRAM  
DEFINITIONS OF CATEGORIES OF COMPOUNDS BEING  
CONSIDERED FOR ACUTE SKIN APPLICATION

CATEGORY I - Compounds producing no primary irritation of the intact skin or no greater than mild primary irritation of the skin surrounding an abrasion. (INTERPRETATION: No restriction for acute application to the human skin.)

CATEGORY II - Compounds producing mild primary irritation of the intact skin and the skin surrounding an abrasion. (INTERPRETATION: Should be used only on human skin found by examination to have no abrasions or may be used as a clothing impregnant.)

CATEGORY III - Compounds producing moderate primary irritation of the intact skin and the skin surrounding an abrasion. (INTERPRETATION: Should not be used directly on the skin without a prophetic patch test having been conducted on humans to determine irritation potential to human skin. May be used without patch testing, with extreme caution, as clothing impregnants. Compound should be resubmitted in the form and at the intended use concentration so that its irritation potential can be reexamined using other test techniques on animals.)

CATEGORY IV - Compounds producing moderate to severe primary irritation of the intact skin and of the skin surrounding an abrasion and, in addition, producing necrosis, vesiculation, and/or eschars. (INTERPRETATION: Should be resubmitted for testing in the form and at the intended use concentration. Upon resubmission, its irritation potential will be reexamined using other test techniques on animals, prior to possible prophetic patch testing in humans, at concentrations which have been shown not to produce primary irritation in animals.)

CATEGORY V - Compounds impossible to classify because of staining of the skin or other masking effects owing to physical properties of the compound. (INTERPRETATION: Not suitable for use on humans.)

EYE CATEGORIES:

A. Compounds noninjurious to the eye. INTERPRETATION: Irritation of human eyes is not expected if the compound should accidentally get into the eyes, provided it is washed out as soon as possible.

B. Compounds producing mild injury to the cornea. INTERPRETATION: Should be used with caution around the eyes.

C. Compounds producing mild injury to the cornea, and in addition some injury to the conjunctiva. INTERPRETATION: Should be used with caution around the eyes and mucosa.

D. Compounds producing moderate injury to the cornea. INTERPRETATION: Should be used with extreme caution around the eyes.

E. Compounds producing moderate injury to the cornea, and in addition producing some injury to the conjunctiva. INTERPRETATION: Should be used with extreme caution around the eyes and mucosa.

F. Compounds producing severe injury to the cornea and to the conjunctiva. INTERPRETATION: Should be used with extreme caution. It is recommended that use be restricted to areas other than the face.



Study No. 75-51-0363-83, February 1982 - May 1983

APPENDIX B

ANALYTICAL QUALITY ASSURANCE

The Analytical Quality Assurance Office certifies the following with regard to this study:

a. This study was conducted in accordance with:

(1) Standing Operating Procedures developed by the Toxicology Division, USAEHA.

(2) Title 21, Code of Federal Regulations, 1981 rev, Part 58, Good Laboratory Practice for Nonclinical Laboratory Studies.

b. Facilities were inspected during its operational phase to insure compliance with paragraph a above.

c. The information presented in this report accurately reflects the raw data generated during the course of conducting the study.



PAUL V. SNEERINGER, PH.D.  
Chief, Analytical Quality  
Assurance Office

EN

DAT  
FILM

10 - 8

DTI