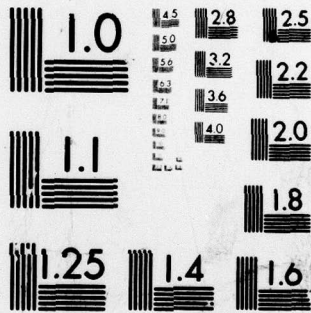


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TOPICAL HAZARD EVALUATION PROGRAM OF CANDIDATE INSECT REPELLENT--ETC(U)
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**UNITED STATES ARMY
ENVIRONMENTAL HYGIENE
AGENCY**

ABERDEEN PROVING GROUND, MD 21010

TOPICAL HAZARD EVALUATION PROGRAM
OF CANDIDATE INSECT REPELLENT AI3-37528a
US DEPARTMENT OF AGRICULTURE PROPRIETARY COMPOUND
STUDY NO. 75-51-0150-79
SEPTEMBER 1978 - JUNE 1979

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER 75-51-0150-79	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER 9
4. TITLE (and Subtitle) Topical Hazard Evaluation Program of Candidate Insect Repellent AI3-37528a, US Department of Agriculture Proprietary Compound, Study No. 75-51-0150-79, September 1978 - June 1979		5. TYPE OF REPORT & PERIOD COVERED Final report Sep 78 - Jun 79
7. AUTHOR(s) ALLEN W. SINGER, CPT, VC		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS US Army Environmental Hygiene Agency Aberdeen Proving Ground, MD 21010		8. CONTRACT OR GRANT NUMBER(s) 126
11. CONTROLLING OFFICE NAME AND ADDRESS Commander US Army Health Services Command Fort Sam Houston, TX 78234		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 11 12 Sep 79
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) 14 USAEHA-75-51-0150-79		12. REPORT DATE Sep 78 - Jun 79
		13. NUMBER OF PAGES 3
		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) Topical Hazard Evaluation Candidate Repellent AI3-37528a USDA Proprietary Compound eye irritation		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) A preliminary hazard evaluation of AI3-37528a was performed by means of laboratory animal studies using New Zealand White rabbits. When 0.1 ml of technical grade compound was applied to the conjunctival sac of three rabbits, generalized convulsions occurred within 1 minute. Testing was discontinued, and the animals observed for other toxic signs. Convulsions continued 10 to 15 minutes, with all rabbits ultimately recovering.		

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

CPT Singer/pf/AUTOVON
584-3980

12 SEP 1979

HSE-LT-T/WP

SUBJECT: Topical Hazard Evaluation Program of Candidate Insect Repellent
AI3-37528a, US Department of Agriculture Proprietary Compound,
Study No. 75-51-0150-79, September 1978 - June 1979

Executive Secretary
Armed Forces Pest Control Board
Forest Glen Section, WRAMC
Washington, DC 20012

A summary of the pertinent findings and recommendations of the inclosed report follows:

A preliminary hazard evaluation of AI3-37528a was performed by means of laboratory animal studies using New Zealand White rabbits. When 0.1 ml of technical grade compound was applied to the conjunctival sac of three rabbits, generalized convulsions occurred within 1 minute. Testing was discontinued, and the animals observed for other toxic signs. Convulsions continued 10 to 15 minutes, with all rabbits ultimately recovering. It was recommended that AI3-37528a, USDA proprietary compound, not be approved for further testing, and that similar compounds and homologs be handled with extreme caution.

FOR THE COMMANDER:

BRENDAN E. JOYCE, Ph.D.
LTC(P), MSC
Director, Laboratory Services

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CF:
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TOPICAL HAZARD EVALUATION PROGRAM
OF CANDIDATE INSECT REPELLENT AI3-37528a
US DEPARTMENT OF AGRICULTURE PROPRIETARY COMPOUND
STUDY NO. 75-51-0150-79
SEPTEMBER 1978 - JUNE 1979

1. AUTHORITY.

a. Letter, US Department of Agriculture - Agricultural Research Service, Southern Region, Insects Affecting Man and Animal Research Laboratory, Gainesville, Florida, 13 September 1978.

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 Administration; titled, "Coordination of Biological and Toxicological Testing of Pesticides," effective 23 January 1979.

2. REFERENCE. Toxicology Division Procedural Guide, USAEHA, 1972, revised 1976.

3. PURPOSE. The purpose of this program is to provide guidance for further entomological testing of the candidate insect repellent AI3-37528a.

4. SUMMARY OF FINDINGS. A hazard evaluation of the candidate repellent AI3-37528a, USDA Proprietary Compound, was conducted by this Agency using New Zealand White rabbits for eye studies. A tabular presentation of animal toxicity data developed in 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) 74-23, revised 1978.

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

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TABULAR PRESENTATION OF DATA

<u>Test</u>	<u>Results</u>	<u>Interpretation</u>
<u>EYE IRRITATION STUDIES</u>		
<u>Rabbits</u>		
Single 24 hour application of 0.1 ml technical grade compound to one eye of each of six New Zealand White rabbits.	Compound A13-37528a was applied to three rabbits before rabbit #2 began convulsing. Application was stopped, within 1 minute, all three rabbits were in convulsions. Additional observed toxic signs include: miosis of test eye, cyanosis and epistaxis. Convulsions lasted 10 to 15 minutes. Rabbits were sitting up, but dyspneic at 1 hour, and appeared normal by 3 days post instillation.	This chemical is extremely toxic to rabbits, and may be similarly toxic to man. Absorption is rapid through mucous membranes.

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5. CONCLUSION. Technical grade AI3-37528a is extremely toxic to rabbits and may be similarly dangerous to man. Absorption is very rapid by mucous membranes and this chemical may pose a real hazard to humans.

6. RECOMMENDATION. Under the provisions of the Memorandum of Understanding (paragraph 1b), it is recommended that AI3-37528a, USDA Proprietary Compound, not be approved for further testing as a candidate repellent. This chemical, as well as precursors and homologs should be identified and handled with extreme caution.

Allen W. Singer

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