

FOR DU PONT USE ONLY

Du Pont HLR 112-90

Study Title

Skin Irritation Test with [REDACTED] in Rabbits

Author

John W. Sarver

Study Completed On

March 5, 1990

Performing Laboratory

E. I. du Pont de Nemours and Company, Inc.
Haskell Laboratory for Toxicology and Industrial Medicine
Elkton Road, P. O. Box 50
Newark, Delaware 19714

[REDACTED]

[REDACTED]

Laboratory Project ID

Haskell Laboratory Report No. 112-90

GENERAL INFORMATION

Material Tested: [REDACTED]

Medical Research No.: [REDACTED]

Haskell No.: 18,267

Haskell Test Code No.: [REDACTED]

Physical Form: Amber dispersion

Purity: [REDACTED]

Composition: [REDACTED]

Synonym: [REDACTED]

Stability: The test material was assumed to be stable under the conditions of administration.

Sponsor: Chemicals and Pigments Department
E. I. du Pont de Nemours and Company, Inc.
Wilmington, Delaware

Material Submitted By: [REDACTED]
Chemicals and Pigments Department
E. I. du Pont de Nemours and Company, Inc.
Jackson Laboratory
Deepwater, New Jersey

Study Initiated - Completed: 2/2/90 - 3/5/90

In-Life Phase Initiated - Completed: 2/6/90 - 2/8/90

Notebook: [REDACTED]

There are 8 pages in this report.

Distribution: [REDACTED]

Skin Irritation Test with [REDACTED] in Rabbits

SUMMARY

[REDACTED] was evaluated for acute skin irritation potential in 5 male rabbits. The test material produced no dermal irritation in any of the treated rabbits during the study. Under the conditions of this study, [REDACTED] was not a skin irritant.

Work by:

Carol Finlay
Carol Finlay
Technician

Study Director:

John W. Sarver
John W. Sarver
Technologist

Approved by:

Dolores E. Malek
Dolores E. Malek, Ph.D.
Research Toxicologist
Acute and Developmental Toxicology Division

Reviewed and
Approved for Issue:

John W. Sarver
John W. Sarver
Study Director

3/5/90

Acknowledgment: Craig Lightcap also participated in the conduct of this study.

JWS:alr:HLR39.12

QUALITY ASSURANCE DOCUMENTATION

STUDY: [REDACTED]
H# 18,267

Skin Irritation Test with
[REDACTED] in Rabbits

AUDITS:

<u>Items Audited</u>	<u>Audit Dates</u>
In-life Observations	2/7/90
STSPS, Records and Final Report	2/28/90

SHORT-TERM AUDIT REPORT NUMBER: [REDACTED]
DATE FINDINGS REPORTED TO MANAGEMENT AND STUDY DIRECTOR: 2/28/90

Reported by: Joseph C. Hamill 2/28/90
Joseph C. Hamill Date
Quality Assurance Auditor

INTRODUCTION

The purpose of this study was to evaluate the skin irritation potential of [REDACTED] when applied to the clipped, intact skin of New Zealand White rabbits. This study was conducted according to the applicable EPA Good Laboratory Practice Regulations. Areas of non-compliance are documented in the study records. No deviations existed that significantly affected the validity of the study.

MATERIALS AND METHODS

A. Animal Husbandry

Young adult male New Zealand White rabbits were received from Hare Marland, Hewitt, New Jersey. The rabbits were housed singly in suspended, stainless steel, wire-mesh cages. Each rabbit was assigned a unique identification number which was recorded on a card affixed to the cage. Purina Certified High Fiber Rabbit Chow #5325 and water were available ad libitum except as noted under Protocol. Rabbits were quarantined, weighed and observed for general health for approximately 2 weeks. Animal rooms were maintained on a timer-controlled, 12-hour light/12-hour dark cycle. Environmental conditions of the rooms were targeted for a temperature of $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and relative humidity of $50\% \pm 10\%$. Any excursions outside these ranges were of small magnitude and/or brief duration and did not adversely affect the validity of the study.

B. Protocol

On the day prior to study initiation, the hair of 6 male New Zealand White rabbits was closely clipped to expose the skin from the scapular to the lumbar region of the back. The rabbits' body weights ranged from 2477 to 2733 grams on the day of treatment.

Each rabbit was placed into a stock which had been fitted with a piece of rubber sheeting, approximately 8" x 18". The rabbits remained in the stocks throughout the exposure period and during that time did not have access to food or water. Approximately 0.5 mL of [REDACTED] was applied directly on the test site beneath a 2-inch gauze square that was held in place with non-irritating tape. The rubber sheeting was then wrapped around the animal and secured with clips to retard evaporation and to keep the test material in contact with the skin without undue pressure.

Approximately 24 hours after application of the test material, the rubber sheeting was loosened, and the skin at the corners of the gauze squares was marked with a water-proof pen. Wrappings and gauze squares were then removed. The test sites were gently washed with warm water to remove excess test material. The skin was gently patted dry and the animals were returned to their cages.

Approximately 24 and 48 hours after application of the test material, the test sites were evaluated for erythema, edema and other evidence of dermal effects and were scored according to the Draize scale (Table I). The adjacent areas of the untreated skin were used for comparison.

C. Records Retention

All raw data and the final report will be stored in the archives of Haskell Laboratory for Toxicology and Industrial Medicine, E. I. du Pont de Nemours and Company, Inc., Newark, Delaware or in the Du Pont Records Management Center, Wilmington, Delaware.

RESULTS AND CONCLUSIONS

One rabbit died during the exposure period. Gross pathological examination revealed no abnormalities. The death of this rabbit was attributed to stress associated with the method of restraint. [REDACTED] produced no dermal irritation in any of the remaining rabbits during the study. Individual skin irritation scores are presented in Table II. A summary of responses is presented in the following table.

Summary of Skin Responses to [REDACTED]

Response	Erythema		Edema	
	24 hr	48 hr	24 hr	48 hr
No Response	5/5	5/5	5/5	5/5

Under the conditions of this study, [REDACTED] was not a skin irritant.

TABLE I**DRAIZE¹ SCALE FOR SCORING PRIMARY SKIN IRRITATION**

<u>Evaluation of Skin Reactions</u>	<u>Value</u>	
Erythema and eschar formation:		
No erythema	0	
Very slight erythema (barely perceptible)	1 (Slight)	
Well-defined erythema	2 (Mild)	
Moderate to severe erythema	3 (Moderate)	
Severe erythema (beet redness) to slight eschar formation (injuries in depth)	4 (Severe)	
Edema formation:		
No edema	0	
Very slight edema (barely perceptible)	1 (Slight)	
Slight edema (edges of area well defined by definite raising)	2 (Mild)	
Moderate edema (raised approximately 1.0 mm)	3 (Moderate)	
Severe edema (raised more than 1.0 mm extending beyond the area of exposure)	4 (Severe)	
Abbreviations of other dermal effects are:		
A = Abraded	F = Fissuring	L = Sloughing
I = Intact	N = Necrosis	R = Raw Areas
T = Thickening	G = Fissuring with Bleeding	X = Compound Adhered to Skin
C = Eschar	S = Epidermal Scaling	SN = Superficial Necrosis
- = No Effect		
B = Blanching		

¹ Draize, J. H., "Dermal Toxicity." Appraisal of the Safety of Chemicals in Foods, Drugs and Cosmetics. The Editorial Committee of the Association of Food and Drug Officials of the United States, Austin, Texas, 1959, pp. 46-59.

TABLE 11

RABBIT SKIN IRRITATION TEST

SKIN RESPONSES OBSERVED IN TEST
RABBITS FOLLOWING TOPICAL EXPOSURE TO [REDACTED]

Rabbit Number	Erythema		Edema	
	24 hr	48 hr	24 hr	48 hr
24565	0	0	0	0
24566	0	0	0	0
24567	0	0	0	0
24568	-	-	-	-
24569	0	0	0	0
24570	0	0	0	0

- Rabbit died during the exposure period.