DuPont Haskell Laboratory
for Health and Environmental Sciences
Elkton Road, P.O. Box 50
Newark, DE 19714-0050

RECEIVED
07 APR 27 AM 6:55

April 25, 2007

Via Federal Express

CONTAIN NO CBI

Document Processing Center (Mail Code 7407M)
Room 6428
Attention: 8(e) Coordinator
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
1201 Constitution Ave., NW
Washington, DC 20460

8EHQ-07-16818

Dear 8(e) Coordinator:

This letter is to inform you of the results of several pre-1977 toxicity studies that we recently became aware of, for several individual test substances and several complex mixtures. The studies include an acute oral toxicity study in rats, primary skin irritation and sensitization tests on guinea pigs, and either a one-subject human skin tests or a 50 subject human patch test for skin sensitization.

Under the experimental conditions used for these studies, the findings appear to be reportable, based upon the guidance given in the EPA TSCA Section 8(e) Reporting Guide (June 1991).

A copy of each report is attached.

Sincerely,

A. Michael Kaplan

8807000023 6

A. Michael Kaplan, Ph.D.
Director – Regulatory Affairs and Occupational Health

AMK: clp
(302) 366-5260

Attachments: (6) Haskell Report No. 71-68 (2 pages); 128-70 (3 pages); 129-70 (3 pages); 592-74 (3 pages); 610-74 (2 pages); and 308-68 (7 pages).

304180

Copies to: A. C. Schoenthaler (6)

E. I. du Pont de Nemours and Company
Haskell Laboratory for Toxicology and Industrial Medicine

HASKELL LABORATORY REPORT NO. 71-68 MR NO. 586

Material Tested: Trimethylolpropane Triacrylate Haskell No.: 5558

Material Submitted by: A. C. Schoenthaler, Photo Products Department Research Division Other Codes: TMPTA Lot No. PB 289

ACUTE ORAL TEST

Procedure: The test material was administered in single doses, as a suspension in peanut oil, to young adult ChR-CD male rats by intragastric intubation. Survivors were sacrificed 14 days later.

Results:

Suspension %	Dose mg/kg	Mortality*	Toxic Signs	Gross Pathologic Evaluation	ALD
45	11,000	D - 1 d.	Lethal Doses: irregular respiration, pallor, chewing-motions, salivation, at all levels; face-pawing and incoordination at 7500 mg/kg and above; continuous weight loss at 5000 mg/kg Nonlethal Doses: pallor, irregular respiration, chewing-motions and salivation at 3400 mg/kg for 3 days; weight losses at 3400 mg/kg for 2 days; none at 670 and 2250 mg/kg	Lethal Doses: concretion of test material (bezoar) in stomach at 7500 and 11,000 mg/kg; mucosa of GI tract hyperemic; advanced PM changes at 5000 mg/kg precluded evaluation Nonlethal Doses: none attributable to compound, 14 days after dosing	5000 mg/kg
45	7,500	D - 1 d.			
45	5,000	D - 10 d.			
45	3,400	S - 14 d.			
15	2,250	S - 14 d.			
15	670	S - 14 d.			

* D - ( ) d. = Found dead ( ) days after dosing.
S - ( ) d. = Sacrificed ( ) days after dosing.

Summary: TMPTA is slightly toxic when administered orally to male rats in single doses, its Approximate Lethal Dose (ALD) being 5000 mg/kg. Based on clinical signs and gross pathologic evaluation, TMPTA appears to act as a gastrointestinal irritant.

Report by: Elizabeth N. Miles
Elizabeth N. Miles
Oral Toxicology Section

Henry Sherman
Henry Sherman
Chief, Oral Toxicology Section

Approved by: John A. Zapp, Jr.
John A. Zapp, Jr.
Director

EYM:HS/jch
Date: March 5, 1968

Copies to: A. B. Jennings (6)
R. P. Held (1)

E. I. du Pont de Nemours and Company
Haskell Laboratory for Toxicology and Industrial Medicine

HASKELL LABORATORY REPORT NO. 128-70 MR NO. 1281

Materials Tested:	Haskell Nos.	Other Codes
1) Trimethylol Propane Triacrylate (liquid)[1]	1) 6385	1) TMPTA; SR-35
2) Custom Toning Film (TMPTA composition)[2]	2) 6388	2) HRYM-369

Materials Submitted by: R. P. Held, Photo Products Department
Parlin Research Laboratory

PRIMARY SKIN IRRITATION AND SENSITIZATION TESTS ON GUINEA PIGS

Introduction: Since acrylates generally cause skin irritation and sensitization, it was necessary to determine if film prepared from an acrylate composition contained enough free acrylate to give skin reaction. The experimental plan was to prepare guinea pigs sensitized to the liquid acrylate, prove sensitization by challenge, and then to test the film itself on sensitized skin.

Procedure: To test for primary irritation, 0.05 ml each of undiluted test material, 50%, 5%, and 1% (v/v) solutions in f.a.d. (13% (w/v) guinea pig fat in a 1:1 solution of acetone and dioxane) were applied to the shaved intact shoulder skin of ten male albino guinea pigs. To test for the sensitization potential, a series of exposures was given over a three-week interval. Five animals received applications of 0.05 ml (4 x 1%, 5 x 5%) of test material in f.a.d. to clipped abraded shoulder skin. The remaining five guinea pigs received four sacral intradermal injections (one week apart) of 0.1 ml 1% solution[3]. After a two-week rest period, the animals were challenged (I) for sensitization by applying 0.05 ml 1% concentration to both intact and abraded skin, and 5% to intact skin. A set of ten previously unexposed control animals was similarly treated at this time to compare the magnitude of response. Two days later, one-inch square patches of custom toning film containing TMPTA (Challenge II) were applied to both intact and abraded skin of all ten test guinea pigs. The trunk of each animal was then wrapped with a layer of stretch gauze bandage and elastic adhesive tape. Wrappings and film were removed after 24 hours. Once a week, for the next two weeks, the test animals received a sacral intradermal injection of 0.1 ml Complete Freund's Adjuvant, followed one and one-half hours later by another injection at the same site of 0.1 ml 1% concentration test material and 0.05 ml 50% (v/v) concentration to abraded flank skin. Following a two-week rest period, the animals were challenged (III) with 5% and 1% (v/v)

1) 1,3,-Propanediol, 2-ethyl-2-/hydroxymethyl/triacrylate
Impurities: Hydroquinone ~ 100 ppm by weight (TMPTA)

2) Composition by weight:

TMPTA	49. %
Elvacite 2008	40. %+
2-Pyrrolidinone	8.2%
Lophine dimer initiating system	2.2%

3) Test material diluted to 5% (w/v) in a 1:1 solution of acetone and dioxane and then diluted to 1% (v/v) in DMP (dimethyl phthalate)

Procedure: (Cont'd.)

concentrations to abraded back skin. One week later the same ten animals were wrapped again for 24 hours (Challenge IV) with one-inch squares of custom toning film on abraded back skin. Later, five guinea pigs were wrapped for 24 hours with two one-inch squares of custom toning film on intact back skin as controls for challenge responses.

Results:

				Reactions[a] One Day after Treatment				
				Test Animals		Control Animals		No. of Test Animals
	H No.	% Test Material	Solvent	Intact Skin	Abraded Skin	Intact Skin	Abraded Skin	Sensitized
Primary Irritation	6385	Undiluted	--	10+++	--	--	--	
	6385	50	f.a.d.	9+++, 1++	--	--	--	
	6385	5	f.a.d.	4+++, 6++	5++++	1++++, 7+++, 2++	--	
	6385	1	f.a.d.	2++, 8+	2++, 3+	3++, 7+	5++, 5+	
	6388	Film	--	--	--	7+, 3 negative	--	
Challenge I	6385	5	f.a.d.	2++++, 4+++, 4++	--	--	--	
	6385	1	f.a.d.	1+++, 3++, 6+	1+++, 4++, 5+	--	--	3/10
Challenge II	6388	Film	--	2+++, 8++	3+++, 7++	--	--	2/10
Challenge III	6385	5	f.a.d.	--	9++++, 1++	--	--	
	6385	1	f.a.d.	--	3++++, 4+++, 3++	--	--	5/10
Challenge IV	6388	Film	--	--	1+++, 3++, 4+, 2 neg.	--	--	1/10

NOTE: The test liquid elicited a sensitization response in 3-5 of 10 animals tested, but the film elicited a response in only 1-2 of the 10 test guinea pigs.

a) Reaction code: +, ++, +++ = Mild, moderate, strong erythema; ++++ = erythema with edema

Summary and Conclusions: Trimethylol propane triacrylate (TMPTA) as undiluted test material produced strong erythema on intact guinea pig skin, and as 50%, 5%, and 1% (v/v) solutions in f.a.d. produced variable mild to strong erythema. From the reactions observed at the times of the challenges with both TMPTA and the custom toning film (49% TMPTA), it is difficult to estimate the sensitization potential. TMPTA is definitely a skin sensitizer. The film itself does cause skin reaction in guinea pigs sensitized to TMPTA. However, with proper industrial hygiene practices the risk of sensitization can be considerably reduced.

Reference: Haskell Laboratory Reports Nos. 129-70 and 130-70.

Report by: Maureen E. McDonnell
Maureen E. McDonnell

MEMcD:dhg
Date: March 25, 1970
Report No. 128-70
N.B. 862-62

Approved by: John A. Zapp, Jr.
John A. Zapp, Jr.
Director

Copies to: A. B. Jennings (6)
R. P. Held (1)

E. I. du Pont de Nemours and Company
Haskell Laboratory for Toxicology and Industrial Medicine

HASKELL LABORATORY REPORT NO. 129-70 MR NO. 1281

Materials Tested:	Haskell Nos.	Other Codes
1) Propylene Glycol Ether of Trimethylol-propane Triacrylate	1) 6386	1) TPOTA; Sartomer Resins SR-325
2) Custom Toning Film (TPOTA composition)*	2) 6387	2) HRYM-387

Material Submitted by: R. P. Held, Photo Products Department, Parlin

PRIMARY SKIN IRRITATION AND SENSITIZATION TESTS IN GUINEA PIGS

Procedure: To test for primary irritation, 0.05 ml undiluted TPOTA and 50%, 5% and 1% (v/v) solutions of TPOTA in f.a.d.** were applied to clipped intact shoulder skin of ten male albino guinea pigs (Group A; av. wt. 552 g). Sensitization treatments were given over a three-week period and consisted of nine topical applications of TPOTA in f.a.d. (three times with 1% (v/v), once with 3%, five times with 5%) to clipped abraded skin of five pigs, and four sacral intradermal injections of 1% (v/v) TPOTA in acetone-DMP*** to the other five pigs. After a two-week rest period, all of the animals (av. wt. 710 g) were given topical applications of 5% and 1% (v/v) solutions of TPOTA in f.a.d. to both intact and abraded skin (Challenge I). A second group of guinea pigs (Group B av. wt. 655 g) not previously treated was given similar exposure. Group A pigs were also exposed to custom toning film containing TPOTA. A one-inch square patch of film was applied to both intact and abraded skin of each pig, and the trunk of the animal was then wrapped in one layer of gauze and one layer of elastic bandage for 24 hours (Challenge II). In the next two weeks, Group A guinea pigs were each given two flank applications on abraded skin of 50% (v/v) TPOTA in f.a.d. and two sacral intradermal injections of Freund's Complete Adjuvant and 1% (v/v) TPOTA in acetone-DMP. Following this, Group A pigs (av. wt. 823 g) were again challenged with 5% and 1% (v/v) solutions of TPOTA in f.a.d. applied to intact and abraded skin (Challenge III) and two patches of custom toning film applied to abraded skin (Challenge IV). A third group of five guinea pigs (Group C av. wt. 587 g) served as the control group for application of the custom toning film to abraded skin areas.

* Composition:		
	TPOTA	48.3%
	Elvacite 2008	40.3%
	2-Pyrrolidinone	10.0%
	Initiating System	1.4%

** 13% (w/v) Solution of guinea pig fat in 1:1 acetone-dioxane

*** 0.1 ml of a 10% (v/v) solution of TPOTA in acetone was diluted to 10 ml with dimethyl phthalate (DMP)

Results:

Test	Compound	Conc. (%)	Reactions[a] 24 Hours after Treatment: Test Animals (Group A) Intact Skin	Test Animals (Group A) Abraded Skin	Controls for Challenge Intact Skin	Controls for Challenge Abraded Skin	No. Sensitized[b]
Primary Irritation	H 6386	100	7+++, 3++	--	--	--	
		50	9+++, 1++	--	--	--	
		5	1+++, 9++	--	1++++, 1+++, 8++	6++++, 1+++, 3++	
		1	2++, 8+	5+	7++, 3+	2++++, 5++, 3+	
	H 6387	Film	--	--	--	2+, 8 negative	
Challenge I	H 6386	5	4++++, 3+++, 3++	7++++, 3++	--	--	3/10
		1	7++, 3+	1++++, 9++	--	--	
Challenge II	H 6387	Film	2++, 1+, 7 neg.	10 negative	--	--	0/10
Challenge III	H 6386	5	3++++, 3+++, 4++	10++	--	--	2/10
		1	4++, 5+, 1 neg.	4++, 6+	--	--	
Challenge IV	H 6387	Film	--	2+++, 6++, 5+, 7 neg.	--	--	1-3/10

NOTE: The same guinea pigs did not react in all four challenge tests.

---

a) Reaction code: +, ++, +++ = Mild, moderate, strong erythema; ++++ = erythema with edema

b) A guinea pig is considered sensitized when his reaction score in the challenge test shows a two-step increase (++) over his primary irritation score and over the average score of the control pigs.

Summary: TPOTA at various concentrations was mildly to strongly irritating to the intact skin of young guinea pigs and at low concentrations was more irritating to older guinea pigs, especially on abraded skin. After repeated exposures, several pigs became sensitized to the material, although it is uncertain exactly how many were sensitized.

Film which contains 48% TPOTA was not significantly irritating to young guinea pigs; this film, however, apparently releases TPOTA since several pigs reacted to it after their sensitizing treatments. Moreover, the film elicited a severe reaction on an acrylate-sensitized person[c].

Although the effects of TPOTA and the film on guinea pigs in this test are not particularly alarming, it is quite likely that because of the test procedure the true sensitization potential of TPOTA was not revealed. From past experience it has been learned that acrylates do not sensitize guinea pigs easily although they may readily sensitize people. The true potency of this material and film may be better realized from the strong reaction on our human subject.

Conclusion: TPOTA alone and on custom toning film is capable of producing mild to strong irritation and sensitization. In these respects, it is comparable to TMPTA[d]. Although both of these compounds and films should be avoided by people who were previously exposed to acrylates, the TMPTA film will probably be the more hazardous.

c) N.B. 718-142

d) Haskell Laboratory Report No. 128-70 (1,3-Propanediol, 2-ethyl-2-[hydroxymethyl]triacrylate)

Report by: Linda A. Koch
Linda A. Koch

LAK:dhg
Date: March 26, 1970
Report No. 129-70
N.B. 862-68.

Approved by: John A. Zapp, Jr.
John A. Zapp, Jr.
Director

Copies to: D. W. Woodward (1)
R. J. Kempf (1)

E. I. du Pont de Nemours and Company
Haskell Laboratory for Toxicology and Industrial Medicine

HASKELL LABORATORY REPORT NO. 592-74 MR NO. 1902-001

Materials Tested	Haskell No.	Other Codes	Submitted by
1) Triethylene glycol diacrylate (A) solution	1) 8980	1) E 4626-51-1A	R. J. Kempf, Photo Products Department, Parlin, New Jersey
Triethylene glycol diacrylate (B) solution acidified	8981		
2) Methacrylic acid, ester with triethylene glycol (A) solution	2) 8982	2) E 4626-51-3A	
Methacrylic acid, ester with triethylene glycol (B) solution acidified	8983		
3) 1,3-Propanediol,2-ethyl-2-(hydroxymethyl), triacrylate (A) solution	3) 8984	3) OZD-18A	
1,3-Propanediol,2-ethyl-2-(hydroxymethyl), triacrylate (B) solution acidified	8985		

ONE-SUBJECT HUMAN SKIN TEST

Purpose: This test was conducted to determine the comparative dermatitis hazard of spent Dycril® alkaline and acidified processing solutions containing TDA, TDMA and TMPTA monomers.

Procedure: One drop of the test solutions was applied to a 1 1/2 cm square of Whatman No. 4 filter paper which was attached to Dermicel® adhesive tape. The patches were then applied to the arms of the acrylate-sensitive subject and observations made at time itching started, periodically through 24 hours, 33 hours, 48 hours and 72 hours after patches were applied.

Results:

Haskell No.	Time Reactions (After Application)
8980	4 hours, itching started; 5 1/2 hours, removed patch, mild erythema beyond test site with moderate edema; 11 1/2 hours, entire test area a square blister; 20 hours, blister broken; 24 hours, blister weeping; 48 - 72 hours, no change.

Results: (Continued)

Haskell No.	Time Reactions (After Application)
8981	4 1/2 hours, itching started; 5 1/2 hours, removed patch, moderate erythema and mild edema; moderate edema with moderate erythema beyond test site; 12 1/2 hours, entire test area covered with papules; 20 hours, large blister formed; 24 hours, blister weeping; 48 - 72 hours, no change.
8982) 8983) 8984) 8985)	Patches removed after 24 hours with no skin erythema or edema through 72 hours.

Summary: Triethylene glycol diacrylate (TDA) solutions, both alkaline and acidified, produced moderate to severe irritation with papules and blisters and moderate edema. Methacrylic acid, ester with triethylene glycol (TDMA) and 1,3-propanediol, 2-ethyl-2-(hydroxymethyl) triacrylate (TMPTA) solutions, both alkaline and acidified, produced no skin irritation at any examination on an acrylate-sensitive subject. This test indicates that all caution should be used to prevent skin contact when handling the triethylene glycol diacrylate solutions. Although the other acrylate solutions tested did not produce any irritation, more testing should be done before they are considered to present no dermatitis potential. In another test TMPTA elicited an allergic response on this same subject at 10 ppm concentration.

Preparation of Solutions

H-8980 - 0.62 gm of E 4626-51-1A raw material in 100 ml of 0.3 N NaOH = 1400 ppm.
H-8981 - 50 ml of H-8980 solution acidified with glacial acetic acid to pH ~5.
H-8982 - 0.62 gm of E 4626-51-3A raw material in 100 ml of 0.3 N NaOH = 1400 ppm.
H-8983 - 50 ml of H-8982 solution acidified with glacial acetic acid to pH ~5.
H-8984 - 0.62 gm of OZD-18A raw material in 100 ml of 0.3 N NaOH = 1400 ppm.
H-8985 - 50 ml of H-8984 solution acidified with glacial acetic acid to pH ~5.

Composition:

	Sample 1) E 4626-51-1A	Sample 2) E 4626-51-3A
Cellulose hydroacetate	37 gm	37 gm
Cellulose acetate	9.2	9.2
Succinic anhydride	14.3	14.3
Triethylene glycol diacrylate (TDA)	25	-
Triethylene glycol dimethacrylate (TDMA)	-	25

Composition: (Continued)

	Sample	
	1) E 4626-51-1A	2) E 4626-51-3A
Tributoxyethyl phosphate	13 gm	- gm
Triethylene glycol diacetate	-	13
Glutaric acid	1	1
2-Ethyl anthraquinone	0.1	0.1
Methyl ether of hydroquinone	0.18	0.18
Indigo	0.02	0.02
N,N-diethylcyclohexylamine	3.2 ml	3.2 ml

	3) OZD-18A
Carboset® 525 (poly(methylmethacrylate/ethyl acrylate/acrylic acid)	42.7
SMA 2625 (poly(styrene/maleic anhydride)	15
PVP/VA S-630 (poly(vinyl pyrrolidone/vinyl acetate)	17
Trimethylolpropane triacrylate (TMPTA)	25
2-Ethyl anthraquinone	0.1
Methyl ether of hydroquinone	0.18

Report by: O. Louis Dashiell

O. Louis Dashiell

Approved by: Raymond W. Morrow

Raymond W. Morrow
Chief, Dermal and Ocular Toxicology Section

N.B. E-5626, page 41
OLD/aph
Report No. 592-74
Date Issued: October 21, 1974

Copies to: D. W. Woodward (1)
H. B. Hicks, Jr. (1)

E. I. du Pont de Nemours and Company
Haskell Laboratory for Toxicology and Industrial Medicine

HASKELL LABORATOPY REPORT NO. 610-74 MR NO. 1730-001

Materials Tested	Haskell Nos.	Other Codes
1) Methacrylic acid, ester with triethylene glycol	1) 8354	1) (TDMA) Sartomer Invoice No. 21021
2) Pentaerythritol triacrylate*	2) 8754	2) (PETA) SR-295
3) Riston® LEH Condensate	3) 9098	3) None
4) 1,3-Propanediol, 2-ethyl-(hydroxymethyl), triacrylate**	4) 9067	4) (TMPTA) RMF 231t
5) 1,10-Decamethylene glycol diacrylate	5) 9068	5) (DMDA) Sartomer INV 20608
6) 1,3-Propanediol, 2-ethyl-2-(hydroxymethyl), triacrylate/methacrylic acid, ester with triethylene glycol 2:1 mixture	6) 9067/ 8354	6) None

Materials Submitted by: H. B. Hicks, Jr., Photo Products Department, Parlin, New Jersey.

ONE-SUBJECT HUMAN SKIN TEST

Purpose: This test was conducted to compare the possible dermal reaction of these acrylate-containing materials on an acrylate-sensitive subject.

Procedure: One drop of the test solutions[1)] was applied to a 1 1/2 cm square of Whatman No. 4 filter paper which was attached to Dermicel® adhesive tape. The patches were then applied to the arms of the acrylate-sensitive subject and observations were made at patch removal, 24 hours after application, and at 12, 24, 48 and 72 hours after patch removal.

Results:

Haskell No.	Reactions (After Application)
8354	No reaction during test.
8754	No reaction during test.
9098	36 Hours - itching with mild irritation and no edema; 42 hours - mild irritation extending beyond site of application; 72 hours - moderate irritation extending well-beyond test site.

Results (Continued)

Haskell No.	Reactions (After Application)
9067	36 Hours - slight itching with mild irritation; 42 hours - mild irritation extending beyond test site; 72 hours - moderate erythema extending over double the patch site area.
9068	No reaction during test.
9067/8354 Mixture	57 Hours - slight itching with very mild irritation.

Summary: The Riston® LEH condensate produced mild to moderate skin irritation when tested on an acrylate-sensitive subject. 1,3-Propanediol, 2-ethyl-2-(hydroxymethyl), triacrylate produced mild to moderate skin irritation and the mixture of 1,3-propanediol-2-ethyl-2-(hydroxymethyl), triacrylate/methacrylic acid, ester with triethylene glycol (2:1) produced only very mild skin irritation. Methacrylic acid, ester with triethylene glycol alone did not produce any skin irritation nor did pentaerythritol triacrylate or 1,10-decamethylene glycol diacrylate. Of the acrylate materials tested, 1,3-propanediol-2-ethyl-2-(hydroxymethyl), triacrylate and the Riston® LEH condensate appear to have the greatest potential as a dermatitis hazard.

Preparation of Solutions

1) The test solutions as received were diluted with ethanol to 0.001% before testing. The mixture of H-9067/H-8354 2:1, was made after diluting both materials to 0.001%.

* Contains 0.1 - 0.35% MEHQ inhibitor.

** Contains 50 ppm hydroquinone inhibitor.

Report by: O. Louis Dashiell

Approved by: Raymond W. Morrow
Chief, Dermal and Ocular Toxicology Section

N.B. E-5626, page 53
OLD/aph
Report No. 610-74
Date Issued: October 24, 1974

MRO-1116-1[4]

HLO-0308-68

REPORT

TO

E. I. du Pont de Nemours & Co.

ON

Sensitization Potential

of

Products 5716 & 5717

Submitted By:

Ivy Research Laboratory, Inc.
Philadelphia, Pennsylvania

Distribution

1. JAZ, JFM, C.A. D'ALONZO, FILE
2. JWC
3. DBH
4. FILE COPY
5.-10. A. C. SCHOENTHALER

Haskell No.	Test Material
5716	Lydel® Photopolymer Lithographic Printing Plate
5717	Lydel® Lithographic Printing Plate Developer

STUDY SYNOPSIS

OBJECTIVE

To evaluate the sensitizing potential of metal coating 5716.

METHOD

Fifty healthy males served as subjects. The manner of removing the coating was according to the directions given. The coating was washed off the plates using solution 5717.

Two inch squares (4 sq. in.) of non-woven cloth (Webril) were moistened with the test solution and applied to the back as an open patch 7 hours a day for 30 days. Fourteen days later the patches were reapplied for 48 hours.

Six subjects showed evidence of irritation during the induction phase. These results are enclosed.

RESULTS

Three of the subjects exhibited evidence of contact allergy at the time of challenge. One subject was biopsied and diagnosis of allergic response was proven histologically. Slides of this biopsy are enclosed.

Respectfully submitted,

Albert M. Kligman, M.D.

RECEIVED

SEP 16 1968

HASKELL LAB.

SUBJECT DATA & CHALLENGE RESULTS

Subj. No.	Initials	Age	Race	Weight	CHALLENGE 48 hours	CHALLENGE 72 hours
1	R. H.	40	N	170	0	0
2	F. M.	28	N	195	0	0
3	R. K.	35	N	160	0	0
4	J. C.	22	N	140	2	2
5	J. K.	58	W	180	0	0
6	V. G.	24	N	160	0	0
7	J. A.	26	W	153	0	0
8	L. W.	52	N	162	0	0
9	M. M.	39	N	180	0	0
10	J. M.	29	N	160	0+	0
11	R. V.	24	N	156	0	0
12	W. C.	23	N	168	0	0
13	B. H.	33	N	210	0	0
14	J. M.	43	N	160	0	0
15	J. H.	39	N	224	0	0
16	J. M.	31	N	147	0	0
17	A. Y.	27	N	185	0	0
18	C. R.	39	N	172	0	0
19	P. H.	22	N	175	0	0
20	E. R.	40	N	148	0	0
21	J. S.	22	N	164	0	0
22	E. H.	57	N	207	0	0
23	H. M.	26	N	165	0	0

Subj. No.	Initials	Age	Race	Weight	CHALLANGE 48 hours	CHALLANGE 72 hours
24	D. F.	27	N	180	0	0
25	L. H.	39	N	208	0	0
26	W. T.	31	N	175	0	0
27	O. T.	29	N	202	0	0
28	C. B.	34	N	170	0	0
29	M. H.	21	N	126	0	0
30	C. B.	42	N	141	0	0
31	R. P.	33	N	152	2	2 *
32	R. S.	54	W	142	0	0
33	J. C.	23	W	165	0	0
34	F. J.	26	N	128	0	0
35	D. S.	32	N	147	0	0
36	W. J.	45	N	182	0	0
37	E. C.	27	N	170	0	0
38	M. D.	39	N	175	0	0
39	R. H.	31	N	145	0	0
40	J. F.	46	N	145	0	0
41	H. J.	38	N	152	0	0
42	D. E.	41	W	190	1	2
43	L. P.	43	N	145	0	0
44	W. H.	22	N	155	0	0
45	F. H.	30	N	165	0	0
46	F. K.	60	W	130	0	0
47	C. D.	34	N	170	0	0
48	A. S.	44	N	165	0	0
49	J. H.	38	N	150	0	0
50	E. J.	27	N	182	0	0

* Biopsy

IRRITATION EFFECTS

Subject No.	APPLICATION NUMBER 24	25	26	27	28	29	30
8	0	0	0	0	0	0	1
9	0	0	0	1	0	0	0
17	0	0	0	0	0	0	1
41	1	1	0+	0	0	0	0
42	0	0	0	0	0	1	?
43	0	0	0	0	0	1	1

Haskell Report No. 0308-68

Composition:

Lydel Photopolymer Lithographic Printing Plate: Haskell No. 5716

Oxygen Barrier Layer
- Polyvinyl pyrrolidone
- Polyvinyl alcohol
- Triton X-100

Photopolymer Layer
- Methacrylate copolymer
- Trimethylolpropane triacrylate
- A mixture of hexanoic and octanoic acid esters of triethylene glycol
- 2-(o-chlorophenyl)-4, 5-bis-(m-methoxy-phenyl) imidazolyl dimmer
- Tris-(4-diethylamino-o-tolyl) methane
- 4, 4'-bis (dimethylamino)-benzophenone
- C.I. Solvent Red #109 Dye

Lydel Lithographic Printing Plate Developer: Haskell No. 5717
- Trisodium phosphate, dodecahydrate
- Sodium phosphate, monobasic monohydrate
- Triton X-100
- Butyl Cellosolve
- Water