FYI-0594-0916

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DCN 84940000016; FYI-94-916

FYI-94-000916
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May 17, 1994

Dear FYI Coordinator:

In accordance with API's policy of providing the federal government with copies of research designed to determine whether any chemical substance or mixture manufactured, processed or distributed by API member companies may cause a risk of injury to health or the environment, we are enclosing a copy of the following draft report:

(Identification no: FYI not assigned) Effects of Dermal Exposure to Petroleum Middle Distillates on Irritation and Epidermal Hyperplasia in Mouse Skin. Draft Histology Report. Dermigen Protocol No. 910801.

Please note that this information is provided in accordance with the full disclosure policy of API and does not constitute a formal submission as required by a test rule. This document does not contain confidential information. If you have any questions, please communicate with me.

Sincerely,

Robert T. Drew, Ph.D.

An equal opportunity employer

EFFECTS OF DERMAL EXPOSURE TO PETROLEUM MIDDLE DISTILLATES ON IRRITATION AND EPIDERMAL HYPERPLASIA IN MOUSE SKIN

DRAFT HISTOPATHOLOGY REPORT

Submitted To: Dermigen
PO Box 727
908 NE 3rd St. (Loop 230)
Smithville, Texas 78957

Performed By: John W, Sagartz, D.V.M.
Veritas Laboratories, Inc.
The Nova Building
1238 Anthony Road
Burlington, NC 27215

Dermigen Protocol Number: 910801

Veritas Project Number: 201-910801

Sub-Protocol 3

Veritas Accession Number: 1848

January 21, 1994

Veritas Approval 1/21/94
Dr. John W. Sagartz, (Date)

Dermigen Approval_____
Dr. Earl Walborg, (Date)

EXECUTIVE SUMMARY

TOLUENE (Group 1), induced the following changes:

1. Epidermal inflammatory/degenerative changes at all sacrifice intervals.

2. Epidermal proliferative changes at all sacrifice intervals.

3. Dermal changes at all sacrifice intervals.

4. Increased epidermal thickness and number of epidermal cells at all sacrifice intervals.

5. Increased BRDU labelling at 24, 48, and 96 hours (indices not measured at 6 hours).

MSO: TOLUENE (Group 3), induced the following changes:

1. Epidermal inflammatory/degenerative changes at all sacrifice intervals.

2. Epidermal proliferative changes at all sacrifice intervals.

3. Dermal changes at all sacrifice intervals.

4. Increased epidermal thickness and number of epidermal cells at all sacrifice levels.

5. Increased BRDU labelling at 24, 48 and 96 hours (indices not measured at 6 hours).

OLPH (Groups 4, 5, 6, and 7), induced the following changes:

1. Epidermal inflammatory/degenerative changes at all sacrifice intervals.

2. Epidermal proliferative changes at all sacrifice intervals.

3. Dermal changes at all sacrifice intervals.

4. Increases in epidermal thickness and number of epidermal cells at all sacrifice intervals.

5. Increased dose-related BRDU labelling at 24, 48 and 96 hours; (indices not measured at 6 hours).

MSO (Groups 8, 9, 10 and 11), induced the following changes:

1. Epidermal inflammatory/degenerative changes at all sacrifice intervals.

2. Epidermal proliferative changes at all sacrifice intervals.

3. Dermal changes at all sacrifice intervals.

4. Increases in epidermal thickness and number of epidermal cells at all sacrifice intervals.

5. Increased BRDU labelling at 24, 48 and 96 hours (indices not measured at 6 hours).

LVD (Groups 12, 13, 14, and 15), induced the following changes:

1. Epidermal inflammatory/degenerative changes at all sacrifice intervals.

2. Epidermal proliferative changes at all sacrifice intervals.

3. Dermal changes at all sacrifice intervals.

4. Increases in epidermal thickness and number of epidermal cells at all sacrifice intervals.

5. Dose-related increases in BRDU labelling at 24, 48 and 96 hours (indices not measured at 6 hours).

TPA (Groups 16, 17, 18 and 19), induced the following changes:

1. Epidermal inflammatory/degenerative changes at all sacrifice intervals.

2. Epidermal proliferative changes at all sacrifice intervals.

3. Dermal changes at all sacrifice intervals.

4. Increases in epidermal thickness and number of epidermal cells at all sacrifice intervals.

5. Increased BRDU labelling at 24, 48 and 96 hours (indices not measured at 6 hours).

n-DODECANE (Groups 20, 21, 22 and 23), induced the following changes:

1. Epidermal inflammatory/degenerative changes at all sacrifice intervals.

2. Epidermal proliferative changes at all sacrifice intervals.

3. Dermal changes at all sacrifice intervals.

4. Increases in epidermal thickness and number of epidermal cells at all sacrifice intervals.

5. Increased BRDU labelling at 24, 48 and 96 hours (indices not measured at 6 hours).

BPX (Groups 24, 25, 25 and 27), induced the following changes:

1. Epidermal inflammatory/degenerative changes only at 6, 24 and 48 hours intervals.

2. Epidermal proliferative changes at all sacrifice intervals.

3. Dermal changes at all sacrifice intervals.

4. Increases in epidermal thickness and number of epidermal cells at all sacrifice intervals.

5. Increased BRDU labelling at 24, 48 and 96 hour intervals (indices not measured at 6 hours).

201-910801, Subprotocol 3, (ACC# 1848)

INTRODUCTION

The general objective of this protocol is the establishment of a data base for designing and implementing a comparative study to extend the effects of petroleum middle distillates on markers of tumor promotion in mouse skin to the human situation. Specifically, Subprotocol 3 was a study of dermal irritation and epidermal hyperplasia induced by acetone, toluene, mineral seal oil: toluene, odorless light petroleum hydrocarbons (OLPH), mineral seal oil (MSO), light vacuum distillates (LVD), TPA, n-dodecane and benzoyl peroxide (BPX). CD-1 mice, administered these test articles or diluent vehicles (twice per week for a total of 4 applications), were sacrificed at 6, 24, 48 and 96 hours post-final dosing. The treatment and sacrifice groups are summarized below:

Veritas Group No.	Treatment	No. of Mice per Sacrifice Interval			
		6 hr.	24 hr.	48 hr.	96 hr.
1	Toluene	4	4	4	4
2	Acetone	4	4	4	4
3	MSO:Toluene	4	4	4	4
4	OLPH, 11.8 ul	4	4	4	4
5	OLPH, 23.5 ul	4	4	4	4
6	OLPH, 50 ul	4	4	4	4
7	OLPH, 100 ul	4	4	4	4
8	MSO, 11.8 ul	4	4	4	4
9	MSO, 23.5 ul	4	4	4	4
10	MSO, 50 ul	4	4	4	4
11	MSO, 100 ul	4	4	4	4
12	LVD, 11.8 ul	4	4	4	4
13	LVD, 23.5 ul	4	4	4	4
14	LVD, 33.3 ul	4	4	4	4
15	LVD, 100 ul	4	4	4	4
16	TPA, 0.21 n mol	4	4	4	4
17	TPA, 0.85 n mol	4	4	4	4
18	TPA, 3.4 n mol	4	4	4	4
19	TPA, 13.6 n mol	4	4	4	4
20	n-Dodecane, 10mg/ml	4	4	4	4
21	n-Dodecane, 25mg/ml	4	4	4	4
22	n-Dodecane, 50mg/ml	4	4	4	4
23	n-Dodecane, 100mg/ml	4	4	4	4
24	BPX, 1mg/ml	4	4	4	4
25	BPX, 5mg/ml	4	4	4	4
26	BPX, 10mg/ml	4	4	4	4
27	BPX, 20mg/ml	4	4	4	4
	Totals	108	108	108	103

INTRODUCTION, (cont'd)

Veritas Group No.	Animal Numbers per Sacrifice Interval
1	6 - 1, 2, 3, 4 24 - 5, 6, 7, 8 48 - 9, 10, 11, 12 96 - 13, 14, 15, 16
2	6 - 17, 18, 19, 20 24 - 21, 22, 23, 24 48 - 25, 26, 27, 28 96 - 29, 30, 31, 32
3	6 - 33, 34, 35, 36 24 - 37, 38, 39, 40 48 - 41, 42, 43, 44 96 - 45, 46, 47, 48
4	6 - 49, 50, 51, 52 24 - 53, 54, 55, 56 48 - 57, 58, 59, 60 96 - 61, 62, 63, 64
5	6 - 65, 66, 67, 68 24 - 69, 70, 71, 72 48 - 73, 74, 75, 76 96 - 77, 78, 79, 80
6	6 - 81, 82, 83, 84 24 - 85, 86, 87, 88 48 - 89, 90, 91, 92 96 - 93, 94, 95, 96
7	6 - 97, 98, 99, 100 24 - 101, 102, 103, 104 48 - 105, 106, 107, 108 96 - 109, 110, 111, 112
8	6 - 113, 114, 115, 116 24 - 117, 118, 119, 120 48 - 121, 122, 123, 124 96 - 125, 126, 127, 128
9	6 - 129, 130, 131, 132 24 - 133, 134, 135, 136 48 - 137, 138, 139, 140 96 - 141, 142, 143, 144

INTRODUCTION, (cont'd)

Veritas Group No.	Animal Numbers per Sacrifice Interval
10	6 - 145, 146, 147, 148
	24 - 149, 150, 151, 152
	48 - 153, 154, 155, 156
	96 - 157, 158, 159, 160
11	6 - 161, 162, 163, 164
	24 - 165, 166, 167, 168
	48 - 169, 170, 171, 172
	96 - 173, 174, 175, 176
12	6 - 177, 178, 179, 180
	24 - 181, 182, 183, 184
	48 - 185, 186, 187, 188
	96 - 189, 190, 191, 192
13	6 - 193, 194, 195, 196
	24 - 197, 198, 199, 200
	48 - 201, 202, 203, 204
	96 - 205, 206, 207, 208
14	6 - 209, 503*, 211, 212
	24 - 213, 214, 215, 216
	48 - 217, 218, 219, 220
	96 - 221, 222, 223, 224
15	6 - 225, 226, 227, 228
	24 - 229, 230, 231, 232
	48 - 233, 234, 235, 236
	96 - 237, 238, 239, 240
16	6 - 241, 242, 243, 244
	24 - 245, 246, 247, 248
	48 - 249, 250, 251, 252
	96 - 253, 254, 255, 256
17	6 - 257, 258, 259, 260
	24 - 261, 262, 263, 264
	48 - 265, 266, 267, 268
	96 - 269, 270, 271, 272
18	6 - 273, 274, 275, 276
	24 - 277, 278, 279, 280
	48 - 281, 282, 283, 284
	96 - 285, 286, 287, 288

* Original animal replaced.

INTRODUCTION, (cont'd)

Veritas Group No.	Animal Numbers per Sacrifice Interval
19	6 - 289, 290, 291, 292
	24 - 293, 294, 295, 296
	48 - 297, 298, 299, 300
	96 - 301, 302, 303, 304
20	6 - 305, 306, 307, 308
	24 - 309, 310, 311, 312
	48 - 313, 314, 315, 316
	96 - 317, 318, 319, 320
21	6 - 321, 322, 451*,324
	24 - 325, 326, 327, 328
	48 - 329, 330, 331, 332
	96 - 333, 334, 335, 336
22	6 - 337, 338, 339, 340
	24 - 341, 342, 343, 344
	48 - 345, 346, 347, 348
	96 - 349, 350, 351, 352
23	6 - 353, 354, 355, 356
	24 - 357, 358, 517*,360
	48 - 361, 362, 363, 364
	96 - 365, 366, 367, 368
24	6 - 369, 370, 371, 372
	24 - 373, 374, 375, 376
	48 - 377, 378, 379, 380
	96 - 381, 382, 383, 384
25	6 - 385, 386, 387, 388
	24 - 389, 390, 391, 392
	48 - 393, 394, 395, 396
	96 - 397, 398, 399, 400
26	6 - 410, 402, 403, 404
	24 - 405, 406, 407, 408
	48 - 409, 410, 411, 412
	96 - 413, 414, 415, 416
27	6 - 417, 418, 419, 420
	24 - 421, 422, 423, 424
	48 - 425, 426, 427, 428
	96 - 429, 430, 431, 432

* Original animal replaced.

MATERIALS AND METHODS

The in-life portion of this study was performed at Mantech Environmental Technology, Inc., 2 Triangle Drive, PO Box 12313, Research Triangle Park, NC 27709.

Tissues were collected at necropsy, preserved in formalin and submitted to Veritas Laboratories, Inc., The Nova Building, 1238 Anthony Road, Burlington, NC 27215, for processing and microscopic evaluation.

The histopathology phase of this study was conducted in accordance with rules stated in "Good Laboratory Practice for Nonclinical Studies" (Federal Register, Vol. 52, No. 172, September 4, 1987. 21 CFR, Part 58). Unless otherwise stated all histopathology methods followed the specifications in Dermigen Protocol 910801 and relevant amendments instituted as of the performance date.

The following sections were prepared for each mouse.

1) Hematoxylin and eosin (H&E). Slides prepared from 6, 24, 48 and 96 hour sacrifices.

2) Bromodeoxyuridine (BrDU), primary antibody-mouse monoclonal, IgG, Becton Dickinson, 1:200. Alkaline Phosphotase chromagen. Slides prepared from 24, 48, and 96 hour sacrifices.

The parameters evaluated microscopically were:

1) H&E Sections:

a) Histopathology, following guidelines stated in: (1) Summaries of E.P.A. Workshops on Carcinogenesis Bioassay Via the Dermal Route, 1987 & 1988, (2) US E.P.A. Atlas of Dermal Lesions, Pesticides and Toxic Substances (TS-796), 20T-2004, August 1990.

b) Epidermal Hyperplasia: (1) Epidermal Thickness-average of 10 measurements of the thickness (in micrometers of non-cornified interfollicular epidermis. (2) Nucleated epidermal cells per 100 micrometers of basement membrane average number of keratinocytes within five 100 micrometer linear segments of interfollicular epidermis.

2) BrDU Sections: average number of labelled nuclei per 500 epidermal cell nuclei (labelled and unlabelled), expressed as percent labelled cells.

MATERIALS AND METHODS, (cont'd)

Histopathologic examination was performed by John W. Sagartz, D.V.M. BrDU cell counts and epidermal hyperplasia measurements were performed by John E. Sagartz, D.V.M. Histopathologic results are shown in the following documents attached to this report:

-- Individual Animal Histopathologic Observation
-- Summary of Histopathologic Observation

GLOSSARY OF HISTOPATHOLOGIC TERMS

Acute Inflammation - infiltrates of polymorphonuclear leukocytes admixed with lower relative numbers of mononuclear lymphohistiocytic cells; accompanied by hyperemia and fluid exudate.

Crust Formation - dessiccated surface mass composed of keratin, serum, and cellular debris.

Edema - widening of intercellular spaces due to increased tissue fluid.

Epidermal hyperplasia - increased thickness of noncornified epidermis due to increased cell numbers.

Epidermitis - inflammation confined to the epidermis.

Erosion - loss of epidermal cells without disruption of basement membrane.

Necrosis - cell death characterized by nuclear fragmentation (Karyorrhexis), nuclear shrinkage (Pyknosis), and disappearance of nuclei (Karyolysis).

Orthokeratosis - form of hyperkeratosis in which there is an anuclear increase in the stratum corneum of epidermis.

Parakeratosis - form of hyperkeratosis in which there is retention of nuclei in the stratum corneum.

Pustule, intraepithelial - intraepidermal cavity filled with inflammatory cells.

Spongiosis/hydropic degeneration - intracellular edema within the epidermis.

Ulceration - loss of epidermis with exposure to the dermis.

RESULTS AND DISCUSSION

SIX HOUR SACRIFICE (GROUP 2 COMPARED TO GROUPS 1 AND 3 THROUGH 27.

HISTOPATHOLOGY, H&E

EPIDERMIS - Inflammatory/Degenerative Changes

The various inflammatory/degenerative changes and their mean severity grades are as follows:

INFLAMMATORY/DEGENERATIVE CHANGES:

MEAN SEVERITY GRADES

R#	Erosion	Ulceration	Crust Formation	Epidermitis	Necrosis Acantholysis	Spongiosis/ Hydropic Degen.	Pustule, Intraepithelial	Comp. Mean
1	0.25	0.50	1.50	0.75	2.00	0.25	1.25	6.50
2	-	-	-	-	-	-	-	-
3	-	2.00	1.75	1.00	-	0.75	3.25	8.75
4	-	-	-	-	-	-	-	-
5	-	-	-	-	-	0.25	1.25	1.50
6	-	-	0.25	-	-	-	3.25	3.50
7	0.75	0.25	0.25	-	-	0.25	3.25	4.75
8	-	0.25	-	-	0.50	-	-	0.75
9	-	0.25	-	0.25	-	-	2.50	3.00
10	-	1.25	0.25	-	-	0.25	3.00	4.75
11	0.50	1.75	0.50	-	0.25	1.25	3.75	8.00
12	-	-	-	-	-	-	-	-
13	-	-	-	-	-	0.25	0.25	0.50
14	-	0.50	-	-	-	-	1.00	1.50
15	-	0.50	-	-	-	0.50	3.00	4.00
16	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-
18	-	-	-	0.75	-	-	0.25	1.00
19	0.50	0.50	0.25	0.25	-	0.50	0.75	2.75
20	-	0.25	-	-	-	-	-	0.25
21	0.25	0.50	0.25	0.25	-	0.25	2.25	3.75
22	0.50	0.25	0.50	-	-	0.75	3.50	5.50
23	0.25	0.50	0.25	-	-	0.50	3.50	5.00
24	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-
26	-	-	-	0.25	-	-	-	0.25
27	-	-	-	-	-	-	0.50	0.50

SIX HOUR SACRIFICE, (con 'd)

For Toluene (Group 1), the treatment-related changes were erosion, ulceration, crust formation, epidermitis, necrosis/ acantholysis, spongiosis/hydropic degeneration and intra-epithelial pustules.

For MSO:Toluene (Group 3), test article-induced changes were ulceration, crust formation, epidermitis, spongiosis/hydropic degeneration and intraepithelial pustules.

For OLPH, (Groups 4, 5, 6 and 7), the compound-related changes were absent in the lowest dose Group (4) and minimal in Group 5. The number and frequency of these changes increased with dosage in the two higher dose Groups (6 and 7).

For MSO, (Groups 8, 9, 10 and 11), there were minimal inflammatory/degenerative changes in the lowest dose group (8). The frequency and severity of microscopic changes increased with dosage in groups 9, 10 and 11.

For LVD, (Groups 12, 13, 14 and 15), there were no inflammatory/degenerative changes in the lowest dose group (12). In Groups 13 and 14, there were minimal compound effects. In Group 15 there was a moderate treatment effect.

For TPA (Groups 16, 17, 18 and 19), there were no treatment-related effects in Groups 16 and 17. Minimal effects were identified in Group 18. In Group 19, the compound effects were mild.

For n-Dodecane (Groups 20, 21, 22 and 23), there were minimal compound effects in Group 20. In Groups 21, 22 and 23 the frequencies and severities of microscopic changes were substantially increased. For Groups 22 and 23, the intensities of the changes were comparable.

For BPX (Groups 24, 25, 26 and 27), there were no treatment effects in Groups 24 and 25. There were minimal compound-related effects in Groups 26 and 27.

EPIDERMIS - Proliferative Changes

There were no proliferative changes in H&E sections in Groups 1 (Sham) and 2 (Acetone).

In Groups 3 through 19, the various proliferative changes and their mean severity grades are as shown:

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SIX HOUR SACRIFICE, (cont'd)

PROLIFERATIVE CHANGES: Mean Severity Grades

roup #	Orthokeratosis	Parakeratosis	Hyperplasia	Composite Mean
1	1.50	-	1.25	2.75
2	-	-	-	-
3	1.50	-	2.50	4.00
4	-	-	-	-
5	-	-	0.50	0.50
6	-	-	1.75	1.75
7	-	-	2.25	2.25
8	-	-	0.25	0.25
9	-	-	1.25	1.25
10	0.50	-	2.25	2.75
11	0.75	-	3.25	4.00
12	-	-	0.25	0.25
13	-	-	0.75	0.75
14	-	-	1.50	1.50
15	0.25	-	2.50	2.75
16	0.25	-	-	0.25
17	0.75	-	0.75	1.50
18	0.75	-	2.00	2.75
19	1.25	-	2.75	4.00
20	-	-	0.25	0.25
21	0.50	-	1.50	2.00
22	1.00	-	2.25	3.25
23	0.50	-	2.00	2.50
24	0.50	-	0.25	0.75
25	0.75	-	1.25	2.00
26	1.00	-	1.00	2.00
27	0.75	-	1.75	2.50

For Toluene (Group 1), the treatment-induced changes were orthokeratosis and hyperplasia.

For MSO: Toluene (Group 3), test article-related changes were orthokeratosis and hyperplasia.

For OLPH (Groups 4, 5, 6 and 7) no compound-related changes were noted in Group 4. Hyperplasia was found in Groups 5, 6 and 7; the intensities of these changes increased with dosage.

SIX HOUR SACRIFICE, (cont'd)

For MSO (Groups 8, 9, 10 and 11), the treatment-related changes were orthokeratosis and hyperplasia. In Groups 8 and 9, only hyperplasia was seen. In Groups 10 and 11, orthokeratosis and hyperplasia were identified. For all four groups, the intensities increased with dosage.

For LVD (Groups 12, 13, 14 and 15), orthokeratosis and hyperplasia were the only compound-related proliferative changes observed. In Groups 12, 13 and 14, only hyperplasia was noted; in Group 15 orthokeratosis and hyperplasia were seen. For all groups the intensities increased with dosage.

For TPA (Groups 16, 17, 18 and 19), orthokeratosis and hyperplasia were observed. In Group 16, only orthokeratosis was identified. The intensities of these changes generally increased with dosage.

For n-Dodecane (Groups 20, 21, 22 and 23), the treatment-induced changes were othokeratosis and hyperplasia. In Group 20, there was hyperplasia only. The intensities generally increased with dosage, but for Groups 22 and 23 the intensities were comparable.

For BPX (Groups 24, 25, 26 and 27), compound-related changes were orthokeratosis and hyperplasia. The severities generally increased with dosage; however, in Groups 25 and 26, the mean intensities were identical.

DERMIS - Histopathologic Changes

The only histopathologic dermal changes were inflammatory infiltrations and edema. The mean severity grades of these changes are as shown:

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SIX HOUR SACRIFICE, (cont'd)

DERMAL CHANGES: Mean Severity Grades

Group #	Inflammatory Infiltrates	Edema	Vasodilatation	Composite Mean
1	2.50	2.50	-	5.00
2	-	-	-	-
3	3.50	3.50	-	7.00
4	-	-	-	-
5	0.75	0.75	-	1.50
6	2.50	2.50	-	5.00
7	3.25	3.25	-	6.50
8	0.25	0.25	-	0.50
9	2.00	2.00	-	4.00
10	2.75	2.75	-	5.50
11	3.25	3.25	-	6.50
12	0.25	0.25	-	0.50
13	0.75	0.75	-	1.50
14	1.75	1.75	-	3.50
15	2.75	2.75	-	5.50
16	0.50	0.50	-	1.00
17	1.00	1.00	-	2.00
18	2.50	2.50	-	5.00
19	3.00	3.00	-	6.00
20	0.50	0.50	-	1.00
21	2.25	2.25	-	4.50
22	3.75	3.75	-	7.50
23	3.25	3.25	-	6.50
24	1.00	1.00	-	2.00
25	1.25	1.25	-	2.50
26	1.50	1.50	-	3.00
27	1.75	1.75	-	3.50

For Toluene (Group 1) and MSO:Toluene (Group 3) there were test article-induced inflammatory infiltrates and edema.

For OLPH (Groups 4, 5, 6 and 7), no treatment-related dermal changes were seen in the lowest dose group (Group 4). In Groups 5, 6 and 7 treatment-induced inflammatory infiltrates and edema were observed; the intensities of these changes increased with dose.

For MSO (Groups 8, 9, 10 and 11), the intensities of the two changes increased with dose.

For LVD (Groups 12, 13, 14 and 15), test article - related dermal changes occurred in all groups. The intensities increased with dose.

SIX HOUR SACRIFICE, (cont'd)

For TPA (Groups 16, 17, 18 and 19), dose-related dermal effects were noted in all groups.

For n-Dodecane (Groups 20, 21, 22 and 23), compound-related dermal changes were seen in all groups. In Groups 20, 21 and 22, these responses were dose-related. In Group 23, the severity was slightly less than that observed for Group 22.

For BPX (Groups 24, 25, 26 and 27) treatment-induced dose-dependent dermal changes were identified in all groups.

EPIDERMAL THICKNESS AND EPIDERMAL CELLS PER 100 um

The mean values for epidermal thickness and numbers of epidermal cells per 100um are tabulated as shown:

MEAN VALUES

Grp #	Epidermal Thickness (um)	Epidermal Cells per 100um
1	41.88	35.80
2	11.07	20.10
3	34.08	30.05
4	11.46	20.90
5	19.11	27.10
6	21.75	26.70
7	28.17	31.90
8	15.63	24.70
9	23.76	28.05
10	30.21	37.10
11	45.93	41.10
12	16.23	21.50
13	18.60	23.25
14	26.04	28.65
15	35.31	36.85
16	11.76	22.90
17	14.82	26.20
18	36.63	41.00
19	50.82	47.70
20	13.29	25.15
21	23.97	25.15
22	35.19	31.90
23	30.72	29.20
24	16.83	25.40
25	20.37	28.90
26	17.94	26.30

SIX HOUR SACRIFICE, (cont'd)

Toluene (Group 1) and MSO:Toluene (Group 3) each produced increases in epidermal thickness and number of epidermal cells per 100um when compared to Acetone (Group 2).

For OLPH (Groups 4, 5, 6 and 7), there were compound and dose-related increases in epidermal thickness for all groups. Treatment-related increases in numbers of epidermal cells occurred for all groups; these increases were not consistently dose-related in Groups 5 and 6.

For MSO (Groups 8, 9, 10 and 11), there were treatment and dose-related increases in epidermal thickness and numbers of epidermal cells per 100um in all groups.

For LVD (Groups 12, 13, 14 and 15), treatment and dose-related increase in epidermal thickness and numbers of epidermal cells were seen in all groups.

For TPA (Groups 16, 17, 18 and 19), there were treatment and dose-related increases in both epidermal thickness and numbers of epidermal cells in all groups.

For n-Dodecane, (Groups 20, 21, 22 and 23), there were treatment-induced increases in epidermal thickness and numbers of epidermal cells in all groups. Only in Groups 21, 22 and 23, was the dose relationship to epidermal thickness and numbers of epidermal cells clear. The intensities of these changes were slightly reduced in Group 23.

For BPX (Groups 24, 25, 26 and 27), there were compound-related increases in epidermal thickness and numbers of epidermal cells. For each parameters, the relation to dose was not clear.

TWENTY-FOUR HOUR SACRIFICE (GROUPS 1 AND 2 COMPARED TO GROUPS 3 THROUGH 27)

HISTOPATHOLOGY, H&E

EPIDERMIS-Inflammatory/Degenerative Changes

The various inflammatory/degenerative changes and their mean severity grades are as follows:

INFLAMMATORY/DEGENERATIVE CHANGES:

MEAN SEVERITY GRADES

Gr#	Erosion	Ulceration	Crust Formation	Epidermitis	Necrosis Acantholysis	Spongiosis/ Hydropic Degen.	Pustule Intraepithelial	Comp. Mean
1	0.75	1.50	3.00	2.25	1.75	1.00	0.50	10.75
2	-	-	-	-	-	-	-	-
	1.00	2.75	3.00	1.25	1.00	2.00	1.00	12.00
4	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-
6	-	0.25	0.75	-	-	0.25	1.50	2.75
7	1.00	1.25	0.50	-	-	1.25	1.50	5.50
8	-	0.50	0.50	-	-	0.50	0.50	2.00
9	1.00	0.50	0.75	-	-	1.00	1.00	4.25
10	2.00	2.00	3.00	-	-	2.50	2.50	12.00
11	1.50	1.50	2.75	-	-	2.75	1.75	10.25
12	0.25	-	-	-	-	-	-	0.25
13	0.25	-	0.25	-	-	0.25	-	0.75
14	0.75	0.50	0.50	-	-	1.25	0.25	3.25
15	0.50	1.75	1.50	-	-	1.75	1.25	6.75
16	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-
18	0.50	-	0.25	-	-	1.75	-	2.50
19	0.50	0.75	1.25	-	-	2.00	1.00	5.50
20	-	-	-	-	-	-	-	-
21	0.75	0.75	-	-	-	1.25	1.25	4.00
22	1.25	0.50	0.25	-	-	1.50	1.00	4.50
23	1.50	2.50	0.25	-	-	1.75	1.50	7.50
24	0.25	-	-	0.25	-	0.25	0.25	1.00
25	-	-	-	0.25	-	1.00	-	1.25
26	-	-	-	-	-	-	-	-
27	-	-	0.25	-	-	1.00	0.25	1.50

TWENTY-FOUR HOUR SACRIFICE, (cont'd)

For Toluene (Group 1) and MSO:Toluene (Group 3), treatment-related changes were erosion, ulceration, crust formation, epidermitis, necrosis/acantholysis, spongiosis/hydropic degeneration and intra-epithelial pustules.

For OLPH (Groups 4, 5, 6 and 7)), compound-related changes occurred only in Groups 6 and 7.

For MSO (Groups 8, 9, 10 and 11), treatment-related changes were observed in all groups. The effects were dose-related in Groups 8, 9 and 10 only.

For LVD (Groups 12, 13, 14 and 15) compound and dose-related changes were seen only in all groups.

For TPA (Groups 16, 17, 18 and 19), treatment-related changes were observed in Groups 18 and 19 only. These changes were dose-dependent.

For n-Dodecane (Groups 20, 21, 22 and 23), no effects were noted in Group 20. In Groups 21, 22 and 23, there were compound and dose-related effects.

For BPX (Groups 24, 25, 26 and 27), test article-related changes were observed only in Groups 24, 25 and 27. The cause for the absence of effects in Group 26 is undetermined.

EPIDERMIS - Proliferative Changes

The proliferative changes and their mean severity grades are as follows:

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TWENTY-FOUR HOUR SACRIFICE, (cont'd)

PROLIFERATIVE CHANGES: Mean Severity Grades

Grp #	Orthokeratosis	Parakeratosis	Hyperplasia	Composite Mean
1	2.25	0.25	2.50	5.00
2	-	-	-	-
3	2.25	0.25	2.25	4.75
4	-	-	-	-
5	0.25	-	0.25	0.50
6	1.25	0.50	2.25	4.00
7	1.50	-	2.00	3.50
8	0.50	-	1.25	1.75
9	1.25	0.25	2.25	3.75
10	2.25	1.00	2.50	5.75
11	1.75	0.25	2.75	4.75
12	-	-	-	-
13	0.50	0.25	1.75	2.50
14	0.75	-	2.00	2.75
15	2.25	-	3.00	5.25
16	-	0.25	0.25	0.50
17	1.00	-	1.50	2.50
18	2.00	0.50	2.75	5.25
19	2.50	-	3.00	5.50
20	0.25	-	0.75	1.00
21	1.75	-	2.25	4.00
22	1.50	0.25	2.25	4.00
23	2.25	-	2.50	4.75
24	0.75	-	1.75	2.50
25	1.00	-	2.00	3.00
26	1.00	-	1.75	2.75
27	1.50	-	2.50	4.00

TWENTY-FOUR HOUR SACRIFICE, (cont'd)

For Toluene (Group 1) and MSO:Toluene (Group 3), the treatment-related changes were orthokeratosis, parakeratosis and hyperplasia.

For OLPH, (Groups 4, 5, 6 and 7), treatment-related changes were found only in Groups 5, 6 and 7. These changes were orthokeratosis, parakeratosis and hyperplasia. In Groups 6 and 7, a relationship to dose was not shown.

For MSO (Groups 8, 9, 10 and 11), treatment-related changes noted for all groups. A dose relationship was apparent only in Groups 8, 9 and 10.

For LVD (Groups 12, 13, 14 and 15), treatment-induced orthokeratosis and hyperplasia were observed only in Groups 13, 14 and 15. In these groups, there was a dose relationship.

For TPA (Groups 16, 17, 18 and 19), treatment and dose-related changes were identified in all groups.

For n-Dodecane (Groups 20, 21, 22 and 23), compound-induced changes were observed in all groups. The relation to dose was unclear in Groups 21 and 22.

For BPX (Groups 24, 25, 26 and 27), treatment effects were found in all groups. For Groups 25 and 26, the relation to dose was not clear.

DERMIS - Histopathologic Changes

The dermal changes were inflammatory infiltrates, edema and vasodilatation. The mean severity grades of these changes are as shown:

TWENTY-FOUR HOUR SACRIFICE, (cont'd)

DERMAL CHANGES: Mean Severity Grades

Group #	Inflammatory Infiltrates	Edema	Vasodilatation	Composite Mean
1	3.00	2.75	0.50	6.25
2	-	-	-	-
3	3.25	3.25	0.50	7.00
4	-	-	-	-
5	0.75	0.75	-	1.50
6	2.75	2.75	-	5.50
7	3.00	3.00	-	6.00
8	1.75	1.75	-	3.50
9	3.25	3.25	-	6.50
10	3.50	3.50	-	7.00
11	3.75	3.75	-	7.50
12	0.25	0.25	-	0.50
13	1.75	1.75	-	3.50
14	2.00	2.00	-	4.00
15	3.25	3.25	-	6.50
16	-	-	-	-
17	1.00	1.00	-	2.00
18	2.75	2.75	-	5.50
19	3.25	3.25	-	6.50
20	0.75	0.75	-	1.50
21	3.00	3.00	-	6.00
22	2.75	2.75	-	5.50
23	3.50	3.50	-	7.00
24	1.75	1.75	-	3.50
25	1.75	1.75	-	3.50
26	2.00	2.00	-	4.00
27	2.50	2.50	-	5.00

For Toluene (Group 1) and MSO:Toluene (Group 3), the treatment-related changes were inflammatory infiltrates, edema and vasodilatation.

For OLPH, (Groups 4, 5, 6 and 7) compound and dose-related changes were noted only in Groups 5, 6 and 7.

For MSO, (Groups 8, 9, 10 and 11), there were compound-related effects in all groups. The severities of these changes increased with dosage.

For LVD (Groups 12, 13, 14 and 15), there were treatment and dose-related increases in all groups.

TWENTY-FOUR HOUR SACRIFICE, (cont'd)

For TPA (Groups 16, 17, 18 and 19), compound-related changes were found only in Groups 17, 18 and 19.

For n-Dodecane (Groups 20, 21, 22 and 23), effects were observed in all groups. In Groups 21 and 22, there was no clear dose relationship.

For BPX (Groups 24, 25, 26 and 27), compound effects occurred in all groups; the dose relationship was unclear in Groups 24 and 25.

EPIDERMAL THICKNESS AND EPIDERMAL CELLS PER 100um

The mean values for epidermal thickness and numbers of epidermal cells per 100um are as shown:

MEAN VALUES

Grp #	Epidermal Thickness (um)	Epidermal Cells per 100um
1	36.90	26.40
2	12.18	20.45
3	36.90	26.40
4	14.55	20.85
5	16.92	27.30
6	34.32	29.05
7	33.81	31.90
8	19.26	27.45
9	32.40	31.35
10	41.22	37.45
11	46.20	38.67
12	15.03	21.50
13	30.45	28.35
14	30.63	30.55
15	44.70	35.70
16	15.18	23.90
17	20.88	25.90
18	38.70	32.95
19	46.08	34.05
20	20.67	27.00
21	35.07	28.00
22	33.39	30.90
23	33.36	26.10
24	23.82	26.70
25	21.78	30.75
26	22.47	30.65
27	33.78	33.20

TWENTY-FOUR HOUR SACRIFICE, (cont'd)

Toluene (Group 1) and MSO:Toluene (Group 3), caused increased mean epidermal thickness and mean number of epidermal cells per 100um when compared to acetone (Group 2).

For OLPH (Groups 4, 5, 6 and 7), only the increases in epidermal thickness and number of epidermal cells in Groups 5, 6 and 7 are considered as compound effects. These effects are not clearly dose-dependent in Group 7.

For MSO (Groups 8, 9, 10 and 11) there were treatment and dose-related increases in epidermal thickness and epidermal cells per 100um in all groups.

For LVD (Groups 12, 13, 14 and 15), there were compound-induced dose-related increases in epidermal thickness and numbers of epidermal cells in all groups.

For TPA (Groups 16, 17, 18 and 19), all groups showed treatment and dose-related increase in epidermal thickness and numbers of epidermal cells per 100um.

For n-Dodecane (Groups 20, 21, 22 and 23), there were treatment-related increases in epidermal thickness and number of epidermal cells for all groups. The increased epidermal thickness was dose-related for all groups. The increased number of epidermal cells was related to dose only in Groups 21, 22 and 23.

For BPX (Groups 24, 25, 26 and 27), treatment-induced increases in both parameters were noted for all groups. For epidermal thickness, the dose response was unclear in Groups 25 and 26. For number of epidermal cells, the relationship to dose was not clear in Group 26.

BrDU SECTIONS

The mean percentages of labelled nuclei in Groups 1 through 27 are as follows:

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TWENTY-FOUR HOUR SACRIFICE, (Cont'd)

Mean % Labelled Nuclei

Group #	BrDU	SD	SEM
1	11.2	3.566511	1.783256
2	2.0	1.478738	.739369
3	5.85	4.759201	2.3796
4	3.75	2.323072	1.161536
5	1.4	1.514375	.7571877
6	16.35	14.12928	7.064642
7	10.9	6.557439	3.278719
8	10.3	6.350854	3.175427
9	9.45	.984876	.492438
10	10.8	2.934848	1.467424
11	18.1	8.542441	4.27122
12	5.75	3.785498	1.892749
13	17.75	13.86639	6.933193
14	13.5	4.407568	2.203784
15	20.35	2.64512	1.32256
16	3.8	2.07846	1.03923
17	7.05	3.96106	1.980053
18	12.5	2.068809	1.034404
19	25.85	6.337975	3.168987
20	6.8	2.648268	1.324134
21	20.4	3.502388	1.751194
22	23.55	1.112049	.5560247
23	18.6	6.404163	3.202082
24	10.9	3.814007	1.907004
25	8.05	1.611418	.8057092
26	5.55	1.995829	.9979144
27	10.1	9.318799	4.6594

Toluene (Group 1) and MSO:Toluene (Group 3) caused increases in BRDU labelling indices.

For OLPH (Groups 4, 5, 6 and 7), there were biologically significant treatment-related increases in BRDU labelling in Groups 6 and 7 only. These increase were not related to dose.

For MSO (Groups 8, 9, 10 and 11), treatment-related increases in BRDU labelling occurred in all Groups. In Groups 8 and 9, the relation to dose was unclear.

For LVD (Groups 12, 13, 14 and 15), there were compound-related increases in all groups. In Group 14, the relationship to increasing dose was not apparent.

For TPA (Groups 16, 17, 18 and 19), there were compound-induced increases in BRDU labelling only in Groups 17, 18 and 19. In Group 16, the slight increase is not considered to be biologically significant.

For n-Dodecane (Groups 20, 21, 22 and 23), treatment-related increases were seen in all groups. These increases were dose-related only in Groups 20, 21 and 22.

For BPX (Groups 24, 25, 26 and 27), there were compound-induced increases in labelling in all groups. These increases were not dose-dependent.

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FORTY-EIGHT HOUR SACRIFICE

HISTOPATHOLOGY, H&E

EPIDERMIS - Inflammatory/Degenerative Changes

The various inflammatory/degenerative changes and their mean severity grades are as follows:

INFLAMMATORY/DEGENERATIVE CHANGES:

MEAN SEVERITY GRADES

Gr#	Erosion	Ulceration	Crust Formation	Epidermitis	Necrosis Acantholysis	Spongiosis/ Hydropic Degen.	Pustule, Intraepithelial	Comp. Mean
1	0.50	1.50	1.50	-	-	1.75	1.00	6.25
2	-	-	-	-	-	-	-	-
3	2.00	2.25	2.00	-	-	3.00	-	9.25
4	-	-	-	-	-	-	-	-
	-	-	0.50	-	-	-	-	0.50
6	0.75	0.25	0.50	-	-	0.50	0.25	2.25
7	2.00	1.75	1.00	-	-	2.25	-	7.00
8	-	-	0.25	-	-	-	-	0.25
9	-	-	0.75	-	-	0.25	-	1.00
10	0.75	1.25	1.75	-	-	1.75	-	5.50
11	2.00	0.50	2.50	-	-	3.25	-	8.25
12	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-
14	-	-	0.50	-	-	0.50	-	1.00
15	1.75	1.50	1.75	-	-	2.25	-	7.25
16	-	-	-	-	-	-	-	-
17	-	-	-	-	-	0.25	-	0.25
18	-	-	-	-	-	1.25	-	1.25
19	0.75	0.75	0.75	-	-	2.50	-	4.75
20	-	-	-	-	-	-	-	-
21	1.00	0.25	1.00	-	-	1.25	0.50	4.00
22	0.50	0.25	0.50	-	-	0.75	-	2.00
23	1.25	2.00	1.00	-	-	3.00	-	7.25
24	-	-	-	-	-	0.50	-	0.50
25	0.25	-	0.25	-	-	1.00	-	1.50
26	-	-	-	-	-	-	-	-
27	-	-	0.25	-	-	2.00	-	2.25

FORTY-EIGHT HOUR SACRIFICE, (cont'd)

Toluene (Group 1) and MSO:Toluene (Group 3), caused a variety of inflammatory/degenerative changes when compared to acetone (Group 2).

For OLPH (Groups 4, 5, 6 and 7), there were no lesions in Group 4. In Groups 5, 6 and 7, there were treatment-related microscopic changes which were dose-related.

For MSO (Groups 8, 9, 10 and 11), compound and dose-related increases were identified in all groups.

For LVD (Groups 12, 13, 14 and 15), no lesions were found in Groups 12 and 13. Treatment and dose-related changes were noted in Groups 14 and 15.

For TPA (Groups 16, 17, 18 and 19), there were no lesions in Group 16. Treatment-related changes were found in Groups 17, 18 and 19; these changes were dose-related.

For n-Dodecane (Groups 20, 21, 22 and 23), no lesions were observed in Group 20. In Groups 21, 22 and 23, compound effects, unrelated to dose, were identified.

For BPX (Groups 24, 25, 26 and 27), there were no lesions in Group 26; the reason for this is unknown. Treatment effects were recorded for Groups 24, 25 and 27.

FORTY-EIGHT HOUR SACRIFICE, (cont'd)

EPIDERMIS - Proliferative Changes

The various proliferative changes and the mean severity grades are shown in the following table:

PROLIFERATIVE CHANGES: Mean Severity Grades

Gp #	Orthokeratosis	Parakeratosis	Hyperplasia	Dyskeratosis	Composite Mean
1	2.75	0.50	2.25	-	5.50
2	-	-	-	-	-
3	2.75	0.75	3.50	-	7.00
4	-	-	-	-	-
5	0.25	-	0.50	-	0.75
6	1.00	-	2.50	-	3.50
7	2.50	1.00	3.25	-	6.75
8	0.50	-	0.50	-	1.00
9	1.25	-	2.25	-	3.50
10	1.75	0.50	3.50	-	5.75
11	2.50	0.75	3.50	-	6.75
12	-	-	-	-	-
13	0.25	-	0.75	-	1.00
14	1.25	0.25	2.50	-	4.00
15	2.50	0.50	3.50	-	6.50
16	-	-	0.75	-	0.75
17	0.75	-	1.50	-	2.25
18	1.50	-	3.25	0.75	5.50
19	1.75	-	3.50	-	5.25
20	-	-	1.25	-	1.25
21	2.25	0.50	2.25	-	5.00
22	1.50	0.25	2.75	-	4.50
23	2.00	0.50	3.50	-	6.00
24	0.50	-	1.75	-	2.25
25	1.00	-	2.25	-	3.25
26	0.50	-	1.25	-	1.75
27	1.00	0.25	3.50	-	4.75

For Toluene (Group 1) and MSO:Toluene (Group 3), the treatment-related changes were orthokeratosis, parakeratosis and hyperplasia.

For OLPH (Groups 4, 5, 6 and 7), no changes occurred in Group 4. The remaining groups contained compound and dose-related changes. The compound effects were apparently dose-related.

FORTY-EIGHT HOUR SACRIFICE, (cont'd)

For MSO (Groups 8, 9, 10 and 11), treatment and dose-related changes were seen in all groups.

For LVD (Groups 12, 13, 14 and 15), no changes were observed in Group 12. In Groups 13, 14 and 15 there were treatment-induced changes which increased with dosage.

For TPA (Groups 16, 17, 18 and 19), treatment effects were found in all groups. A dose relationship was clear only in Groups 16, 17 and 18.

For n-Dodecane (Groups 20, 21, 22 and 23), there were treatment effects in all groups. Overall, there was a tendency toward a dose relationship but the trend was broken in Group 22.

For BPX (Groups 24, 25, 26 and 27), treatment effects occurred in all groups. The general dose relationship was not present in Group 26.

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FORTY-EIGHT HOUR SACRIFICE, (cont'd)

DERMIS - Histopathologic Changes

The following dermal changes and their mean severity changes are as shown:

DERMAL CHANGES: Mean Severity Grades

Group #	Inflammatory Infiltrates	Edema	Vasodilatation	Composite Mean
1	2.50	2.50	1.00	6.00
2	-	-	-	-
3	3.25	3.25	0.25	6.75
4	-	-	-	-
5	0.50	0.50	-	1.00
6	2.50	2.50	-	5.00
7	2.75	2.75	0.25	5.75
8	0.75	0.75	-	1.50
9	2.50	2.50	-	5.00
10	3.25	3.25	-	6.50
11	3.00	3.00	-	6.00
12	-	-	-	-
13	0.25	0.25	-	0.50
14	1.75	1.75	-	3.50
15	3.00	3.00	0.50	6.50
16	0.75	0.75	-	1.50
17	1.75	1.75	-	3.50
18	2.50	2.50	-	5.00
19	3.50	3.50	-	7.00
20	1.50	1.50	-	3.00
21	2.50	2.50	-	5.00
22	2.75	2.75	-	5.50
23	3.00	3.00	-	6.00
24	1.00	1.00	-	2.00
25	2.00	2.00	-	4.00
26	1.50	1.50	-	3.00
27	3.25	3.25	-	6.50

FORTY-EIGHT HOUR SACRIFICE, (cont'd)

For Toluene (Group 1) and MSO:Toluene (Group 3), the treatment-related changes were inflammatory infiltrates, edema and vasodilatation.

For OLPH (Groups 4, 5, 6 and 7), there were no dermal changes in Group 4. In Groups 5, 6 and 7, treatment related, dose-dependent changes were observed.

For MSO (Groups 8, 9, 10 and 11), treatment-induced lesions were found in all groups. In Groups 8, 9 and 10, the changes were dose-related.

For LVD (Groups 12, 13, 14 and 15), treatment-related increases were noted in Groups 13, 14 and 15 only. These changes were dose-related.

For TPA (Groups 16, 17, 18 and 19), treatment and dose-related changes were seen in all groups.

For n-Dodecane (Groups 20, 21, 22 and 23), treatment and dose-related effects were identified in all groups.

For BPX (Groups 24, 25, 26 and 27), there were compound effects in all groups. The general tendency toward dose dependency was not seen in Group 26.

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FORTY-EIGHT HOUR SACRIFICE, (cont'd)

EPIDERMAL THICKNESS AND EPIDERMAL CELLS PER 100um

The mean values for epidermal thickness and numbers of epidermal cells per 100um are tabulated as shown:

MEAN VALUES

Grp #	Epidermal Thickness (um)	Epidermal Cells per 100um
1	28.56	23.40
2	12.39	21.15
3	51.24	39.50
4	15.78	24.40
5	20.76	24.45
6	33.84	33.55
7	44.31	34.45
8	16.26	26.65
9	25.68	29.40
10	45.03	37.85
11	52.26	41.80
12	14.55	23.65
13	18.90	24.80
14	36.00	33.25
15	40.05	35.80
16	15.72	25.90
17	17.82	25.10
18	37.86	34.10
19	47.97	35.80
20	17.58	25.70
21	37.38	29.55
22	37.41	28.00
23	43.44	33.30
24	20.64	24.80
25	30.15	27.90
26	16.26	25.10
27	34.26	39.75

FORTY-EIGHT HOUR SACRIFICE, (cont'd)

Toluene (Group 1) and MSO;Toluene (Group 3), produced treatment-related increases in epidermal thickness and number of epidermal cells per 100um.

For OLPH (Groups 4, 5, 6 and 7), treatment and dose-related increases in epidermal thickness and number of epidermal cells per 100um were found in all groups.

For MSO (Groups 8, 9, 10 and 11), there were treatment and dose-related increases in epidermal thickness and number of epidermal cells in all groups.

For LVD (Groups 12, 13, 14 and 15), there were compound and dose-related increases in epidermal thickness and number of epidermal cells in all groups.

For TPA (Groups 16, 17, 18 and 19), compound and dose-related increases in epidermal thickness and number of epidermal cells were recorded in all groups.

For n-Dodecane (Groups 20, 21, 22 and 23), treatment-induced increases in epidermal thickness and number of epidermal cells occurred in all groups. The increased epidermal thickness was dose-related. For the number of epidermal cells, the dose relationship was not apparent in Group 22.

For BPX (Groups 24, 25, 26 and 27), there were compound-related increases in epidermal thickness and number of epidermal cells. For both parameters, the dose relationship was not observed in Group 26.

FORTY-EIGHT HOUR SACRIFICE, (cont'd)

BrDU SECTIONS

The mean percentages of labelled nuclei in Groups 1 through 27 are as follows:

Mean % Labelled Nuclei

Group #	BrDU	SD	SEM
1	8.5	8.37536	4.18768
2	1.8	.8164966	.4082483
3	11.1	5.989992	2.994996
4	4.35	4.174128	2.087064
5	2.55	1.417745	.7088725
6	5.35	2.89079	1.445395
7	6.2	2.244994	1.122497
8	3.5	.3464086	.1732043
9	5.6	2.74712	1.37356
10	7.3	.7023723	.3511862
11	9.5	4.585485	2.2922742
12	3.0	1.296147	.6480737
13	4.0	1.735895	.8679475
14	11.0	4.510729	2.255365
15	13.2	6.099181	3.04959
16	3.4	.966091	.4830455
17	3.3	.5033205	.2526603
18	7.55	4.08697	2.043485
19	11.95	3.900003	1.950001
20	5.0	1.211061	.6055307
21	9.7	6.674329	3.337165
22	7.45	2.629956	1.314978
23	13.75	3.767845	1.883922
24	4.2	1.505545	.7527725
25	3.25	1.050397	.5251985
26	3.8	1.608312	.8041558
27	4.85	3.473231	1.736616

Toluene (Group 1) and MSO:Toluene (Group 3), caused increases in BrDU labelling indices.

For OLPH (Groups 4, 5, 6 and 7), there were treatment-related increases in labelling indices in all groups. A dose relationship was absent in Group 5.

For MSO (Groups 8, 9, 10 and 11), there were test article and dose-related increases in all groups.

FORTY-EIGHT HOUR SACRIFICE, (cont'd)

For LVD (Groups 12, 13, 14 and 15), treatment and dose-related increases in all groups.

For TPA (Groups 16, 17, 18 and 19), there were treatment and dose-related increases in all groups. In Group 17, a relation to dose was not observed.

For n-Dodecane (Groups 20, 21, 22 and 23), compound and dose-related increases in labelling were seen in all groups.

For BPX (Groups 24, 25, 26 and 27), treatment-induced increases occurred in all groups. A dose relationship was not apparent.

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NINETY-SIX HOUR SACRIFICE

HISTOPATHOLOGY, H&E

EPIDERMIS - Inflammatory/Degenerative Changes

The various inflammatory/degenerative changes and their mean severity grades are as follows:

INFLAMMATORY/DEGENERATIVE CHANGES:

MEAN SEVERITY GRADES

GR#	Erosion	Ulceration	Crust Formation	Epidermitis	Necrosis Acantholysis	Spongiosis/ Hydropic Degen.	Pustule, Intraepithelial	Comp. MEAN
1	0.50	1.25	1.25	1.25	-	1.75	-	6.00
2	-	-	-	-	-	-	-	-
3	2.00	2.25	2.00	-	-	3.00	-	9.25
4	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-
6	0.75	*0.75	0.25	-	-	1.00	-	2.75
7*	1.33	1.00	1.00	-	-	2.67	-	6.00
8	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-
10	1.00	-	0.25	0.25	-	1.25	-	2.75
11	1.00	0.25	0.50	-	-	2.00	-	3.75
12	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-
14*	-	-	-	-	-	0.67	-	0.67
15	0.50	0.25	0.25	-	-	0.75	-	1.75
16	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-
21	-	-	0.25	-	-	0.50	-	0.75
22	0.25	0.25	0.25	-	-	1.00	-	1.75
23	0.75	-	-	-	-	1.00	-	1.75
24	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-

* Values based on microscopic examination of 3 mice.

NINETY-SIX HOUR SACRIFICE, (cont'd)

Toluene (Group 1) and MSO:Toluene (Group 3) produced increased inflammatory/degenerative changes when compared to acetone (Group 2).

For OLPH (Groups 4, 5, 6 and 7), no effects were observed in Groups 4 and 5. In Groups 6 and 7, there were treatment and dose-related changes.

For MSO (Groups 8, 9, 10 and 11), there were no effects in Groups 8 and 9. Treatment and dose-related changes were found in Groups 10 and 11.

For LVD (Groups 12, 13, 14 and 15), no effects were noted in Groups 12 and 13. Groups 14 and 15 contained treatment and dose-related changes.

For TPA (Groups 16, 17, 18 and 19), there were no changes in any group.

For n-Dodecane (Groups 20, 21, 22 and 23), no changes were seen in Group 20. Mild treatment effects occurred in Groups 21, 22 and 23. The relation to dose was not present in Group 23.

For BPX (Groups 24, 25, 26 and 27), no changes were identified in any group.

NINETY-SIX HOUR SACRIFICE, (cont'd)

EPIDERMIS - Proliferative Changes

The various proliferative changes and the mean severity grades are shown in the following table:

PROLIFERATIVE CHANGES: Mean Severity Grades

Group #	Orthokeratosis	Parakeratosis	Hyperplasia	Composite Mean
1	1.75	0.25	2.75	4.75
2	-	-	-	-
3	2.50	1.50	3.25	7.25
4	-	-	-	-
5	0.50	-	1.00	1.50
6	1.75	0.25	2.75	4.75
7*	2.00	0.67	4.00	6.67
8	0.25	-	1.00	1.25
9	1.25	-	2.00	3.25
10	1.75	0.50	2.50	4.75
11	2.25	0.25	3.00	5.50
12	-	-	0.25	0.25
13	0.75	-	0.75	1.50
14*	0.67	-	2.00	2.67
15	1.75	0.25	2.75	4.75
16	0.25	-	-	0.25
17	-	0.50	-	0.50
18	1.00	-	1.25	2.25
19	1.50	-	3.25	4.75
20	0.25	-	0.25	0.50
21	1.50	-	2.25	3.75
22	1.50	-	2.75	4.25
23	1.75	-	2.75	4.50
24	-	-	0.25	0.25
25	0.25	-	0.75	1.00
26	-	-	0.50	0.50
27	0.75	-	1.50	2.25

* Values based upon microscopic examination of 3 mice.

NINETY-SIX HOUR SACRIFICE, (cont'd)

For Toluene (Group 1) and MSO:Toluene (Group 3) changes were orthokeratosis, parakeratosis and hyperplasia.

For OLPH (Groups 4, 5, 6 and 7), no compound changes occurred in Group 4. The remaining groups contained compound and dose-related changes.

For MSO (Groups 8, 9, 10 and 11), treatment and dose-related changes were seen in all groups.

For LVD (Groups 12, 13, 14 and 15), test article and dose-related changes were observed in all groups.

For TPA (Groups 16, 17, 18 and 19), treatment and dose-dependent effects were found in all groups.

For N-Dodecane (Groups 20, 21, 22 and 23), there were compound and dose-related changes in all groups.

For BPX (Groups 24, 25, 26 and 27), treatment effects were observed in all groups. There was no clear dose relationship.

DERMIS - Histopathologic Changes

The following dermal changes and their mean severity changes are as shown:

NINETY-SIX HOURS SACRIFICE, (cont'd)

DERMAL CHANGES: Mean Severity Grades

Group #	Inflammatory Infiltrates	Edema	Vasodilatation	Composite Mean
1	2.25	2.25	0.25	4.75
2	-	-	-	-
3	3.00	3.00	-	6.00
4	-	-	-	-
5	1.00	1.00	-	2.00
6	2.75	2.75	-	5.50
7*	3.00	3.00	-	6.00
8	0.50	0.50	-	1.00
9	1.75	1.75	-	3.50
10	3.00	3.00	-	6.00
11	2.75	2.75	-	5.50
12	-	-	-	-
13	0.50	0.50	-	1.00
14*	1.67	1.67	-	3.34
15	2.75	2.75	-	5.50
16	0.25	0.25	-	0.50
17	0.50	0.50	-	1.00
18	1.50	1.50	-	3.00
19	2.75	2.75	-	5.50
20	-	-	-	-
21	2.50	2.50	-	5.00
22	3.00	3.00	-	6.00
23	2.50	2.50	-	5.00
24	0.25	0.25	-	0.50
25	1.25	1.25	-	2.50
26	0.25	0.25	-	0.50
27	2.00	2.00	-	4.00

*Values based upon microscopic examination of 3 mice.

NINETY-SIX HOURS SACRIFICE, (cont'd)

For Toluene (Group 1 and MSO:Toluene (Group 3), compound related dermal changes were identified.

For OLPH (Groups 4, 5, 6 and 7), there were no dermal changes in Group 4. In Groups 5, 6 and 7, treatment-related, dose-dependent changes were observed.

For MSO (Groups 8, 9, 10 and 11), there were compound-induced changes in all groups. A dose relationship was present in Groups 8, 9 and 10; it did not continue in Group 11.

For LVD (groups 12, 13, 14 and 15), treatment and dose-related increases were noted in Groups 13, 14 and 15 only. There were no effects in Group 12.

For TPA (Groups 16, 17, 18 and 19), treatment and dose-related effects were seen in all groups.

For n-Dodecane (Groups 20, 21, 22 and 23), no effects were found in Group 20. Treatment-induced changes, unrelated to dose, occurred in Groups 21, 22 and 23.

For BPX (Groups 24, 25, 26 and 27), compound effects were identified in all groups. There was no clear dose relationship.

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EPIDERMAL THICKNESS AND EPIDERMAL CELLS PER 100um

The mean values for epidermal thickness and numbers of epidermal cells per 100um are tabulated as shown:

MEAN VALUES

Group #	Epidermal Thickness (um)	Epidermal Cells per 100um
1	45.36	33.00
2	12.24	20.85
3	50.04	41.80
4	13.32	21.70
5	16.38	26.15
6	30.30	34.00
7*	36.04	37.53
8	20.07	28.35
9	23.76	32.40
10	33.99	35.60
11	37.83	39.30
12	17.07	26.50
13	19.32	24.65
14*	25.76	31.33
15	34.77	34.50
16	12.18	23.05
17	17.64	26.20
18	20.43	26.85
19	40.14	36.00
20	15.60	24.35
21	24.48	32.20
22	37.89	32.65
23	35.73	32.55
24	16.41	25.70
25	19.32	28.70
26	14.61	26.95
27	18.09	29.05

*Values based upon microscopic examination of 3 mice.

Toluene (Group 1) and MSO:Toluene (Group 3), produced treatment-related increases in epidermal thickness, and number of epidermal cells per 100um.

For OLPH (Groups 4, 5, 6 and 7), compound and dose-related increases in epidermal thickness and number of epidermal cells per 100um were found in all groups.

NINETY-SIX HOUR SACRIFICE, (cont'd)

For MSO (Groups 8, 9, 10 and 11), there were treatment and dose-related increases in epidermal thickness and number of epidermal cells per 100um in all groups.

For LVD (Groups 12, 13, 14 and 15), treatment-induced increases in epidermal thickness and number of epidermal cells were observed in all groups. For both parameters, the relation to dose was not present in Group 13.

For TPA (Groups 16, 17, 18 and 19), compound-related increases in epidermal thickness were found only in Groups 17, 18 and 19; these increases were dose-related. For number of epidermal cells per 100um, there were compound and dose-related increases in all groups.

For n-Dodecane (Groups 20, 21, 22 and 23), test article-induced increases in epidermal thickness and number of epidermal cells occurred in all groups. For both parameters, a dose relationship was present only in groups 20, 21 and 22.

For BPX (Groups 24, 25, 26 and 27), compound-related increases in epidermal thickness and number of epidermal cells were identified in all groups. There was no clear relation to dose.

NINETY-SIX HOUR SACRIFICE, (cont'd)

BrDU SECTIONS

The mean percentages of labelled nuclei in Groups 1 through 27 are as follows:

Mean % Labelled Nuclei

Group #	BrDU	SD	SEM
1	9.6	4.955805	2.477903
2	.8	.2828427	.1414214
3	8.15	3.944192	1.972096
4	2.05	.6608075	.3304037
5	5.65	3.304038	1.652019
6	9.0	3.290389	1.645195
7	9.067	3.164386	1.826959
8	4.7	2.335238	1.167619
9	5.9	1.465151	.7325755
10	8.5	3.968207	1.984103
11	9.75	1.64418	.82209
12	3.7	1.06458	.5322902
13	7.15	3.477067	1.738534
14	9.467	2.532455	1.4622114
15	13.4	5.212801	2.6064
16	2.4	.8485289	.4242644
17	3.25	1.247665	.6238324
18	3.65	.869866	.434933
19	4.75	1.738774	.8693868
20	9.7	6.674329	3.337165
21	7.95	4.878182	2.43909
22	15.0	7.754567	3.877283
23	17.6	2.0199	1.00995
24	4.05	1.857418	.928709
25	4.95	2.418677	1.209339
26	2.7	1.792577	.8962886
27	3.3	.6218262	.3109131

Toluene (Group 1) and MSO:Toluene (Group 3) caused increases in BrDU labelling when compared to Acetone (Group 2).

For OLPH (Groups 4, 5, 6 and 7), treatment and dose-related increases in labelling indices were identified in all groups.

For MSO (Groups 8, 9, 10 and 11), compound and dose-related increases occurred in all groups.

NINETY-SIX HOUR SACRIFICE, (cont'd)

For LVD (Groups 12, 13, 14 and 15), there were treatment and dose-related in BrDU labelling indices in all groups.

For TPA (Groups 16, 17, 18 and 19), compound and dose-related increases in labelling indices occurred in all groups.

For n-Dodecane (Groups 20, 21, 22 and 23), there were treatment and dose-related increases in labelling in all groups.

For BPX (Groups 24, 25, 26 and 27), the compound caused increased labelling in all groups. These increases were not related to dose.

CONCLUSION

The following treatment-related changes were observed for the compounds under study:

1. TOLUENE (GROUP 1)

6 Hour Sacrifice:

- Epidermal erosion, crust formation, necrosis/acantholysis, spongiosis/hydropic degeneration, orthokeratosis, hyperplasia and intraepithelial pustules.
- Dermal inflammatory infiltrations, edema.
- Increased epidermal thickness and number of epidermal cells per 100um.

24 Hour Sacrifice:

- Epidermal erosion, ulceration, epidermitis, necrosis/ acantholysis, spongiosis/hydropic degeneration, intraepithelial pustules, orthokeratosis and hyperplasia.
- Dermal inflammatory infiltrates, edema and vasodilatation.
- Increased epidermal thickness and number of epidermal cells.
- Increased BRDU labelling index.

48 HOUR SACRIFICE

- Epidermal erosion, ulceration, crust formation, spongiosis/hydropic degeneration, intraepithelia pustules, orthokeratosis, parakeratosis and hyperplasia.
- Dermal inflammatory infiltrates, edema and vasodilatation.
- Increased epidermal thickness and number of epidermal cells.
- Increased BRDU labelling index.

CONCLUSION, (cont'd)

96 HOUR SACRIFICE

- Epidermal erosion, ulceration, crust formation, spongiosis hydropic degeneration, orthokeratosis, parakeratosis and hyperplasia.
- Dermal inflammatory infiltrates, edema and vasodilatation.
- Increased epidermal thickness and number of epidermal cells.
- Increased BrDU labelling index.

2. MSO:TOLUENE

6 HOUR SACRIFICE

- Epidermal ulceration, crust formation, epidermitis, spongiosis/hydropic degeneration, intraepithelial pustules, orthokeratosis and hyperplasia.
- Dermal inflammatory infiltrates and edema.
- Increased epidermal thickness and epidermal cells.

24 HOUR SACRIFICE

- Epidermal erosion, ulceration, crust formation, epidermitis, necrosis/acantholysis, spongiosis/hydropic degeneration, intraepithelial pustules, orthokeratosis, parakeratosis and hyperplasia.
- Dermal inflammatory infiltrates, edema and vasodilatation.
- Increased epidermal thickness and number of epidermal cells.
- Increased BrDU labelling index.

CONCLUSION, (cont'd)

48 HOUR SACRIFICE

- Epidermal erosion, ulceration, crust formation, spongiosis/hydropic degeneration, orthokeratosis, parakeratosis and hyperplasia.
- Dermal inflammatory infiltrates and edema.
- Increased epidermal thickness and number of epidermal cells.
- Increased BrDU labelling index.

96 HOUR SACRIFICE

- Epidermal erosion, ulceration, crust formation, spongiosis hydropic degeneration, orthokeratosis, parakeratosis and hyperplasia.
- Dermal inflammatory infiltrates, edema and vasodilatation.
- Increased epidermal thickness and number of epidermal cells.
- Increased BrDU labelling index.

3. OLPH (GROUPS 4, 5, 6 and 7)

6 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: treatment and dose-related increases in Groups 5, 6, and 7 only.
- Epidermal proliferative changes: treatment and dose-related increases in Groups 5, 6 and 7 only.
- Dermal changes: treatment and dose-related increases in Groups 5, 6 and 7 only.
- Increased epidermal thickness in all groups; dose-related.
- Increased numbers of epidermal cells in all groups; no dose relationship in Groups 5 and 6.

CONCLUSION, (cont'd)

24 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: dose-related increases occurred only in Groups 6 and 7; no compound effects found in Groups 4 and 5.

- Epidermal proliferative changes: increases unrelated to dose, identified only in Groups 5, 6 and 7.

- Dermal changes: dose-related increase in Groups 5, 6 and 7 only.

- Increased epidermal thickness in Groups 5, 6 and 7 only; dose-related only in Groups 5 and 6.

- Increased BrDU labelling indices in Groups 6 and 7 only; unrelated to dose.

48 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: dose-related increases identified in Groups 5, 6 and 7 only. No inflammatory/degenerative changes were seen in Group 4.

- Epidermal proliferative changes: dose-related increases in Groups 5, 6 and 7 only. No proliferative changes found in Group 4.

- Dermal changes: dose-related increases in Groups 5, 6, and 7 only. No dermal changes noted in Group 4.

- Dose-related increased epidermal thickness in all groups.

- Dose-related increased numbers of epidermal cells in all groups.

- Increased BrDU labelling indices, unrelated to dose in all groups.

CONCLUSION, (cont'd)

96 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: no effects in Groups 4 and 5. Dose-related increases in Groups 6 and 7.

- Epidermal proliferative changes: no changes in Group 4. Dose-related increases in Groups 5, 6 and 7.

- Dermal changes: no changes in Group 4. Dose-related increases in Groups 5, 6 and 7.

- Dose-related increase in epidermal thickness in all groups.

- Dose-related increases in number of epidermal cells in all groups.

- Dose-related increased BrDU labelling in all groups.

4. MSO (GROUPS 8, 9, 10 AND 11)

6 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: dose-related increases in all groups.

- Epidermal proliferative changes: dose-related increase in all groups.

- Dermal changes: dose-related increases in all groups.

- Dose-related increased epidermal thickness in all groups.

- Dose-related increased numbers of epidermal cells in all groups.

CONCLUSION, (cont'd)

24 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: compound related increases observed in all groups. These increases were dose-related in Groups 8, 9 and 10 only.
- Epidermal proliferative changes: increases in all groups; dose-related only in Groups 8, 9 and 10.
- Dermal changes: dose-related increases in all groups.
- Dose-related increased epidermal thickness in all groups.
- Dose-related increased numbers of epidermal cells in all groups.
- Increased BrDU labelling indices in all groups; dose-related in Groups 10 and 11 only.

48 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: treatment and dose-related increases identified only in all groups.
- Epidermal proliferative changes: treatment and dose-related increases in all groups.
- Dermal changes: treatment-induced effects in all groups; dose-related in Groups 8, 9 and 10 only.
- Dose-related increased epidermal thickness in all groups.
- Dose-related increases in numbers of epidermal cells in all groups.
- Dose-related increased BrDU labelling index in all groups.

CONCLUSION, (cont'd)

96 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: no effects in Groups 8 and 9; treatment dose-related increases in Groups 10 and 11.
- Epidermal proliferative changes: treatment and dose-related effects in all groups.
- Dermal changes: treatment effects in all groups; dose-related only in Groups 8, 9 and 10.
- Dose-related increased epidermal thickness in all groups.
- Dose-related increased number of epidermal cells in all groups.
- Dose-related increases in BrDU labelling in all groups.

5. LVD, (GROUPS 12, 13, 14 and 15)

6 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: compound and dose-related effects found in Groups 13, 14 and 15 only.
- Epidermal proliferative changes: compound and dose-related increases in all groups.
- Dermal changes: dose-related increases in all groups.
- Dose-related increased epidermal thickness in all groups.
- Dose-related increased numbers of epidermal cells in all groups.

CONCLUSION, (cont'd)

24 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: dose-related increases in all groups.
- Epidermal proliferative changes: dose-related increased in Groups 13, 14 and 15 only. No changes in Group 12.
- Dermal changes: dose-related increases in all groups.
- Dose-related increased epidermal thickness in all groups.
- Dose-related increased numbers of epidermal cells in all groups.
- Dose-related increased BrDU labelling indices in all groups.

48 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: dose-related increases were identified only in Groups 14 and 15.
- Epidermal proliferative changes: treatment and dose-related increases in Groups 13, 14 and 15 only.
- Dermal changes: treatment and dose-related increases in Groups 13, 14 and 15 only.
- Dose-related increased epidermal thickness in all groups.
- Dose-related increases in numbers of epidermal cells in all groups.
- Dose-related increases in BrDU labelling indices, in all groups.

CONCLUSION, (cont'd)

96 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: no effects in Groups 12 and 13. Treatment and dose-related effects in Groups 14 and 15.

- Epidermal proliferative changes: treatment and dose-related changes in all groups.

- Dermal changes: no effects in Group 12; treatment and dose-related effects in Groups 13, 14 and 15.

- Increased epidermal thickness in all groups; dose-related in Groups 12, 14 and 15 only.

- Increased numbers of epidermal cells in all groups; dose-related in Groups 12, 14 and 15 only.

- Dose-related increases in BrDU labelling indices in all groups.

6. TPA (GROUPS 16, 17, 18 and 19)

6 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: no treatment effects seen in Groups 16 and 17. Dose-related changes in Groups 18 and 19.

- Epidermal proliferative changes: treatment and dose-related increases in all groups.

- Dermal changes: treatment and dose-related increases in all groups.

- Dose-related increased epidermal thickness in all groups

- Dose-related increased numbers of epidermal cells in all groups.

CONCLUSION, (cont'd)

24 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: treatment and dose-related increases in all groups.
- Epidermal proliferative changes: compound and dose-induced increases in all groups.
- Dermal changes: compound and dose-related effects only in Groups 17, 18 and 19.
- Treatment and dose-related increased epidermal thickness in all groups.
- Treatment and dose-related increased numbers of epidermal cells in all groups.
- Compound and dose-related increased BrDU labelling indices in Groups 17, 18 and 19 only.

48 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: no effects in Group 16. Treatment-induced, dose-related increases in Groups 17, 18 and 19.
- Epidermal proliferative changes: treatment-induced increases in all groups; dose relationship only in Groups 16, 17 and 18.
- Dermal changes: compound and dose-related increases in all groups.
- Dose related increased epidermal thickness in all groups.
- Dose-related increased numbers of epidermal cells in all groups.
- Dose-related increases in BrDU labelling indices in all groups.

CONCLUSIC.., (cont'd)

96 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: no changes in any groups.
- Epidermal proliferative changes: treatment-related, dose-responsive increases in all groups.
- Dermal changes: dose-related increases in all groups.
- Dose-related increased epidermal thickness in Groups 17, 18 and 19 only.
- Dose-related increases in numbers of epidermal cells in all groups.
- Dose-related increases in BrDU labelling in all groups.

7. n-Dodecane, (GROUPS 20, 21, 22 and 23)

6 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: compound effects found in all groups. Relationship to dose is unclear for Groups 22 and 23.
- Epidermal proliferative changes: compound and dose-induced increases in all groups.
- Dermal changes: dose-related effects in all groups.
- Increased epidermal thickness in all groups. Dose relationship only in Groups 21, 22 and 23.
- Increased numbers of epidermal cells in all groups; dose relationship only in Groups 21, 22 and 23.

CONCLUSION (cont'd)

24 HOUR SACRIFICE

- Epidermal/degenerative changes: treatment and dose-related increases only in Groups 21, 22 and 23. No effects in Group 20.
- Epidermal proliferative changes: increases in all groups; dose relationship only in Groups 22 and 23.
- Dermal changes: increases in all groups; dose relationship only in Groups 20 and 23.
- Increased epidermal thickness in all groups; dose-related in all groups.
- Increased numbers of epidermal cells in all groups; dose relationship only in Groups 21, 22 and 23.
- Increased BrDU labelling indices in all groups; dose-related only in Groups 20, 21 and 22.

48 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: increases unrelated to dose, were identified only in Groups 21, 22 and 23.
- Epidermal proliferative changes: treatment-related increases in all groups; dose related only in Groups 20, 21 and 23.
- Dermal changes: dose-related effects in all groups.
- Dose-related increased epidermal thickness in all groups.
- Increases in numbers of epidermal cells in all groups; dose-related only in Groups 20, 21 and 23.
- Dose-related increases in BrDU labelling indices in all groups.

CONCLUSION, (cont'd)

96 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: treatment effects, seen in Groups 21, 22 and 23. Dose relationship only in Groups 21 and 22. No inflammatory/degenerative changes in Group 20.

- Epidermal proliferative changes: treatment and dose-related increases in all groups.

- Dermal changes: treatment-induced increases, unrelated to dose, Groups 21, 22 and 23. No effects in Group 20.

- Increased epidermal thickness in all groups; dose relationship only in Groups 20, 21 and 22.

- Increased numbers of epidermal cells in all groups; dose-related only in Groups 20, 21 and 22.

- Dose-related increased BrDU labelling indices in all groups.

8. BPX (GROUPS 24, 25, 26 and 27)

6 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: no effects in Groups 24 and 25. Dose-related changes in Groups 26 and 27.

- Epidermal proliferative changes: compound-induced increases, in all groups; dose relationship only in Groups 24, 25 and 27.

- Dermal changes: dose-related increases in all groups.

- Increased epidermal thickness, unrelated to dose, in all groups.

- Increased numbers of epidermal cells, unrelated to dose in all groups.

CONCLUSION, (cont'd)

24 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: increases, unrelated to dose, observed only in Groups 24, 25 and 27.
- Epidermal proliferative changes: increases in all groups; dose-related only in Groups 26 and 27.
- Dermal changes: increases in all groups; dose-related only in Groups 26 and 27.
- Increased epidermal thickness in all groups; dose-related only in Groups 24 and 27.
- Increased numbers of epidermal cells in all groups; dose relationship, only in Groups 24, 25 and 27.
- Increased BrDU labelling indices, unrelated to dose, in all groups.

48 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: compound effects found in Groups 24, 25 and 27 only. Relationship to dose in unclear.
- Epidermal proliferative changes: compound-induced increases in all groups; dose-related only in Groups 24, 25 and 27.
- Dermal changes: increases in all groups; dose-related only in Groups 24, 25 and 27.
- Dose-related increased epidermal thickness in all groups. Dose-related only in Groups 24, 25 and 27.
- Increased numbers of epidermal cells in all groups; dose relationship only in Groups 24, 25 and 27.
- Increased BrDU labelling, unrelated to dose, in all groups.

CONCLUSION (cont'd)

96 HOUR SACRIFICE

- Epidermal inflammatory/degenerative changes: no changes in any group.
- Epidermal proliferative changes: increases, unrelated to dose, in all groups.
- Dermal changes: increases, unrelated to dose, in all groups.
- Increased epidermal thickness, unrelated to dose, in all groups.
- Increased numbers of epidermal cells in all groups; no dose relationship.
- Increased BrDU labelling indices, unrelated to dose, in a all groups.

201-910801
ACC# 1848

QUALITY ASSURANCE STATEMENT

This study has been performed in the spirit of Good Laboratory Practice and meets the Sponsor's requirements for quality assurance.

This study was performed without deviation from accepted protocols and SOPs.

All SOPs used in this study were properly authorized. The study protocol was properly instrumented.

The final report has been reviewed. The results accurately reflect the raw data of the study.

Any discrepancies are of an inconsequential nature or have been properly explained and documented.

The following phases of this study were inspected by Veritas Laboratories Quality Assurance Unit. The dates of the inspections performed as indicated below. All findings were reported to the Veritas Project Coordinator and to Management.

May 11, 1993	Part 1 of 9 - Project Sheet Review
Feb. 4, 1994	Part 2 of 9 - Master Individual/Multiple Animal Worksheet
May 12 & June 8, 1993	Part 3 of 9 - Histology Setup
Feb. 4, 1994	Part 4 of 9 - Histology Completion
Dec. 13-17, 1993	Part 5 of 9 - Slide/Block Match (100%)
Dec. 13-17, 1993	Part 6 of 9 - Slide Label Check (100%)
Dec. 7-9, 1993	Part 7 of 9 - Wet Tissue Check (100%)
Feb. 7-10, 1994	Part 8 of 9 - Rough Draft Report
	Part 9 of 9 - Final Report
	Other

Vickie R. Hocker Feb. 10, 1994
Vickie R. Hocker (Date)

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 1 Species: Mouse
Duration (Hours): 6

	Animal Numbers 1	2	3	4	Mean Grade Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	1	0	0.25
2. Ulceration	0	2	0	0	0.50
3. Crust Formation	2	1	3	0	1.50
4. Epidermitis	0	0	2	1	0.75
5. Necrosis/Acantholysis	2	3	2	1	2.00
6. Spongiosis/Hydropic Degen.	0	0	0	1	0.25
7. Pustule, Intraepithelial	0	2	1	2	1.25
8.					
Proliferative Changes					
9. Orthokeratosis	2	1	2	1	1.50
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	0	3	0	1.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	43.56	-	57.24	24.84	41.88
14. Epi. Cells Per 100 um **	34.80	-	48.60	24.00	35.80
.					
.					
DERMIS					
17. Inflammatory Infiltrates	2	3	3	2	2.50
18. Edema	2	3	3	2	2.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

-=Tissue too ulcerated or necrotic to measure.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 2 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	17	18	19	20	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	0	0.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	12.24	11.52	9.6	10.92	11.07
14. Epi. Cells Per 100 um **	20.40	23.20	16.20	20.60	20.10
15.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	0	0.0
18. Edema	0	0	0	0	0.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 3 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	33	34	35	36	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	3	0	2	3	2.0
3. Crust Formation	2	1	2	2	1.75
4. Epidermitis	1	1	1	1	1.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	2	1	0.75
7. Pustule, Intraepithelial	3	3	3	4	3.25
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	2	2	1.50
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	2	3	2	2.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	33	30	37.8	35.52	34.08
14. Epi. Cells Per 100 um **	30.4	24.6	36.6	28.6	30.05
15.					
DERMIS					
17. Inflammatory Infiltrates	4	3	4	3	3.5
18. Edema	4	3	4	3	3.5
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 4 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	49	50	51	52	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	0	0.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	13.08	11.16	11.52	10.08	11.46
14. Epi. Cells Per 100 um **	21.80	23.20	19.0	19.60	20.90
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	0	0.0
18. Edema	0	0	0	0	0.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 5 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	65	66	67	68	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	0	0	0	0.25
7. Pustule, Intraepithelial	0	2	1	2	1.25
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	0	0	1	0.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	22.56	17.52	17.04	19.32	19.11
14. Epi. Cells Per 100 um **	32.60	29.20	23.80	22.80	27.10
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	1	1	0	1	0.75
18. Edema	1	1	0	1	0.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 6 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	81	82	83	84	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	1	0	0	0	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	3	2	4	4	3.25
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	1	2	3	1.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	21.96	18.12	17.28	29.64	21.75
14. Epi. Cells Per 100 um **	22.80	24.20	27.40	32.40	26.70
15.					
.					
DERMIS					
17. Inflammatory Infiltrates	2	1	3	4	2.50
18. Edema	2	1	3	4	2.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 7 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	97	98	99	100	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	1	1	0	0.75
2. Ulceration	1	0	0	0	0.25
3. Crust Formation	0	1	0	0	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	0	0	0	0.25
7. Pustule, Intraepithelial	2	3	4	4	3.25
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	2	2	3	2.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	24.48	24.12	38.04	26.04	28.17
14. Epi. Cells Per 100 um **	30.20	29.80	34.80	32.80	31.90
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	3	4	4	3.25
18. Edema	2	3	4	4	3.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 8 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	113	114	115	116	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	1	0	0	0	0.25
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	2	0	0	0	0.50
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	1	0.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	16.32	15.12	14.28	16.80	15.63
14. Epi. Cells Per 100 um **	22.60	25.00	23.60	27.60	24.70
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	1	0	0.25
18. Edema	0	0	1	0	0.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 9 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	129	130	131	132	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	1	0.25
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	1	0	0	0	0.25
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	2	3	3	2	2.50
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	1	2	1	1.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	21.60	21.60	35.52	16.32	23.76
14. Epi. Cells Per 100 um **	28.20	24.60	35.00	24.40	28.05
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	2	2	2	2.00
18. Edema	2	2	2	2	2.00
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 10 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	145	146	147	148	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	2	0	0	3	1.25
3. Crust Formation	0	1	0	0	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	0	0	0	0.25
7. Pustule, Intraepithelial	3	3	3	3	3.00
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	0	0	0.50
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	3	2	2	2.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	31.68	37.44	26.04	25.68	30.21
14. Epi. Cells Per 100 um **	33.80	43.80	38.60	32.20	37.10
.					
.					
DERMIS					
17. Inflammatory Infiltrates	2	3	3	3	2.75
18. Edema	2	3	3	3	2.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 11 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	161	162	163	164	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	1	0	0	0.50
2. Ulceration	2	1	1	3	1.75
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	1	0	0	0	0.25
6. Spongiosis/Hydropic Degen.	2	1	0	2	1.25
7. Pustule, Intraepithelial	3	4	4	4	3.75
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	1	0	0.75
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	4	3	3	3	3.25
12. Dyskeratosis	4	0	0	0	1.00
13. Epidermal Thickness (um)*	60.12	43.80	31.44	48.36	45.93
14. Epi. Cells Per 100 um **	53.00	41.00	32.40	38.00	41.10
.					
.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	4	3.25
18. Edema	3	3	3	4	3.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 12 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	177	178	179	180	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	1	0.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	18.48	12.12	11.04	23.28	16.23
14. Epi. Cells Per 100 um **	28.20	18.00	17.00	22.80	21.50
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	1	0.25
18. Edema	0	0	0	1	0.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 13 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	193	194	195	196	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	1	0	0.25
7. Pustule, Intraepithelial	1	0	0	0	0.25
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	0	0	2	0.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	23.16	19.32	14.40	17.52	18.60
14. Epi. Cells Per 100 um **	26.00	23.40	19.80	23.80	23.25
...					
DERMIS					
17. Inflammatory Infiltrates	2	0	1	0	0.75
18. Edema	2	0	1	0	0.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 14 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	209	503	211	212	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	2	0	0.50
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	1	2	1	1.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	2	2	1	1.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	18.24	30.12	32.40	23.40	26.04
14. Epi. Cells Per 100 um **	26.80	32.00	26.60	29.00	28.60
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	1	2	3	1	1.75
18. Edema	1	2	3	1	1.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 15 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	225	226	227	228	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	1	0	0	1	0.50
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	1	1	0.50
7. Pustule, Intraepithelial	2	3	4	3	3.00
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	1	0	0.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	1	3	3	2.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	30.72	24.84	48.84	36.84	35.31
14. Epi. Cells Per 100 um **	31.00	32.60	44.00	39.80	36.85
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	2	3	3	2.75
18. Edema	3	2	3	3	2.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 16 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	241	242	243	244	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	1	0	0.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	0	0.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	10.44	10.68	14.28	11.64	11.76
14. Epi. Cells Per 100 um **	22.20	20.40	26.80	22.20	22.90
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	1	1	0.50
18. Edema	0	0	1	1	0.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 17 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	257	258	259	260	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	1	0	0.75
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	1	1	0	0.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	15.00	19.08	14.52	10.68	14.82
14. Epi. Cells Per 100 um **	25.20	29.80	25.00	24.80	26.20
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	1	1	0	1.00
18. Edema	2	1	1	0	1.00
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 18 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	273	274	275	276	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	1	1	1	0.75
5. Necrosis/Acantholysis	0	0	0	0	0.00
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.00
7. Pustule, Intraepithelial	0	1	0	0	0.25
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	0	1	0.75
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	2	2	2	2.00
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	39.24	34.20	30.60	42.48	36.63
14. Epi. Cells Per 100 um **	46.20	42.00	33.20	42.60	41.00
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	3	2	3	2.50
18. Edema	2	3	2	3	2.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 19 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	289	290	291	292	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	1	0	0	0.50
2. Ulceration	1	1	0	0	0.50
3. Crust Formation	0	1	0	0	0.25
4. Epidermitis	0	0	0	1	0.25
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	1	0	0	0.50
7. Pustule, Intraepithelial	1	1	0	1	0.75
8.					
Proliferative Changes					
9. Orthokeratosis	1	2	1	1	1.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	3	2	3	2.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	58.20	72.72	37.92	34.44	50.82
14. Epi. Cells Per 100 um **	52.00	56.20	33.80	48.80	47.70
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	3	3.00
18. Edema	3	3	3	3	3.00
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 20 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	305	306	307	308	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	1	0	0	0.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	12.00	17.28	12.48	11.40	13.29
14. Epi. Cells Per 100 um **	25.40	30.80	21.40	23.00	25.15
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	1	0	1	0.50
18. Edema	0	1	0	1	0.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 21 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	321	322	451	324	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	1	0.25
2. Ulceration	0	0	0	2	0.50
3. Crust Formation	0	0	0	1	0.25
4. Epidermitis	1	0	0	0	0.25
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	1	0	0	0.25
7. Pustule, Intraepithelial	2	3	2	2	2.25
8.					
Proliferative Changes					
9. Orthokeratosis	1	0	1	0	0.50
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	2	2	1	1.5
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	22.32	27.84	23.52	22.20	23.97
14. Epi. Cells Per 100 um **	25.40	24.60	25.60	25.00	25.15
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	3	2	2	2.25
18. Edema	2	3	2	2	2.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 22 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	337	338	339	340	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	1	1	0	0.50
2. Ulceration	0	0	0	1	0.25
3. Crust Formation	1	1	0	0	0.50
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	1	0	1	0.75
7. Pustule, Intraepithelial	4	3	3	4	3.50
8.					
Proliferative Changes					
9. Orthokeratosis	2	1	1	0	1.00
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	2	2	2	2.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	48.96	30.36	30.12	31.32	35.19
14. Epi. Cells Per 100 um **	40.80	26.80	30.80	29.20	31.90
.					
.					
DERMIS					
17. Inflammatory Infiltrates	4	3	4	4	3.75
18. Edema	4	3	4	4	3.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 23 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	353	354	355	356	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	1	0	0.25
2. Ulceration	0	0	2	0	0.50
3. Crust Formation	0	0	0	1	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	1	1	0	0.50
7. Pustule, Intraepithelial	4	4	3	3	3.50
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	2	0	0.50
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	2	2	2	2.00
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	33.48	34.22	29.88	25.32	30.72
14. Epi. Cells Per 100 um **	31.20	30.20	27.40	28.00	29.20
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	4	3	3	3.25
18. Edema	3	4	3	3	3.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 24 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	369	370	371	372	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	1	1	0.50
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	0	0	0	0.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	18.00	17.04	15.36	16.92	16.83
14. Epi. Cells Per 100 um **	25.80	22.40	29.80	23.60	25.40
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	1	0	2	1	1.00
18. Edema	1	0	2	1	1.00
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 25 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	385	386	387	388	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	0	1	0.75
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	1	1	1	1.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	25.80	18.96	19.56	17.16	20.37
14. Epi. Cells Per 100 um **	29.40	27.40	27.20	31.60	28.90
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	1	2	1	1	1.25
18. Edema	1	2	1	1	1.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 26 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	401	402	403	404	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	1	0.25
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	0	1	2	1.00
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	1	1	2	1.00
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	12.60	16.92	17.16	25.08	17.94
14. Epi. Cells Per 100 um **	22.20	24.20	25.60	33.20	26.30
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	1	2	1	2	1.50
18. Edema	1	2	1	2	1.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 27 Species: Mouse
Duration (Hours): 6

	Animal Numbers				Mean Grade
	417	418	419	420	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	1	1	0	0.50
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	1	1	1	0.75
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	1	3	2	1.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	15.96	15.60	39.36	21.48	23.10
14. Epi. Cells Per 100 um **	25.60	20.80	33.20	30.40	27.50
15.					
.					
DERMIS					
17. Inflammatory Infiltrates	1	2	2	2	1.75
18. Edema	1	2	2	2	1.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 1 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	5	6	7	8	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	0	2	0	0.75
2. Ulceration	0	2	3	1	1.5
3. Crust Formation	3	3	3	3	3.0
4. Epidermitis	2	2	3	2	2.25
5. Necrosis/Acantholysis	1	1	2	3	1.75
6. Spongiosis/Hydropic Degen.	1	1	1	1	1.0
7. Pustule, Intraepithelial	0	0	2	0	0.5
8.					
Proliferative Changes					
9. Orthokeratosis	2	2	3	2	2.25
10. Parakeratosis	0	1	0	0	0.25
11. Hyperplasia	2	3	2	3	2.5
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	-	-	-	-	-
14. Epi. Cells Per 100 um **	-	-	-	-	-
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	3	3.0
18. Edema	3	2	3	3	2.75
19. Vasodilatation	1	0	1	0	0.5
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

- = Tissue too ulcerated or necrotic for measurement.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 2 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	21	22	23	24	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	0	0.0
12. Dyskeratosis	0	0	0	0	0.0
. Epidermal Thickness (um)*	12.72	10.92	12.72	12.36	12.18
14. Epi. Cells Per 100 um **	18.4	19.4	23.6	20.4	20.45
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	0	0.0
18. Edema	0	0	0	0	0.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 3 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	37	38	39	40	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	2	1	0	1	1.0
2. Ulceration	2	3	2	4	2.75
3. Crust Formation	3	4	2	3	3.0
4. Epidermitis	1	1	2	1	1.25
5. Necrosis/Acantholysis	1	1	1	1	1.0
6. Spongiosis/Hydropic Degen.	3	2	1	2	2.0
7. Pustule, Intraepithelial	1	1	1	1	1.0
8.					
Proliferative Changes					
9. Orthokeratosis	3	2	2	2	2.25
10. Parakeratosis	0	1	0	0	0.25
11. Hyperplasia	2	2	2	3	2.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	35.64	34.92	34.80	42.24	36.90
14. Epi. Cells Per 100 um **	23.2	27.4	27.2	27.8	26.4
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	4	3.25
18. Edema	3	3	3	4	3.25
19. Vasodilatation	0	0	0	2	0.5
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 4 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	53	54	55	56	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	0	0.0
. Dyskeratosis	0	0	0	0	0.0
,. Epidermal Thickness (um)*	18.0	13.08	14.76	12.36	14.55
14. Epi. Cells Per 100 um **	22.4	18.2	20.0	22.8	20.85
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	0	0.0
18. Edema	0	0	0	0	0.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 5 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	69	70	71	72	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	0	0	0	0.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	1	0.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	18.12	15.24	15.48	18.84	16.92
14. Epi. Cells Per 100 um **	29.2	29.0	25.8	24.4	27.3
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	1	1	1	0.75
18. Edema	0	1	1	1	0.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 6 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	85	86	87	88	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	1	0	0	0	0.25
3. Crust Formation	2	0	1	0	0.75
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	0	0	0	0.25
7. Pustule, Intraepithelial	2	0	2	2	1.5
8.					
Proliferative Changes					
9. Orthokeratosis	2	1	1	1	1.25
10. Parakeratosis	1	0	0	1	0.5
11. Hyperplasia	3	2	2	2	2.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	47.28	25.56	31.80	32.64	34.32
14. Epi. Cells Per 100 um **	30.6	26.4	30.6	28.6	29.05
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	2	3	3	2.75
18. Edema	3	2	3	3	2.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 7 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	101	102	103	104	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	2	0	2	1.0
2. Ulceration	0	2	0	3	1.25
3. Crust Formation	0	0	0	2	0.5
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	2	1	2	1.25
7. Pustule, Intraepithelial	2	2	1	1	1.5
8.					
Proliferative Changes					
9. Orthokeratosis	1	2	1	2	1.5
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	2	2	2	2.0
12. Dyskeratosis	0	0	0	0	0.0
. Epidermal Thickness (um)*	41.28	34.56	28.20	31.20	33.81
14. Epi. Cells Per 100 um **	33.4	33.0	31.6	29.6	31.9
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	3	3.0
18. Edema	3	3	3	3	3.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 8 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	117	118	119	120	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	2	0.5
3. Crust Formation	0	2	0	0	0.5
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	1	0	1	0.5
7. Pustule, Intraepithelial	0	1	0	1	0.5
8.					
Proliferative Changes					
9. Orthokeratosis	0	1	0	1	0.5
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	2	1	2	1.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	13.56	20.28	21.36	21.84	19.26
14. Epi. Cells Per 100 um **	24.8	31.8	23.6	29.6	27.45
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	3	1	3	1.75
18. Edema	0	3	1	3	1.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 9 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	133	134	135	136	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	2	1	1	0	1.0
2. Ulceration	2	0	0	0	0.5
3. Crust Formation	1	2	0	0	0.75
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	2	0	1	1.0
7. Pustule, Intraepithelial	1	1	1	1	1.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	2	1	1	1.25
10. Parakeratosis	0	1	0	0	0.25
11. Hyperplasia	2	3	2	2	2.25
. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	32.88	37.56	30.48	28.68	32.4
14. Epi. Cells Per 100 um **	35.0	32.6	28.0	29.8	31.35
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	4	3	3.25
18. Edema	3	3	4	3	3.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 10 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	149	150	151	152	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	2	3	1	2	2.0
2. Ulceration	2	2	2	2	2.0
3. Crust Formation	4	4	2	2	3.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	3	3	2	2	2.5
7. Pustule, Intraepithelial	2	3	3	2	2.5
8.					
Proliferative Changes					
9. Orthokeratosis	2	3	2	2	2.25
10. Parakeratosis	1	2	1	0	1.0
11. Hyperplasia	3	3	2	2	2.5
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	37.32	46.80	45.12	35.64	41.22
14. Epi. Cells Per 100 um **	34.4	40.6	41.4	33.4	37.45
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	4	4	3	3	3.5
18. Edema	4	4	3	3	3.5
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 11 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	165	166	167	168	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	2	2	2	0	1.5
2. Ulceration	0	0	2	4	1.5
3. Crust Formation	3	3	3	2	2.75
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	3	2	3	3	2.75
7. Pustule, Intraepithelial	2	1	2	2	1.75
8.					
Proliferative Changes					
9. Orthokeratosis	2	2	2	1	1.75
10. Parakeratosis	0	0	1	0	0.25
11. Hyperplasia	3	3	2	3	2.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	34.20	43.08	-	61.32	46.20
14. Epi. Cells Per 100 um **	33.6	33.2	-	49.2	38.67
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	4	4	4	3	3.75
18. Edema	4	4	4	3	3.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

- = Tissue too ulcerated or necrotic to measure.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 12 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	181	182	183	184	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	1	0.25
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	0	0.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	15.72	15.84	13.08	15.48	15.03
14. Epi. Cells Per 100 um **	20.8	21.4	21.2	22.6	21.5
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	1	0.25
18. Edema	0	0	0	1	0.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910601-3

Group ID 13 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	197	198	199	200	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	0	0	0	0.25
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	1	0	0	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	0	0	0	0.25
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	0	0	0.5
10. Parakeratosis	1	0	0	0	0.25
11. Hyperplasia	2	2	1	2	1.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	33.60	45.0	21.0	22.2	30.45
14. Epi. Cells Per 100 um **	33.2	26.8	25.4	28.0	28.35
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	2	1	2	1.75
18. Edema	2	2	1	2	1.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 14 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	213	214	215	216	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	0	2	0	0.75
2. Ulceration	0	2	0	0	0.5
3. Crust Formation	1	0	1	0	0.5
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	2	2	0	1.25
7. Pustule, Intraepithelial	1	0	0	0	0.25
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	1	0	0.75
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	2	2	1	2.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	40.2	34.32	31.2	16.8	30.63
14. Epi. Cells Per 100 um **	34.8	37.2	28.6	21.6	30.55
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	2	2	1	2.0
18. Edema	3	2	2	1	2.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 15 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	229	230	231	232	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	1	0	1	0.5
2. Ulceration	4	0	0	3	1.75
3. Crust Formation	1	2	2	1	1.5
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	2	0	2	3	1.75
7. Pustule, Intraepithelial	0	2	1	2	1.25
8.					
Proliferative Changes					
9. Orthokeratosis	2	2	2	3	2.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	3	3	3	3.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	37.44	46.44	44.52	50.4	44.70
14. Epi. Cells Per 100 um **	33.8	35.0	31.8	42.2	35.7
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	4	3	3	3	2.5
18. Edema	4	3	3	3	2.5
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 16 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	245	246	247	248	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	1	0.25
11. Hyperplasia	0	0	0	1	0.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	12.84	16.08	15.24	16.56	15.18
14. Epi. Cells Per 100 um **	20.2	25.4	21.8	28.2	23.9
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	0	0.0
18. Edema	0	0	0	0	0.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 17 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	261	262	263	264	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	1	1	1.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	1	2	1	1.5
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	21.60	17.52	20.76	23.64	20.88
14. Epi. Cells Per 100 um **	27.2	24.4	28.2	23.8	25.9
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	1	1	1	1	1.0
18. Edema	1	1	1	1	1.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 18 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	277	278	279	280	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	2	0	0	0.5
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	1	0	0	0	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	2	2	1	2	1.75
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	2	2	2	2	2.0
10. Parakeratosis	0	1	0	1	0.5
11. Hyperplasia	3	3	2	3	2.75
. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	39.72	45.12	32.04	37.92	38.70
14. Epi. Cells Per 100 um **	28.8	33.4	32.4	37.2	32.95
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	2	3	2.75
18. Edema	3	3	2	3	2.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 19 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	293	294	295	296	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	2	0	0	0.5
2. Ulceration	0	3	0	0	0.75
3. Crust Formation	0	3	2	0	1.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	2	3	2	1	2.0
7. Pustule, Intraepithelial	0	2	0	2	1.0
8.					
Proliferative Changes					
9. Orthokeratosis	3	2	2	3	2.5
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	3	3	3	3.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	45.60	61.68	42.48	34.56	46.08
14. Epi. Cells Per 100 um **	28.8	47.2	30.8	29.4	34.05
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	4	3	3	3.25
18. Edema	3	4	3	3	3.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 20 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	309	310	311	312	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	0	0	0	0.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	0	0	1	0.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	30.36	17.04	16.20	19.08	20.67
14. Epi. Cells Per 100 um **	34.4	23.6	23.8	26.2	27.0
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	0	0	1	0.75
18. Edema	2	0	0	1	0.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 21 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	325	326	327	328	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	1	2	0	0.75
2. Ulceration	0	0	3	0	0.75
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	1	3	1	1.25
7. Pustule, Intraepithelial	0	2	2	1	1.25
8.					
Proliferative Changes					
9. Orthokeratosis	2	2	2	1	1.75
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	2	3	2	2.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	23.04	43.20	47.28	26.76	35.07
. Epi. Cells Per 100 um **	24.0	28.4	35.6	24.0	28.0
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	3	3.0
18. Edema	3	3	3	3	3.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 22 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	341	342	343	344	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	2	2	0	1.25
2. Ulceration	0	0	2	0	0.5
3. Crust Formation	1	0	0	0	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	2	2	2	0	1.5
7. Pustule, Intraepithelial	0	2	1	1	1.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	2	2	1	1.5
10. Parakeratosis	0	1	0	0	0.25
11. Hyperplasia	2	2	3	2	2.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	36.12	30.96	43.44	23.04	33.39
. Epi. Cells Per 100 um **	30.0	26.0	42.0	25.6	30.9
.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	2	2.75
18. Edema	3	3	3	2	2.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 23 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	357	358	517	360	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	3	0	2	1	1.5
2. Ulceration	3	0	3	4	2.5
3. Crust Formation	0	1	0	0	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	4	1	1	1	1.75
7. Pustule, Intraepithelial	2	2	2	0	1.5
8.					
Proliferative Changes					
9. Orthokeratosis	2	2	3	2	2.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	3	2	2	2.5
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	36.00	41.52	30.84	25.08	33.36
. Epi. Cells Per 100 um **	32.6	24.6	22.4	24.8	26.1
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	4	4	3	3	3.5
18. Edema	4	4	3	3	3.5
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 24 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	373	374	375	376	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	0	0	0	0.25
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	1	0.25
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	1	0.25
7. Pustule, Intraepithelial	1	0	0	0	0.25
8.					
Proliferative Changes					
9. Orthokeratosis	1	0	1	1	0.75
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	1	2	2	1.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	27.72	18.12	21.00	28.44	23.82
. Epi. Cells Per 100 um **	25.8	21.2	30.2	29.6	26.7
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	1	2	2	1.75
18. Edema	2	1	2	2	1.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 25 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	389	390	391	392	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	1	0.25
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	1	1	1	1.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	1	1	1.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	3	2	2	2.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	17.64	18.84	27.96	22.68	21.78
. Epi. Cells Per 100 um **	32.2	27.4	35.0	28.4	30.75
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	1	2	2	2	1.75
18. Edema	1	2	2	2	1.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 26 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	405	406	407	408	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	1	1	1.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	2	1	3	1.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	18.72	24.36	20.16	26.64	22.47
14. Epi. Cells Per 100 um **	30.8	31.2	25.4	35.2	30.65
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	2	1	3	2.0
18. Edema	2	2	1	3	2.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 27 Species: MOUSE
Duration (Hours) 24

	Animal Numbers				Mean Grade
	421	422	423	424	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	1	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	2	0	2	0	1.0
7. Pustule, Intraepithelial	1	0	0	0	0.25
8.					
Proliferative Changes					
9. Orthokeratosis	2	2	2	0	1.5
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	2	3	2	2.5
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	45.60	21.20	48.60	19.68	33.78
. Epi. Cells Per 100 um **	39.0	31.2	35.6	27.0	33.2
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	2	2	3	2.5
18. Edema	3	2	2	3	2.5
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 1 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	9	10	11	12	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	2	0.50
2. Ulceration	0	1	2	3	1.5
3. Crust Formation	3	0	0	3	1.5
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	2	1	2	2	1.75
7. Pustule, Intraepithelial	2	0	0	2	1.00
8.					
Proliferative Changes					
9. Orthokeratosis	4	2	2	3	2.75
10. Parakeratosis	1	0	0	1	0.50
11. Hyperplasia	3	1	2	3	2.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	45.72	9.12	17.16	42.24	28.56
14. Epi. Cells Per 100 um **	29.60	16.60	20.20	27.20	23.40
15.					
DERMIS					
17. Inflammatory Infiltrates	3	2	2	3	2.50
18. Edema	3	2	2	3	2.50
19. Vasodilatation	2	0	0	2	1.00
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 2 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	25	26	27	28	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	0	0.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	11.64	11.04	12.60	14.28	12.39
14. Epi. Cells Per 100 um **	18.80	24.80	21.60	19.40	21.15
15.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	0	0.0
18. Edema	0	0	0	0	0.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 3 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	41	42	43	44	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	3	2	2	1	2.0
2. Ulceration	2	2	3	1	2.0
3. Crust Formation	3	3	3	1	2.50
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	3	3	3	3	3.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	3	3	3	2	2.75
10. Parakeratosis	1	1	1	0	0.75
11. Hyperplasia	3	4	4	3	3.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	46.44	57.36	57.48	43.68	51.24
14. Epi. Cells Per 100 um **	38.80	36.60	44.00	38.60	39.50
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	4	3	3	3	3.25
18. Edema	4	3	3	3	3.25
19. Vasodilatation	1	0	0	0	0.25
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 4 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	57	58	59	60	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	0	0.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	16.20	19.56	13.92	13.44	15.78
14. Epi. Cells Per 100 um **	27.20	27.40	22.40	20.60	24.40
.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	0	0.0
18. Edema	0	0	0	0	0.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 5 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	73	74	75	76	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	1	0	1	0	0.50
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	1	0	0.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	0	1	0	0.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	20.04	18.72	21.72	22.56	20.76
14. Epi. Cells Per 100 um **	21.40	26.80	25.40	24.20	24.45
15.					
DERMIS					
17. Inflammatory Infiltrates	1	0	1	0	0.50
18. Edema	1	0	1	0	0.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 6 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	89	90	91	92	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	2	1	0.75
2. Ulceration	0	0	0	1	0.25
3. Crust Formation	1	0	1	0	0.50
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	1	1	0.50
7. Pustule, Intraepithelial	0	0	1	0	0.25
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	1	1	1.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	2	3	3	2.5
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	25.08	37.32	32.76	40.20	33.84
14. Epi. Cells Per 100 um **	29.20	30.20	31.60	43.20	33.55
15.					
.					
DERMIS					
17. Inflammatory Infiltrates	2	2	3	3	2.50
18. Edema	2	2	3	3	2.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 7 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	105	106	107	108	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	3	2	1	2	2.00
2. Ulceration	2	3	0	2	1.75
3. Crust Formation	1	2	0	1	1.00
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	2	2	2	3	2.25
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	3	3	2	2	2.50
10. Parakeratosis	1	2	0	1	1.0
11. Hyperplasia	3	3	3	4	3.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	32.28	54.36	41.40	49.20	44.31
14. Epi. Cells Per 100 um **	35.60	31.80	39.40	31.00	34.45
15.					
DERMIS					
17. Inflammatory Infiltrates	3	3	2	3	2.75
18. Edema	3	3	2	3	2.75
19. Vasodilatation	1	0	0	0	0.25
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910301-3

Group ID: 8 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	121	122	123	124	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	1	0	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	1	1	0.50
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	1	1	0.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	11.28	14.28	16.44	23.04	16.26
14. Epi. Cells Per 100 um **	19.80	27.60	29.40	29.80	26.65
15.					
DERMIS					
17. Inflammatory Infiltrates	0	0	2	1	0.75
18. Edema	0	0	2	1	0.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 9 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	137	138	139	140	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	2	1	0.75
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	0	0	0	0.25
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	2	1	1.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	2	2	2	2.25
12. Dyskeratosis	0	0	0	2	0.50
13. Epidermal Thickness (um)*	29.52	27.00	23.88	22.32	25.68
14. Epi. Cells Per 100 um **	30.40	32.80	26.00	28.40	29.40
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	2	3	2	2.50
18. Edema	3	2	3	2	2.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 10 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	153	154	155	156	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	0	2	0	0.75
2. Ulceration	0	0	4	1	1.25
3. Crust Formation	1	2	3	1	1.75
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	2	4	0	1.75
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	2	3	1	1.75
10. Parakeratosis	0	0	2	0	0.50
11. Hyperplasia	3	4	4	3	3.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	35.40	56.64	53.76	34.32	45.03
14. Epi. Cells Per 100 um **	30.80	45.40	43.80	31.40	37.85
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	4	3	3.25
18. Edema	3	3	4	3	3.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 11 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	169	170	171	172	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	3	3	0	2	2.00
2. Ulceration	0	2	0	0	0.50
3. Crust Formation	3	3	2	2	2.50
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	4	4	2	3	3.25
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	3	3	2	2	2.50
10. Parakeratosis	2	1	0	0	0.75
11. Hyperplasia	4	3	4	3	3.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	60.36	41.40	57.12	50.16	52.26
14. Epi. Cells Per 100 um **	56.20	29.60	42.40	39.00	41.80
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	3	3.00
18. Edema	3	3	3	3	3.00
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 12 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	185	186	187	188	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	0	0.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	15.60	15.12	12.60	14.88	14.55
14. Epi. Cells Per 100 um **	26.80	27.00	22.20	18.60	23.65
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	0	0.0
18. Edema	0	0	0	0	0.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 13 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	201	202	203	204	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	1	0	0	0.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	1	0	1	0.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	17.64	20.04	20.04	17.88	18.90
14. Epi. Cells Per 100 um **	25.00	25.80	24.40	24.00	24.80
.					
.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	1	0.25
18. Edema	0	0	0	1	0.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 14 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	217	218	219	220	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	2	0	0	0.50
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	2	0	0	0	0.50
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	2	1	1	1.25
10. Parakeratosis	1	0	0	0	0.25
11. Hyperplasia	3	3	1	3	2.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	45.96	40.32	25.80	31.92	36.00
14. Epi. Cells Per 100 um **	36.00	39.00	29.80	28.20	33.25
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	2	0	2	1.75
18. Edema	3	2	0	2	1.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 15 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	233	234	235	236	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	3	2	1	1.75
2. Ulceration	0	3	2	1	1.50
3. Crust Formation	1	3	3	0	1.75
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	3	3	2	2.25
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	2	3	3	2	2.50
10. Parakeratosis	0	1	0	1	0.50
11. Hyperplasia	2	4	4	4	3.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	25.44	43.32	47.28	44.16	40.05
14. Epi. Cells Per 100 um **	28.40	36.20	34.60	44.00	35.80
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	4	3	3	3.00
18. Edema	2	4	3	3	3.00
19. Vasodilatation	0	1	1	0	0.50
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 16 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	249	250	251	252	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	1	1	0	0.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	19.44	13.92	14.16	15.36	15.72
14. Epi. Cells Per 100 um **	33.80	25.80	25.20	18.80	25.90
15.					
DERMIS					
17. Inflammatory Infiltrates	1	0	1	1	0.75
18. Edema	1	0	1	1	0.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 17 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	265	266	267	268	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	1	0	0.25
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	1	0	0.75
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	2	2	0	1.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	17.64	20.76	18.96	13.92	17.82
14. Epi. Cells Per 100 um **	23.80	27.80	27.00	21.80	25.10
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	2	2	1	1.75
18. Edema	2	2	2	1	1.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 18 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	281	282	283	284	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	0	2	2	1.25
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	2	2	1.50
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	3	4	3	3.25
12. Dyskeratosis	0	3	0	0	0.75
13. Epidermal Thickness (um)*	32.16	31.92	41.64	45.72	37.86
14. Epi. Cells Per 100 um **	28.40	34.60	35.80	37.60	34.10
15.					
DERMIS					
17. Inflammatory Infiltrates	3	2	3	2	2.50
18. Edema	3	2	3	2	2.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 19 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	297	298	299	300	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	2	0	0	1	0.75
2. Ulceration	3	0	0	0	0.75
3. Crust Formation	3	0	0	0	0.75
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	3	3	1	3	2.50
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	2	2	1	2	1.75
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	4	3	4	3.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	36.60	60.24	29.88	65.16	47.97
14. Epi. Cells Per 100 um **	41.20	34.20	34.00	33.80	35.80
15.					
.					
DERMIS					
17. Inflammatory Infiltrates	4	3	3	4	3.50
18. Edema	4	3	3	4	3.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 20 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	313	314	315	316	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	1	1	2	1.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	13.56	22.56	15.72	18.48	17.58
14. Epi. Cells Per 100 um **	23.80	27.80	28.40	22.80	25.70
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	1	2	1	2	1.50
18. Edema	1	2	1	2	1.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 21 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	329	330	331	332	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	3	0	0	1	1.00
2. Ulceration	1	0	0	0	0.25
3. Crust Formation	2	0	2	0	1.00
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	3	0	1	1	1.25
7. Pustule, Intraepithelial	2	0	0	0	0.50
8.					
Proliferative Changes					
9. Orthokeratosis	4	1	2	2	2.25
10. Parakeratosis	2	0	0	0	0.50
11. Hyperplasia	3	2	2	2	2.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	56.52	29.04	37.92	26.04	37.38
14. Epi. Cells Per 100 um **	37.20	25.40	24.80	30.80	29.55
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	2	2	3	2.50
18. Edema	3	2	2	3	2.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 22 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	345	346	347	348	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	1	1	0	0.50
2. Ulceration	0	1	0	0	0.25
3. Crust Formation	0	1	1	0	0.50
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	1	1	1	0.75
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	2	2	1	1.50
10. Parakeratosis	0	0	1	0	0.25
11. Hyperplasia	2	3	3	3	2.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	30.72	39.12	46.80	33.00	37.41
14. Epi. Cells Per 100 um **	23.20	25.40	37.00	26.40	28.00
.					
.					
DERMIS					
17. Inflammatory Infiltrates	2	3	3	3	2.75
18. Edema	2	3	3	3	2.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 23 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	361	362	363	364	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	2	0	2	1.25
2. Ulceration	1	3	0	4	2.00
3. Crust Formation	0	1	1	2	1.00
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	2	3	3	4	3.00
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	2	2	3	2.00
10. Parakeratosis	0	0	1	1	0.50
11. Hyperplasia	3	3	4	4	3.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	35.28	44.16	48.60	45.72	43.44
14. Epi. Cells Per 100 um **	28.20	34.60	33.40	37.00	33.30
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	3	3.00
18. Edema	3	3	3	3	3.00
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 24 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	377	378	379	380	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	1	0	1	0.50
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	1	0	1	0.50
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	2	2	2	1.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	18.72	21.72	21.36	20.76	20.64
14. Epi. Cells Per 100 um **	21.40	23.40	27.40	27.00	24.80
15.					
DERMIS					
17. Inflammatory Infiltrates	1	1	1	1	1.00
18. Edema	1	1	1	1	1.00
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 25 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	393	394	395	396	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	1	0	0.25
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	1	0	0	0	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	3	0	1	0	1.00
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	2	0	1	1	1.00
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	2	2	2	2.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	43.92	25.68	21.84	29.16	30.15
14. Epi. Cells Per 100 um **	34.00	24.40	25.60	27.60	27.90
15.					
DERMIS					
17. Inflammatory Infiltrates	3	1	2	2	2.00
18. Edema	3	1	2	2	2.00
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 26 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	409	410	411	412	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	0	0	0.50
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	2	1	1	1.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	14.16	18.72	15.12	17.04	16.26
14. Epi. Cells Per 100 um **	21.40	29.60	26.20	23.20	25.10
15.					
DERMIS					
17. Inflammatory Infiltrates	2	2	1	1	1.50
18. Edema	2	2	1	1	1.50
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID: 27 Species: Mouse
Duration (Hours): 48

	Animal Numbers				Mean Grade
	425	426	427	428	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	1	0	0	0	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	3	1	3	1	2.00
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	0	1	2	1.00
10. Parakeratosis	0	0	1	0	0.25
11. Hyperplasia	4	3	4	3	3.50
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	43.92	20.28	48.36	24.48	34.26
14. Epi. Cells Per 100 um **	44.40	35.40	45.60	33.60	39.75
15.					
DERMIS					
17. Inflammatory Infiltrates	3	3	4	3	3.25
18. Edema	3	3	4	3	3.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 1 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	13	14	15	16	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	2	0	0.5
2. Ulceration	3	0	2	0	1.25
3. Crust Formation	2	0	3	0	1.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	2	1	3	1	1.75
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	4	1	1.75
10. Parakeratosis	0	0	1	0	0.25
11. Hyperplasia	3	2	3	3	2.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	58.44	37.44	43.44	42.12	45.36
14. Epi. Cells Per 100 um **	36.2	26.8	31.4	37.6	33.0
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	2	3	2	2.25
18. Edema	2	2	3	2	2.25
19. Vasodilatation	0	0	1	0	0.25
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 2 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	29	30	31	32	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	0	0.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	12.24	12.00	13.20	11.52	12.24
. Epi. Cells Per 100 um **	25.2	17.0	20.4	20.8	20.85
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	0	0.0
18. Edema	0	0	0	0	0.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 3 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	45	46	47	48	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	2	2	3	2.0
2. Ulceration	0	3	2	4	2.25
3. Crust Formation	3	1	1	3	2.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	2	3	3	4	3.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	2	2	2	4	2.5
10. Parakeratosis	1	2	1	2	1.5
11. Hyperplasia	3	4	3	3	3.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	38.52	54.84	51.36	55.44	50.04
. Epi. Cells Per 100 um **	36.8	42.6	45.6	42.2	41.8
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	3	3.0
18. Edema	3	3	3	3	3.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 4 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	61	62	63	64	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	0	0.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	12.12	12.12	14.16	14.88	13.32
. Epi. Cells Per 100 um **	18.8	22.0	21.8	24.2	21.7
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	0	0.0
18. Edema	0	0	0	0	0.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 5 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	77	78	79	80	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	1	0	1	0.5
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	2	0	2	1.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	14.28	16.56	14.76	19.92	16.38
. Epi. Cells Per 100 um **	21.6	31.6	24.4	27.0	26.15
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	2	0	2	1.0
18. Edema	0	2	0	2	1.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 6 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	93	94	95	96	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	0	1	1	0.75
2. Ulceration	0	0	3	0	0.75
3. Crust Formation	1	0	0	0	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	0	3	0	1.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	2	1	2	2	1.75
10. Parakeratosis	1	0	0	0	0.25
11. Hyperplasia	3	2	4	2	2.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	32.28	21.24	42.12	25.56	30.30
. Epi. Cells Per 100 um **	29.8	30.8	43.4	32.0	34.0
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	2	3	3	2.75
18. Edema	3	2	3	3	2.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 7 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	109	110	111***	112	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	0	-	3	1.33
2. Ulceration	0	1	-	2	1.0
3. Crust Formation	1	1	-	1	1.0
4. Epidermitis	0	0	-	0	0.0
5. Necrosis/Acantholysis	0	0	-	0	0.0
6. Spongiosis/Hydropic Degen.	3	2	-	3	2.67
7. Pustule, Intraepithelial	0	0	-	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	2	1	-	3	2.0
10. Parakeratosis	0	0	-	2	0.67
11. Hyperplasia	4	4	-	4	4.0
12. Dyskeratosis	0	0	-	0	0.0
13. Epidermal Thickness (um)*	37.44	38.40	-	32.28	36.04
. Epi. Cells Per 100 um **	42.8	36.4	-	33.4	37.53
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	-	3	3.0
18. Edema	3	3	-	3	3.0
19. Vasodilatation	0	0	-	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

***Tissue not available for microscopic examination.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 8 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	125	126	127	128	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	1	0	0	0.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	2	1	0	1.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	24.96	19.32	21.48	14.52	20.07
14. Epi. Cells Per 100 um **	28.2	24.8	36.6	23.8	28.35
.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	1	1	0	0.5
18. Edema	0	1	1	0	0.5
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 9 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	141	142	143	144	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	1	2	1.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	2	2	2	2.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	19.56	22.08	27.60	25.80	23.76
. Epi. Cells Per 100 um **	35.4	29.2	28.6	36.4	32.4
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	2	1	2	1.75
18. Edema	2	2	1	2	1.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 10 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	157	158	159	160	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	1	2	0	1.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	1	0	0.25
4. Epidermitis	0	0	0	1	0.25
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	1	2	1	1.25
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	2	2	2	1	1.75
10. Parakeratosis	0	0	2	0	0.5
11. Hyperplasia	3	2	3	2	2.5
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	30.96	29.52	44.4	31.08	33.99
14. Epi. Cells Per 100 um **	34.4	34.8	37.2	36.0	35.6
15.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	3	3.0
18. Edema	3	3	3	3	3.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 11 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	173	174	175	176	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	3	0	1	0	1.0
2. Ulceration	1	0	0	0	0.25
3. Crust Formation	1	0	0	1	0.5
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	4	1	2	1	2.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	2	2	3	2	2.25
10. Parakeratosis	1	0	0	0	0.25
11. Hyperplasia	4	3	3	2	3.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	37.68	41.76	39.84	32.04	37.83
. Epi. Cells Per 100 um **	38.8	44.0	40.0	34.4	39.3
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	2	2.75
18. Edema	3	3	3	2	2.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 12 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	189	190	191	192	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	1	0	0.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	16.20	18.00	18.36	15.72	17.07
14. Epi. Cells Per 100 um **	25.2	30.8	25.0	25.0	26.5
.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	0	0.0
18. Edema	0	0	0	0	0.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 13 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	205	206	207	208	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	0	1	1	0.75
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	0	1	1	0.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	17.28	21.12	21.84	17.04	19.32
14. Epi. Cells Per 100 um **	26.6	24.2	24.6	23.2	24.65
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	1	0	1	0	0.5
18. Edema	1	0	1	0	0.5
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 14 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	221	222	223***	224	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	-	0	0.0
2. Ulceration	0	0	-	0	0.0
3. Crust Formation	0	0	-	0	0.0
4. Epidermitis	0	0	-	0	0.0
5. Necrosis/Acantholysis	0	0	-	0	0.0
6. Spongiosis/Hydropic Degen.	2	0	-	0	0.67
7. Pustule, Intraepithelial	0	0	-	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	-	0	0.67
10. Parakeratosis	0	0	-	0	0.0
11. Hyperplasia	3	1	-	2	2.0
12. Dyskeratosis	0	0	-	0	0.0
13. Epidermal Thickness (um)*	24.72	24.96	-	27.60	25.76
14. Epi. Cells Per 100 um **	28.4	26.8	-	38.8	31.33
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	1	-	2	1.67
18. Edema	2	1	-	2	1.67
19. Vasodilatation	0	0	-	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

***Tissue not available for microscopic examination.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 15 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	237	238	239	240	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	2	0	0.5
2. Ulceration	0	0	1	0	0.25
3. Crust Formation	0	1	0	0	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	0	2	0	0.75
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	2	2	2	1	1.75
10. Parakeratosis	0	0	1	0	0.25
11. Hyperplasia	3	3	3	2	2.75
12. Dyskeratosis	0	0	0	0	0.0
[illegible]. Epidermal Thickness (um)*	32.52	33.72	47.04	25.80	34.77
. Epi. Cells Per 100 um **	34.2	36.0	35.0	32.8	34.5
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	2	2.75
18. Edema	3	3	3	2	2.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 16 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	253	254	255	256	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	1	0.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	0	0	0	0.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	11.52	12.12	12.60	12.48	12.18
14. Epi. Cells Per 100 um **	26.0	25.6	18.2	22.4	23.05
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	1	0	0	0.25
18. Edema	0	1	0	0	0.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 17 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	269	270	271	272	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	1	1	0.5
11. Hyperplasia	0	0	0	0	0.0
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	16.20	18.96	20.04	15.36	17.64
14. Epi. Cells Per 100 um **	18.6	31.4	28.0	26.8	26.2
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	1	1	0.5
18. Edema	0	0	1	1	0.5
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 18 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	285	286	287	288	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	1	1	1.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	1	2	2	1.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	17.88	17.16	27.36	19.32	20.43
14. Epi. Cells Per 100 um **	23.2	26.4	26.6	31.2	26.85
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	1	1	2	2	1.5
18. Edema	1	1	2	2	1.5
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 19 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	301	302	303	304	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	2	2	1.5
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	3	3	4	3.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	27.0	41.88	40.32	51.34	40.14
14. Epi. Cells Per 100 um **	31.4	34.6	34.4	43.6	36.0
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	2	3	3	2.75
18. Edema	3	2	3	3	2.75
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 20 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	317	318	319	320	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	0	0	0	0.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	0	0	0	0.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	13.56	18.12	13.56	17.16	15.60
. Epi. Cells Per 100 um **	20.2	28.0	22.4	26.8	24.35
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	0	0	0	0.0
18. Edema	0	0	0	0	0.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 21 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	333	334	335	336	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	1	0	0	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	1	0	0	0.5
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	2	1	2	1.5
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	2	3	2	2	2.25
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	23.28	31.08	21.60	21.96	24.48
14. Epi. Cells Per 100 um **	28.8	37.2	32.8	30.0	32.2
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	3	3	2	2.5
18. Edema	2	3	3	2	2.5
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 22 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	349	350	351	352	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	1	0	0.25
2. Ulceration	1	0	0	0	0.25
3. Crust Formation	0	0	0	1	0.25
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	1	0	2	1	1.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	1	1	2	2	1.5
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	2	3	3	2.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	29.88	32.88	52.08	36.72	37.89
14. Epi. Cells Per 100 um **	29.4	38.4	41.8	31.0	35.15
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	3	3	3	3.0
18. Edema	3	3	3	3	3.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 23 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	365	366	367	368	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	1	1	0	1	0.75
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	2	1	0	1	1.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	2	2	2	1	1.75
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	3	3	3	2	2.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	39.12	39.6	28.92	35.28	35.73
14. Epi. Cells Per 100 um **	31.4	33.2	30	35.6	32.55
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	3	2	3	2	2.5
18. Edema	3	2	3	2	2.5
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 24 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	381	382	383	384	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	1	0	0	0.25
12. Dyskeratosis	0	0	0	0	0.0
. Epidermal Thickness (um)*	13.56	17.88	15.48	18.72	16.41
14. Epi. Cells Per 100 um **	21.8	28.0	24.6	28.4	25.7
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	0	1	0	0	0.25
18. Edema	0	1	0	0	0.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 25 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	397	398	399	400	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	1	0	0	0.25
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	0	1	1	0.75
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	18.24	17.76	20.76	20.52	19.32
. Epi. Cells Per 100 um **	25.6	28.2	29.6	31.4	28.7
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	1	1	2	1	1.25
18. Edema	1	1	2	1	1.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 26 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	413	414	415	416	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	0	0	0	0.0
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	0	1	0	1	0.5
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	13.08	16.68	13.08	15.60	14.61
14. Epi. Cells Per 100 um **	26.8	28.8	27.0	25.2	26.95
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	1	0	0	0	0.25
18. Edema	1	0	0	0	0.25
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

INDIVIDUAL ANIMAL HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

Group ID 27 Species: MOUSE
Duration (Hours) 96

	Animal Numbers				Mean Grade
	429	430	431	432	Group
EPIDERMIS					
Inflammatory/Degenerative Changes					
1. Erosion	0	0	0	0	0.0
2. Ulceration	0	0	0	0	0.0
3. Crust Formation	0	0	0	0	0.0
4. Epidermitis	0	0	0	0	0.0
5. Necrosis/Acantholysis	0	0	0	0	0.0
6. Spongiosis/Hydropic Degen.	0	0	0	0	0.0
7. Pustule, Intraepithelial	0	0	0	0	0.0
8.					
Proliferative Changes					
9. Orthokeratosis	0	1	1	1	0.75
10. Parakeratosis	0	0	0	0	0.0
11. Hyperplasia	1	2	2	1	1.5
12. Dyskeratosis	0	0	0	0	0.0
13. Epidermal Thickness (um)*	14.52	21.0	22.32	14.52	18.09
14. Epi. Cells Per 100 um **	29.0	29.0	31.2	28.6	29.45
15.					
16.					
DERMIS					
17. Inflammatory Infiltrates	2	2	3	1	2.0
18. Edema	2	2	3	1	2.0
19. Vasodilatation	0	0	0	0	0.0
20.					
21.					

SCORE 0 = Regular/Normal, 1 = Minimal, 2 = Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

*Epidermal thickness is average of ten micrometer-based measurements per specimen.

**Epidermal Cells per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 1 (Toluene) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.25	0.75	0.50	0.50
2. Ulceration	0.50	1.50	1.50	1.25
3. Crust Formation	1.50	3.00	1.50	1.25
4. Epidermitis	0.75	2.25	0.0	0.0
5. Necrosis/Acantholysis	2.00	1.75	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.25	1.00	1.75	1.75
7. Pustule, Intraepithelial	1.25	0.50	1.00	0.0
8.				
Inflammatory/ Degenerative Score	6.50	10.75	6.25	4.75
Proliferative Changes				
9. Orthokeratosis	1.50	2.25	2.75	1.75
10. Parakeratosis	0.0	0.25	0.50	0.25
11. Hyperplasia	1.25	2.50	2.25	2.75
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	41.88	36.90	28.56	45.36
14. Epi. Cells per 100 um **	35.80	26.40	23.40	33.00
Proliferative Score	80.43	68.30	57.46	83.11
DERMIS				
15. Inflammatory Infiltrates	2.50	3.00	2.50	2.25
16. Edema	2.50	2.75	2.50	2.25
17. Vasodilatation	0.0	0.50	1.00	0.25
Dermal Score	5.00	6.25	6.00	4.75

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 2 (Acetone) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.0	0.0	0.0
2. Ulceration	0.0	0.0	0.0	0.0
3. Crust Formation	0.0	0.0	0.0	0.0
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	0.0	0.0	0.0
7. Pustule, Intraepithelial	0.0	0.0	0.0	0.0
8.				
Inflammatory/ Degenerative Score	0.0	0.0	0.0	0.0
Proliferative Changes				
9. Orthokeratosis	0.0	0.0	0.0	0.0
10. Parakeratosis	0.0	0.0	0.0	0.0
11. Hyperplasia	0.0	0.0	0.0	0.0
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	11.07	12.18	12.39	12.24
14. Epi. Cells per 100 um **	20.10	20.45	21.15	20.85
Proliferative Score	31.17	32.63	33.54	33.09
DERMIS				
15. Inflammatory Infiltrates	0.0	0.0	0.0	0.0
16. Edema	0.0	0.0	0.0	0.0
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	0.0	0.0	0.0	0.0

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 3 (MSO:Toluene) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	1.00	2.00	2.00
2. Ulceration	2.00	2.75	2.00	2.25
3. Crust Formation	1.75	3.00	2.50	2.00
4. Epidermitis	1.00	1.25	0.0	0.0
5. Necrosis/Acantholysis	0.0	1.00	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.75	2.00	3.00	3.00
7. Pustule, Intraepithelial	3.25	1.00	0.0	0.0
8.				
Inflammatory/ Degenerative Score	8.75	12.00	9.50	9.25
Proliferative Changes				
9. Orthokeratosis	1.50	2.25	2.75	2.50
10. Parakeratosis	0.0	0.25	0.75	1.50
11. Hyperplasia	2.50	2.25	3.50	3.25
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	34.08	36.90	51.24	50.04
14. Epi. Cells per 100 um **	30.05	26.40	39.50	41.80
Proliferative Score	68.13	68.05	97.74	99.09
DERMIS				
15. Inflammatory Infiltrates	3.50	3.25	3.25	3.00
16. Edema	3.50	3.25	3.25	3.00
17. Vasodilatation	0.0	0.50	0.25	0.0
Dermal Score	7.00	7.00	6.75	6.00

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 4 (OLPH, 11.8 ul) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.0	0.0	0.0
2. Ulceration	0.0	0.0	0.0	0.0
3. Crust Formation	0.0	0.0	0.0	0.0
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	0.0	0.0	0.0
7. Pustule, Intraepithelial	0.0	0.0	0.0	0.0
8.				
Inflammatory/ Degenerative Score	0.0	0.0	0.0	0.0
Proliferative Changes				
9. Orthokeratosis	0.0	0.0	0.0	0.0
10. Parakeratosis	0.0	0.0	0.0	0.0
11. Hyperplasia	0.0	0.0	0.0	0.0
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	11.46	14.55	15.78	13.32
14. Epi. Cells per 100 um **	20.90	20.85	24.40	21.70
Proliferative Score	32.36	35.40	40.18	35.02
DERMIS				
15. Inflammatory Infiltrates	0.0	0.0	0.0	0.0
16. Edema	0.0	0.0	0.0	0.0
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	0.0	0.0	0.0	0.0

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 5 (OLPH, 23.5ul) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.0	0.0	0.0
2. Ulceration	0.0	0.0	0.0	0.0
3. Crust Formation	0.0	0.0	0.50	0.0
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.25	0.0	0.0	0.0
7. Pustule, Intraepithelial	1.25	0.0	0.0	0.0
8.				
Inflammatory/ Degenerative Score	1.50	0.0	0.50	0.0
Proliferative Changes				
9. Orthokeratosis	0.0	0.25	0.25	0.50
[illegible]. Parakeratosis	0.0	0.0	0.0	0.0
[illegible]. Hyperplasia	0.50	0.25	0.50	1.00
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	19.11	16.92	20.76	16.38
14. Epi. Cells per 100 um **	27.10	27.30	24.45	26.15
Proliferative Score	46.71	44.72	45.96	44.03
DERMIS				
15. Inflammatory Infiltrates	0.75	0.75	0.50	1.00
16. Edema	0.75	0.75	0.50	1.00
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	1.50	1.50	1.00	2.00

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 6 (OLPH, 50.0ul) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.0	0.75	0.75
2. Ulceration	0.0	0.25	0.25	0.75
3. Crust Formation	0.25	0.75	0.50	0.25
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	0.25	0.50	1.00
7. Pustule, Intraepithelial	3.25	1.50	0.25	0.0
8.				
Inflammatory/ Degenerative Score	3.50	2.75	2.25	2.75
Proliferative Changes				
9. Orthokeratosis	0.0	1.25	1.00	1.75
10. Parakeratosis	0.0	0.50	0.0	0.25
11. Hyperplasia	1.75	2.25	2.50	2.75
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	21.75	34.32	33.84	30.30
14. Epi. Cells per 100 um **	26.70	29.05	33.55	34.00
Proliferative Score	50.20	67.37	70.89	69.05
DERMIS				
15. Inflammatory Infiltrates	2.50	2.75	2.50	2.75
16. Edema	2.50	2.75	2.50	2.75
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	5.00	5.50	5.00	5.50

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 7 (OLPH, 100.0ul) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.75	1.00	2.00	1.33
2. Ulceration	0.25	1.25	1.75	1.00
3. Crust Formation	0.25	0.50	1.00	1.00
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.25	1.25	2.25	2.67
7. Pustule, Intraepithelial	3.25	1.50	0.0	0.0
8.				
Inflammatory/ Degenerative Score	4.75	5.50	7.00	6.00
Proliferative Changes				
9. Orthokeratosis	0.0	1.50	2.50	2.00
10. Parakeratosis	0.0	0.0	1.00	0.67
11. Hyperplasia	2.25	2.00	3.25	4.00
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	28.17	33.81	44.31	36.04
14. Epi. Cells per 100 um **	31.90	31.90	34.45	37.53
Proliferative Score	62.32	69.21	85.51	80.24
DERMIS				
15. Inflammatory Infiltrates	3.25	3.00	2.75	3.00
16. Edema	3.25	3.00	2.75	3.00
17. Vasodilatation	0.0	0.0	0.25	0.0
Dermal Score	6.50	6.00	5.75	6.00

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 8 (MSO, 11.8ul) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.0	0.0	0.0
2. Ulceration	0.25	0.50	0.0	0.0
3. Crust Formation	0.0	0.50	0.25	0.0
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.50	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	0.50	0.0	0.0
7. Pustule, Intraepithelial	0.0	0.50	0.0	0.0
8.				
Inflammatory/ Degenerative Score	0.75	2.00	0.25	0.0
Proliferative Changes				
9. Orthokeratosis	0.0	0.50	0.50	0.25
10. Parakeratosis	0.0	0.0	0.0	0.0
11. Hyperplasia	0.25	1.25	0.50	1.00
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	15.63	19.26	16.26	20.07
14. Epi. Cells per 100 um **	24.70	27.45	26.65	28.35
Proliferative Score	40.58	48.46	43.91	49.67
DERMIS				
15. Inflammatory Infiltrates	0.25	1.75	0.75	0.50
16. Edema	0.25	1.75	0.75	0.50
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	0.50	3.50	1.50	1.00

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 9 (MSO, 23.5ul) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	1.00	0.0	0.0
2. Ulceration	0.25	0.50	0.0	0.0
3. Crust Formation	0.0	0.75	0.75	0.0
4. Epidermitis	0.25	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	1.00	0.25	0.0
7. Pustule, Intraepithelial	2.50	1.00	0.0	0.0
8.				
Inflammatory/ Degenerative Score	3.00	4.25	1.00	0.0
Proliferative Changes				
9. Orthokeratosis	0.0	1.25	1.25	1.25
10. Parakeratosis	0.0	0.25	0.0	0.0
11. Hyperplasia	1.25	2.25	2.25	2.00
12. Dyskeratosis	0.0	0.0	0.50	0.0
13. Epidermal thickness (um)*	23.76	32.40	25.68	23.76
14. Epi. Cells per 100 um **	28.05	31.35	29.40	32.40
Proliferative Score	53.06	67.50	59.08	59.41
DERMIS				
15. Inflammatory Infiltrates	2.00	3.25	2.50	1.75
16. Edema	2.00	3.25	2.50	1.75
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	4.00	6.50	5.00	3.50

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 10 (MSO, 50.0ul) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	2.00	0.75	1.00
2. Ulceration	1.25	2.00	1.25	0.0
3. Crust Formation	0.25	3.00	1.75	0.25
4. Epidermitis	0.0	0.0	0.0	0.25
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.25	2.50	1.75	1.25
7. Pustule, Intraepithelial	3.00	2.50	0.0	0.0
8.				
Inflammatory/ Degenerative Score	4.75	12.00	5.50	2.75
Proliferative Changes				
9. Orthokeratosis	0.50	2.25	1.75	1.75
10. Parakeratosis	0.0	1.00	0.50	0.50
11. Hyperplasia	2.25	2.50	3.50	2.50
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	30.21	41.22	45.03	33.99
14. Epi. Cells per 100 um **	37.10	37.45	37.85	35.60
Proliferative Score	70.06	84.42	88.63	74.34
DERMIS				
15. Inflammatory Infiltrates	2.75	3.50	3.25	3.00
16. Edema	2.75	3.50	3.25	3.00
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	5.50	7.00	6.50	6.00

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 11 (MSO, 100.0ul) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.50	1.50	2.00	1.00
2. Ulceration	1.75	1.50	0.50	0.25
3. Crust Formation	0.0	2.75	2.50	0.50
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.25	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	1.25	2.75	3.25	2.00
7. Pustule, Intraepithelial	3.75	1.75	0.0	0.0
8.				
Inflammatory/ Degenerative Score	7.50	10.25	8.25	3.75
Proliferative Changes				
9. Orthokeratosis	0.75	1.75	2.50	2.25
10. Parakeratosis	0.0	0.25	0.75	0.25
11. Hyperplasia	3.25	2.75	3.50	3.00
12. Dyskeratosis	1.00	0.0	0.0	0.0
13. Epidermal thickness (um)*	45.93	46.20	52.26	37.83
14. Epi. Cells per 100 um **	41.10	38.67	41.80	39.30
Proliferative Score	92.03	89.62	100.81	82.63
DERMIS				
15. Inflammatory Infiltrates	3.25	3.75	3.00	2.75
16. Edema	3.25	3.75	3.00	2.75
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	6.50	7.50	6.00	5.50

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 12 (LVD, 11.8ul) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.25	0.0	0.0
2. Ulceration	0.0	0.0	0.0	0.0
3. Crust Formation	0.0	0.0	0.0	0.0
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	0.0	0.0	0.0
7. Pustule, Intraepithelial	0.0	0.0	0.0	0.0
8.				
Inflammatory/ Degenerative Score	0.0	0.25	0.0	0.0
Proliferative Changes				
9. Orthokeratosis	0.0	0.0	0.0	0.0
10. Parakeratosis	0.0	0.0	0.0	0.0
11. Hyperplasia	0.25	0.0	0.0	0.25
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	16.23	15.03	14.55	17.07
14. Epi. Cells per 100 um **	21.50	21.50	23.65	26.50
Proliferative Score	37.98	36.53	38.20	43.82
DERMIS				
15. Inflammatory Infiltrates	0.25	0.25	0.0	0.0
16. Edema	0.25	0.25	0.0	0.0
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	0.50	0.50	0.0	0.0

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 13 (LVD, 23.5ul) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.25	0.0	0.0
2. Ulceration	0.0	0.0	0.0	0.0
3. Crust Formation	0.0	0.25	0.0	0.0
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.25	0.25	0.0	0.0
7. Pustule, Intraepithelial	0.25	0.0	0.0	0.0
8.				
Inflammatory/ Degenerative Score	0.50	0.75	0.0	0.0
Proliferative Changes				
9. Orthokeratosis	0.0	0.50	0.25	0.75
10. Parakeratosis	0.0	0.25	0.0	0.0
11. Hyperplasia	0.75	1.75	0.75	0.75
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	18.60	30.45	18.90	19.32
14. Epi. Cells per 100 um **	23.25	28.35	24.80	24.65
Proliferative Score	42.60	61.30	44.70	45.47
DERMIS				
15. Inflammatory Infiltrates	0.75	1.75	0.25	0.50
16. Edema	0.75	1.75	0.25	0.50
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	1.50	3.50	0.50	1.00

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 14 (LVD, 33.3ul) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.75	0.0	0.0
2. Ulceration	0.50	0.50	0.0	0.0
3. Crust Formation	0.0	0.50	0.50	0.0
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	1.25	0.50	0.67
7. Pustule, Intraepithelial	1.00	0.25	0.0	0.0
8.				
Inflammatory/ Degenerative Score	1.50	3.25	1.00	0.67
Proliferative Changes				
9. Orthokeratosis	0.0	0.75	1.25	0.67
10. Parakeratosis	0.0	0.0	0.25	0.0
11. Hyperplasia	1.50	2.00	2.50	2.00
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	26.04	30.63	36.00	25.76
14. Epi. Cells per 100 um **	28.65	30.55	33.25	31.33
Proliferative Score	56.14	63.93	73.25	59.76
DERMIS				
15. Inflammatory Infiltrates	1.75	2.00	1.75	1.67
16. Edema	1.75	2.00	1.75	1.67
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	3.50	4.00	3.50	3.34

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 15 (LVD, 100.0ul) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.50	1.75	0.50
2. Ulceration	0.50	1.75	1.50	0.25
3. Crust Formation	0.0	1.50	1.75	0.25
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.50	1.75	2.25	0.75
7. Pustule, Intraepithelial	3.00	1.25	0.0	0.0
8.				
Inflammatory/ Degenerative Score	4.00	6.75	7.25	1.30
Proliferative Changes				
9. Orthokeratosis	0.25	2.25	2.50	1.75
10. Parakeratosis	0.0	0.0	0.50	0.25
11. Hyperplasia	2.50	3.00	3.50	2.75
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	35.31	44.70	40.05	34.77
14. Epi. Cells per 100 um **	36.85	35.70	35.80	34.50
Proliferative Score	74.91	85.65	82.35	74.02
DERMIS				
15. Inflammatory Infiltrates	2.75	3.25	3.00	2.75
16. Edema	2.75	3.25	3.00	2.75
17. Vasodilatation	0.0	0.0	0.50	0.0
Dermal Score	5.50	6.50	6.50	5.50

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 16 (TPA, 0.2125nmol) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.0	0.0	0.0
2. Ulceration	0.0	0.0	0.0	0.0
3. Crust Formation	0.0	0.0	0.0	0.0
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	0.0	0.0	0.0
7. Pustule, Intraepithelial	0.0	0.0	0.0	0.0
8.				
Inflammatory/ Degenerative Score	0.0	0.0	0.0	0.0
Proliferative Changes				
9. Orthokeratosis	0.25	0.0	0.0	0.25
10. Parakeratosis	0.0	0.25	0.0	0.0
11. Hyperplasia	0.0	0.25	0.75	0.0
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	11.76	15.18	15.72	12.18
14. Epi. Cells per 100 um **	22.90	23.90	25.90	23.05
Proliferative Score	34.91	39.58	42.37	35.48
DERMIS				
15. Inflammatory Infiltrates	0.50	0.0	0.75	0.25
16. Edema	0.50	0.0	0.75	0.25
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	1.00	0.0	1.50	0.50

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 17 (TPA, 0.85nmol) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.0	0.0	0.0
2. Ulceration	0.0	0.0	0.0	0.0
3. Crust Formation	0.0	0.0	0.0	0.0
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	0.0	0.25	0.0
7. Pustule, Intraepithelial	0.0	0.0	0.0	0.0
8.				
Inflammatory/ Degenerative Score	0.0	0.0	0.25	0.0
Proliferative Changes				
9. Orthokeratosis	0.75	1.00	0.75	0.0
10. Parakeratosis	0.0	0.0	0.0	0.50
11. Hyperplasia	0.75	1.50	1.50	0.0
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	14.82	20.88	17.82	17.64
14. Epi. Cells per 100 um **	26.20	25.90	25.10	26.20
Proliferative Score	45.52	49.28	45.17	44.34
DERMIS				
15. Inflammatory Infiltrates	1.00	1.00	1.75	0.50
16. Edema	1.00	1.00	1.75	0.50
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	2.00	2.00	3.50	1.00

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 18 (TPA, 3.4nmol) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.50	0.0	0.0
2. Ulceration	0.0	0.0	0.0	0.0
3. Crust Formation	0.0	0.25	0.0	0.0
4. Epidermitis	0.75	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	1.75	1.25	0.0
7. Pustule, Intraepithelial	0.25	0.0	0.0	0.0
8.				
Inflammatory/ Degenerative Score	1.00	2.50	1.25	0.0
Proliferative Changes				
9. Orthokeratosis	0.75	2.00	1.50	1.00
10. Parakeratosis	0.0	0.50	0.0	0.0
11. Hyperplasia	2.00	2.75	3.25	1.25
12. Dyskeratosis	0.0	0.0	0.75	0.0
13. Epidermal thickness (um)*	36.63	38.70	37.86	20.43
14. Epi. Cells per 100 um **	41.00	32.95	34.10	26.45
Proliferative Score	80.38	76.90	77.46	49.13
DERMIS				
15. Inflammatory Infiltrates	2.50	2.75	2.50	1.50
16. Edema	2.50	2.75	2.50	1.50
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	5.00	5.50	5.00	3.00

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 19 (TPA, 73.6nmol) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.50	0.50	0.75	0.0
2. Ulceration	0.50	0.75	0.75	0.0
3. Crust Formation	0.25	1.25	0.75	0.0
4. Epidermitis	0.25	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.50	2.00	2.50	0.0
7. Pustule, Intraepithelial	0.75	1.00	0.0	0.0
8.				
Inflammatory/ Degenerative Score	2.75	5.50	4.75	0.0
Proliferative Changes				
9. Orthokeratosis	1.25	2.50	1.75	1.50
10. Parakeratosis	0.0	0.0	0.0	0.0
11. Hyperplasia	2.75	3.00	3.50	3.25
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	50.82	46.08	47.97	40.14
14. Epi. Cells per 100 um **	47.70	34.05	35.80	36.00
Proliferative Score	102.52	85.63	89.02	80.89
DERMIS				
15. Inflammatory Infiltrates	3.00	3.25	3.50	2.75
16. Edema	3.00	3.25	3.50	2.75
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	6.00	6.50	7.00	5.50

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 20 (Dodecane 10mg/ml) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.0	0.0	0.0
2. Ulceration	0.0	0.0	0.0	0.0
3. Crust Formation	0.0	0.0	0.0	0.0
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	0.0	0.0	0.0
7. Pustule, Intraepithelial	0.0	0.0	0.0	0.0
8.				
Inflammatory/ Degenerative Score	0.0	0.0	0.0	0.0
Proliferative Changes				
9. Orthokeratosis	0.0	0.25	0.0	0.25
10. Parakeratosis	0.0	0.0	0.0	0.0
11. Hyperplasia	0.25	0.75	1.25	0.25
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	13.29	20.67	17.58	15.60
14. Epi. Cells per 100 um **	25.12	27.00	25.70	24.35
Proliferative Score	38.66	48.67	44.53	40.45
DERMIS				
15. Inflammatory Infiltrates	0.50	0.75	1.50	0.0
16. Edema	0.50	0.75	1.50	0.0
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	1.00	1.50	3.00	0.0

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 21 (Dodecane 25mg/ml) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.25	0.75	1.00	0.0
2. Ulceration	0.50	0.75	0.25	0.0
3. Crust Formation	0.25	0.0	1.00	0.25
4. Epidermitis	0.25	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.25	1.25	1.25	0.50
7. Pustule, Intraepithelial	2.25	1.25	0.50	0.0
8.				
Inflammatory/ Degenerative Score	3.75	4.00	4.00	0.75
Proliferative Changes				
9. Orthokeratosis	0.50	1.75	2.25	1.50
10. Parakeratosis	0.0	0.0	0.50	0.0
11. Hyperplasia	1.50	2.25	2.25	2.25
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	23.97	35.07	37.38	24.48
14. Epi. Cells per 100 um **	25.15	28.00	29.55	32.20
Proliferative Score	51.12	67.07	71.93	60.43
DERMIS				
15. Inflammatory Infiltrates	2.25	3.00	2.50	2.50
16. Edema	2.25	3.00	2.50	2.50
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	4.50	6.00	5.00	5.00

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 22 (Dodecane 50mg/ml) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.50	1.25	0.50	0.25
2. Ulceration	0.25	0.50	0.25	0.25
3. Crust Formation	0.50	0.25	0.50	0.25
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.75	1.50	0.75	1.00
7. Pustule, Intraepithelial	3.50	1.00	0.0	0.0
8.				
Inflammatory/ Degenerative Score	5.50	4.50	2.00	1.75
Proliferative Changes				
9. Orthokeratosis	1.00	1.50	1.50	1.50
10. Parakeratosis	0.0	0.25	0.25	0.0
11. Hyperplasia	2.25	2.25	2.75	2.75
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	35.19	33.09	37.41	37.89
14. Epi. Cells per 100 um **	31.90	30.90	28.00	35.15
Proliferative Score	70.34	67.99	69.91	77.29
DERMIS				
15. Inflammatory Infiltrates	3.75	2.75	2.75	3.00
16. Edema	3.75	2.75	2.75	3.00
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	7.50	5.50	5.50	6.00

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 23 (Dodecane 100mg/ml) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.25	1.50	1.25	0.75
2. Ulceration	0.50	2.50	2.00	0.0
3. Crust Formation	0.25	0.25	1.00	0.0
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.50	1.75	3.00	1.00
7. Pustule, Intraepithelial	3.50	1.50	0.0	0.0
8.				
Inflammatory/ Degenerative Score	5.00	7.50	7.25	1.75
Proliferative Changes				
9. Orthokeratosis	0.50	2.25	2.00	1.75
10. Parakeratosis	0.0	0.0	0.50	0.0
. Hyperplasia	2.00	2.50	3.50	2.75
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	30.72	33.36	43.44	35.73
14. Epi. Cells per 100 um **	29.20	26.10	33.30	32.55
Proliferative Score	62.42	64.21	82.74	72.78
DERMIS				
15. Inflammatory Infiltrates	3.25	3.50	3.00	2.50
16. Edema	3.25	3.50	3.00	2.50
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	6.50	7.00	6.00	5.00

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 24 (Benzoyl Peroxide, 1mg/ml) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.25	0.0	0.0
2. Ulceration	0.0	0.0	0.0	0.0
3. Crust Formation	0.0	0.0	0.0	0.0
4. Epidermitis	0.0	0.25	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	0.25	0.50	0.0
7. Pustule, Intraepithelial	0.0	0.25	0.0	0.0
8.				
Inflammatory/ Degenerative Score	0.0	1.00	0.50	0.0
Proliferative Changes				
9. Orthokeratosis	0.50	0.75	0.50	0.0
10. Parakeratosis	0.0	0.0	0.0	0.0
11. Hyperplasia	0.25	1.75	1.75	0.25
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	16.83	23.82	20.64	16.41
14. Epi. Cells per 100 um **	25.40	26.70	24.80	25.70
Proliferative Score	42.98	53.02	47.69	42.36
DERMIS				
15. Inflammatory Infiltrates	1.00	1.75	1.00	0.25
16. Edema	1.00	1.75	1.00	0.25
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	2.00	3.50	2.00	0.50

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 25 (Benzoyl Peroxide, 5mg/ml) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.0	0.25	0.0
2. Ulceration	0.0	0.0	0.0	0.0
3. Crust Formation	0.0	0.0	0.25	0.0
4. Epidermitis	0.0	0.25	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	1.00	1.00	0.0
7. Pustule, Intraepithelial	0.0	0.0	0.0	0.0
8.				
Inflammatory/ Degenerative Score	0.0	1.25	1.50	0.0
Proliferative Changes				
9. Orthokeratosis	0.75	1.00	1.00	0.25
10. Parakeratosis	0.0	0.0	0.0	0.0
11. Hyperplasia	1.25	2.00	2.25	0.75
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	20.37	21.78	30.15	19.32
14. Epi. Cells per 100 um **	28.90	30.75	27.90	28.70
Proliferative Score	51.27	55.53	61.30	49.02
DERMIS				
15. Inflammatory Infiltrates	1.25	1.75	2.00	1.25
16. Edema	1.25	1.75	2.00	1.25
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	2.50	3.50	4.00	2.50

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 26 (Benzoyl Peroxide, 10mg/ml) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.0	0.0	0.0
2. Ulceration	0.0	0.0	0.0	0.0
3. Crust Formation	0.0	0.0	0.0	0.0
4. Epidermitis	0.25	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.0	0.0	0.0	0.0
7. Pustule, Intraepithelial	0.0	0.0	0.0	0.0
8.				
Inflammatory/ Degenerative Score	0.25	0.0	0.0	0.0
Proliferative Changes				
9. Orthokeratosis	1.00	1.00	0.50	0.0
10. Parakeratosis	0.0	0.0	0.0	0.0
11. Hyperplasia	1.00	1.75	1.25	0.50
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	17.94	22.47	16.26	14.61
14. Epi. Cells per 100 um **	26.30	30.65	25.10	26.95
Proliferative Score	46.24	55.87	43.11	42.06
DERMIS				
15. Inflammatory Infiltrates	1.50	2.00	1.50	0.25
16. Edema	1.50	2.00	1.50	0.25
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	3.00	4.00	3.00	0.50

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

SUMMARY OF HISTOPATHOLOGIC OBSERVATIONS
MOUSE SKIN
STUDY 910801-3

GROUP MEAN SUMMARIES

Group ID: 27 (Benzoyl Peroxide, 20mg/ml) Species: Mouse

Duration:	6 Hour	24 Hour	48 Hour	96 Hour
EPIDERMIS				
Inflammatory/Degenerative Changes (means)				
1. Erosion	0.0	0.0	0.0	0.0
2. Ulceration	0.0	0.0	0.0	0.0
3. Crust Formation	0.0	0.25	0.25	0.0
4. Epidermitis	0.0	0.0	0.0	0.0
5. Necrosis/Acantholysis	0.0	0.0	0.0	0.0
6. Spongiosis/Hydropic Degen.	0.50	1.00	2.00	0.0
7. Pustule, Intraepithelial	0.0	0.25	0.0	0.0
8.				
Inflammatory/ Degenerative Score	0.50	1.50	2.25	0.0
Proliferative Changes				
9. Orthokeratosis	0.75	1.50	1.00	0.75
10. Parakeratosis	0.0	0.0	0.25	0.0
11. Hyperplasia	1.75	2.50	3.50	1.50
12. Dyskeratosis	0.0	0.0	0.0	0.0
13. Epidermal thickness (um)*	23.10	33.78	34.26	18.09
14. Epi. Cells per 100 um **	27.50	33.20	39.75	29.05
Proliferative Score	53.10	70.98	78.76	49.39
DERMIS				
15. Inflammatory Infiltrates	1.75	2.50	3.25	2.00
16. Edema	1.75	2.50	3.25	2.00
17. Vasodilatation	0.0	0.0	0.0	0.0
Dermal Score	3.50	5.00	6.50	4.00

SCORE 0 = Regular/Normal, 1 = Minimal, 2 - Mild, 3 = Moderate, 4 = Marked, 5 = Severe.

* Epidermal thickness is average of ten micrometer-based measurements per specimen.

** Epidermal Cell per 100u is average of five micrometer-based measurements per specimen.

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