

TDMS No. 20117 - 02

Test Type: 1-YEAR

Route: SKIN APPLICATION

Species/Strain: MICE/SKH-1/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

All-trans-retinyl palmitate

CAS Number: 79-81-2

Date Report Requested: 06/29/2009

Time Report Requested: 16:32:02

First Dose M/F: NA / 06/22/03

Lab: NCTR

C Number: C20117

Lock Date: 12/01/2008

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

Study Gender: Female

TDMSE Version: 2.1.0

	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
DAY ON TEST	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
.....																											
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
ANIMAL ID	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	8	8	8	8	8	8		
NO CREAMNO SSL-F	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5		

females (cont...)

ALIMENTARY SYSTEM
NONE

CARDIOVASCULAR SYSTEM
NONE

ENDOCRINE SYSTEM
NONE

GENERAL BODY SYSTEM
NONE

GENITAL SYSTEM
NONE

HEMATOPOIETIC SYSTEM
NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Abscess																									
Cyst Epithelial Inclusion																									
Hyperplasia, Squamous																									

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
NO CREAMNO SSL-F	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
ANIMAL ID	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

females (cont...)

Dermis, Inflammation, Chronic Active											2										3									
Epidermis, Ulcer																					3									
Skin, Site Of Application	+ +																													
Abscess																														
Cyst, Multiple	X																													
Cyst Epithelial Inclusion											X										X									
Hyperplasia, Squamous											1																			
Dermis, Inflammation, Chronic Active											1																			

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	
	3	3	3	3	3	3	3	3	3	3	3	
	6	6	6	6	5	6	6	6	6	6	6	
	7	7	7	7	4	7	7	7	7	7	7	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
ANIMAL ID	5	5	5	5	5	5	5	5	5	5	5	
	8	8	8	8	9	9	9	9	9	9	9	
NO CREAMNO SSL-F	6	7	8	9	0	1	2	3	4	5	6	* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	36
Abscess									3			1 3.0
Cyst Epithelial Inclusion			X							X		2
Hyperplasia, Squamous												1 2.0

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0		
	3	3	3	3	3	3	3	3	3	3	3		
	6	6	6	6	5	6	6	6	6	6	6		
	7	7	7	7	4	7	7	7	7	7	7		
<hr/>													
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0		
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6		
NO CREAMNO SSL-F	5	5	5	5	5	5	5	5	5	5	5		
ANIMAL ID	8	8	8	8	9	9	9	9	9	9	9		
	6	7	8	9	0	1	2	3	4	5	6	* TOTALS	
<hr/>													
Dermis, Inflammation, Chronic Active												4	3 3.0
Epidermis, Ulcer													1 3.0
<hr/>													
Skin, Site Of Application	+	+	+	+	+	+	+	+	+	+	+	36	
Abscess												4	1 4.0
Cyst, Multiple													1
Cyst Epithelial Inclusion													2
Hyperplasia, Squamous													1 1.0
Dermis, Inflammation, Chronic Active												2	2 1.5
<hr/>													
MUSCULOSKELETAL SYSTEM													
NONE													
<hr/>													
NERVOUS SYSTEM													
NONE													
<hr/>													
RESPIRATORY SYSTEM													
NONE													
<hr/>													
SPECIAL SENSES SYSTEM													
NONE													
<hr/>													
URINARY SYSTEM													
NONE													

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	
	3	3	3	3	2	3	3	3	3	3	3	
	6	6	6	6	7	6	4	3	6	6	6	
	7	7	7	7	0	7	9	4	7	7	7	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
ANIMAL ID	6	6	6	6	6	6	6	6	6	6	6	
	2	2	2	2	2	2	2	2	3	3	3	
PH 7.0 NO SSL-F	2	3	4	5	6	7	8	9	0	1	2	* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	36
Cyst Epithelial Inclusion						X					X	4
Ulcer											3	1 3.0
Dermis, Inflammation, Chronic Active											3	1 3.0

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

	0	0	0	0	0	0	0	0	0	0	0	
DAY ON TEST	3	3	3	3	2	3	3	3	3	3	3	
	6	6	6	6	7	6	4	3	6	6	6	
	7	7	7	7	0	7	9	4	7	7	7	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
	6	6	6	6	6	6	6	6	6	6	6	
ANIMAL ID	2	2	2	2	2	2	2	2	3	3	3	
PH 7.0 NO SSL-F	2	3	4	5	6	7	8	9	0	1	2	* TOTALS

Skin, Site Of Application	+	+	+	+	+	+	+	+	+	+	+	36
Abscess					4							1 4.0
Hyperplasia, Squamous Atypical, Two, Focal												1
Hyperplasia, Squamous							1			1		7 1.1
Dermis, Inflammation, Chronic Active							2			1		2 1.5

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3
	6	6	6	3	6	6	6	6	6	6	6	6	6	6	2	6	6	6	6	6	6	5	2	6	
	7	7	7	4	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	6	6	7	
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
NO CREAM6.75SSLF	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
ANIMAL ID	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9

females (cont...)

Skin, Site Of Application	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst Epithelial Inclusion											X									X				
Hyperplasia, Squamous Atypical, One, Focal			X	X					X	X			X						X					
Hyperplasia, Squamous Atypical, Two, Focal																								
Hyperplasia, Squamous Atypical, Three, Focal						X													X					
Hyperplasia, Squamous Atypical, Four, Focal																				X				
Hyperplasia, Squamous Atypical, Five, Focal													X											
Hyperplasia, Squamous Dermis, Inflammation, Chronic Active								1					1	1	1			1	1	3			1	2

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
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 2) Mild 4) Marked

	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DAY ON TEST	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3
	6	6	6	3	6	6	6	6	6	6	6	6	6	6	2	6	6	6	6	6	6	5	2	6
	7	7	7	4	7	7	7	7	7	7	7	7	7	7	0	7	7	7	7	7	7	6	6	7
.....																								
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
ANIMAL ID	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2
NO CREAM6.75SSLF	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8

females (cont...)

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	
	3	3	3	3	3	2	2	3	3	3	3	
	6	6	6	6	6	9	6	6	6	6	6	
	7	7	7	7	7	9	0	7	7	7	7	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
	7	7	7	7	7	7	7	7	7	7	7	
ANIMAL ID	3	3	3	3	3	3	3	3	3	3	4	
NO CREAM6.75SSLF	0	1	2	3	4	5	6	7	8	9	0	* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	36
Abscess												1 4.0
Cyst Epithelial Inclusion		X			X							4
Dermis, Inflammation, Chronic Active								4				1 4.0

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	2	2	3	3	3	3
	6	6	6	6	6	9	6	6	6	6	6
	7	7	7	7	7	9	0	7	7	7	7
<hr/>											
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6
	7	7	7	7	7	7	7	7	7	7	7
ANIMAL ID	3	3	3	3	3	3	3	3	3	3	4
NO CREAM6.75SSLF	0	1	2	3	4	5	6	7	8	9	0
											* TOTALS

Skin, Site Of Application	+	+	+	+	+	+	+	+	+	+	+	36
Cyst Epithelial Inclusion				X				X				4
Hyperplasia, Squamous Atypical, One, Focal		X	X	X					X	X		11
Hyperplasia, Squamous Atypical, Two, Focal								X				1
Hyperplasia, Squamous Atypical, Three, Focal												2
Hyperplasia, Squamous Atypical, Four, Focal												1
Hyperplasia, Squamous Atypical, Five, Focal												1
Hyperplasia, Squamous Dermis, Inflammation, Chronic Active			1	1								11 1.3
												1 3.0

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20117 - 02

Test Type: 1-YEAR

Route: SKIN APPLICATION

Species/Strain: MICE/SKH-1/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

All-trans-retinyl palmitate

CAS Number: 79-81-2

Date Report Requested: 06/29/2009

Time Report Requested: 16:32:02

First Dose M/F: NA / 06/22/03

Lab: NCTR

	0	0	0	0	0	0	0	0	0	0	0	
DAY ON TEST	3	3	3	3	3	2	2	3	3	3	3	
	6	6	6	6	6	9	6	6	6	6	6	
	7	7	7	7	7	9	0	7	7	7	7	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
	7	7	7	7	7	7	7	7	7	7	7	
ANIMAL ID	3	3	3	3	3	3	3	3	3	3	4	
NO CREAM6.75SSLF	0	1	2	3	4	5	6	7	8	9	0	* TOTALS

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

	0	0	0	0	0	0	0	0	0	0	0	
DAY ON TEST	2	2	3	2	2	3	3	3	3	3	3	
	7	3	4	2	1	6	6	6	0	6	6	
	2	5	6	8	4	7	7	7	6	7	7	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
	7	7	7	7	7	7	7	7	7	7	7	
ANIMAL ID	6	6	6	6	7	7	7	7	7	7	7	
PH 7.0 6.75SSLF	6	7	8	9	0	1	2	3	4	5	6	* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	36
Cyst Epithelial Inclusion												6
Hyperplasia, Squamous												1 4.0
Dermis, Inflammation, Chronic Active								3				1 3.0

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0
	2	2	3	2	2	3	3	3	3	3	3
	7	3	4	2	1	6	6	6	0	6	6
	2	5	6	8	4	7	7	7	6	7	7
<hr/>											
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6
	7	7	7	7	7	7	7	7	7	7	7
ANIMAL ID	6	6	6	6	7	7	7	7	7	7	7
PH 7.0 6.75SSLF	6	7	8	9	0	1	2	3	4	5	6
											* TOTALS

Skin, Site Of Application	+	+	+	+	+	+	+	+	+	+	+	36
Abscess								3				1 3.0
Cyst Epithelial Inclusion			X	X			X					5
Hyperplasia, Squamous Atypical, One, Focal		X					X					6
Hyperplasia, Squamous Atypical, Two, Focal												5
Hyperplasia, Squamous Atypical, Three, Focal										X		6
Hyperplasia, Squamous Atypical, Four, Focal							X					3
Hyperplasia, Squamous Atypical, Five, Focal												2
Hyperplasia, Squamous Atypical, Greater Than Five, Focal	X		X					X				5
Hyperplasia, Basal Cell												1 2.0
Hyperplasia, Squamous	3	2		3	3		3	1	1	2	1	24 1.8
Dermis, Inflammation, Chronic Active	2			1	2		4	1	1		1	15 1.7
Epidermis, Inflammation, Suppurative					1							1 1.0
Epidermis, Necrosis									1			2 1.0
Epidermis, Ulcer					1							1 1.0

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 20

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

	0	0	0	0	0	0	0	0	0	0	0	
DAY ON TEST	2	2	3	2	2	3	3	3	3	3	3	
	7	3	4	2	1	6	6	6	0	6	6	
	2	5	6	8	4	7	7	7	6	7	7	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
	7	7	7	7	7	7	7	7	7	7	7	
ANIMAL ID	6	6	6	6	7	7	7	7	7	7	7	
PH 7.0 6.75SSLF	6	7	8	9	0	1	2	3	4	5	6	* TOTALS

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	
	2	2	2	1	3	3	2	2	3	1	3	
	3	7	5	0	0	2	9	4	6	1	6	
	5	7	6	7	6	7	9	9	7	1	7	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
	8	8	8	8	8	8	8	8	8	8	8	
ANIMAL ID	0	0	0	0	0	0	0	0	1	1	1	
.1% RP 6.75SSLF	2	3	4	5	6	7	8	9	0	1	2	* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	36
Cyst Epithelial Inclusion					X							3
Hyperplasia, Squamous Atypical, Focal								X				1

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	* TOTALS
	2	2	2	1	3	3	2	2	3	1	3	
	3	7	5	0	0	2	9	4	6	1	6	
	5	7	6	7	6	7	9	9	7	1	7	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
.1% RP 6.75SSLF	8	8	8	8	8	8	8	8	8	8	8	
ANIMAL ID	0	0	0	0	0	0	0	0	1	1	1	
	2	3	4	5	6	7	8	9	0	1	2	
Skin, Site Of Application	+	+	+	+	+	+	+	+	+	+	+	36
Cyst Epithelial Inclusion		X							X			4
Hyperplasia, Squamous Atypical, One, Focal												1
Hyperplasia, Squamous Atypical, Two, Focal	X					X		X				4
Hyperplasia, Squamous Atypical, Three, Focal												3
Hyperplasia, Squamous Atypical, Four, Focal			X						X			6
Hyperplasia, Squamous Atypical, Five, Focal							X					3
Hyperplasia, Squamous Atypical, Greater Than Five, Focal		X			X					X		14
Hyperplasia, Basal Cell												1 3.0
Hyperplasia, Squamous	2	2	3	2		2	2	2	1	2		32 2.0
Dermis, Inflammation, Chronic Active	2	2	3	2	2	2	2	1		4		28 1.9
Epidermis, Inflammation, Suppurative							1			4		2 2.5
Epidermis, Necrosis							2					4 1.8
Epidermis, Ulcer										4		3 3.3
Sebaceous Gland, Hyperplasia												1 3.0

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

	0	0	0	0	0	0	0	0	0	0	0
DAY ON TEST	2	2	2	1	3	3	2	2	3	1	3
	3	7	5	0	0	2	9	4	6	1	6
	5	7	6	7	6	7	9	9	7	1	7
.....											
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6
	8	8	8	8	8	8	8	8	8	8	8
ANIMAL ID	0	0	0	0	0	0	0	0	1	1	1
.1% RP 6.75SSLF	2	3	4	5	6	7	8	9	0	1	2
											* TOTALS

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	
	2	2	2	2	3	2	2	2	2	2	2	
	4	3	5	2	1	6	2	6	3	6	4	
	1	5	6	8	3	5	1	5	4	5	9	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
	8	8	8	8	8	8	8	8	8	8	8	
ANIMAL ID	3	3	4	4	4	4	4	4	4	4	4	
.5% RP 6.75SSLF	8	9	0	1	2	3	4	5	6	7	8	* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	36
Cyst Epithelial Inclusion												1
Hyperplasia, Squamous												4 1.5

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	
	2	2	2	2	3	2	2	2	2	2	2	
	4	3	5	2	1	6	2	6	3	6	4	
	1	5	6	8	3	5	1	5	4	5	9	
<hr/>												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
.5% RP 6.75SSLF	8	8	8	8	8	8	8	8	8	8	8	
ANIMAL ID	3	3	4	4	4	4	4	4	4	4	4	
	8	9	0	1	2	3	4	5	6	7	8	* TOTALS
Skin, Site Of Application	+	+	+	+	+	+	+	+	+	+	+	36
Cyst Epithelial Inclusion												1
Hyperplasia, Squamous Atypical, One, Focal				X		X		X	X			8
Hyperplasia, Squamous Atypical, Two, Focal		X									X	3
Hyperplasia, Squamous Atypical, Three, Focal												2
Hyperplasia, Squamous Atypical, Four, Focal												2
Hyperplasia, Squamous Atypical, Five, Focal												3
Hyperplasia, Squamous Atypical, Greater Than Five, Focal	X		X		X		X			X		16
Hyperplasia, Squamous	2	1	3	2	3	3	2	3	2	3	2	36 2.5
Dermis, Inflammation, Chronic Active	2	1	2	3	2	2	2	1	2	2	2	36 2.0
Epidermis, Inflammation, Suppurative			2									7 1.9
Epidermis, Necrosis				2						1		7 1.6
Epidermis, Ulcer			2			2						9 2.6

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20117 - 02

Test Type: 1-YEAR

Route: SKIN APPLICATION

Species/Strain: MICE/SKH-1/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

All-trans-retinyl palmitate

CAS Number: 79-81-2

Date Report Requested: 06/29/2009

Time Report Requested: 16:32:02

First Dose M/F: NA / 06/22/03

Lab: NCTR

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	3	2	2	2	2	2	2
	4	3	5	2	1	6	2	6	3	6	4
	1	5	6	8	3	5	1	5	4	5	9

SKH-1 HAIRLESS MICE (NCTR)
MICE FEMALE

ANIMAL ID

.5% RP 6.75SSLF

0	0	0	0	0	0	0	0	0	0	0	0
6	6	6	6	6	6	6	6	6	6	6	6
8	8	8	8	8	8	8	8	8	8	8	8
3	3	4	4	4	4	4	4	4	4	4	4
8	9	0	1	2	3	4	5	6	7	8	

* TOTALS

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	
	3	2	2	2	2	2	2	2	2	3	2	
	4	5	6	7	8	5	9	4	6	2	6	
	6	6	4	2	9	6	2	1	5	7	5	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
	9	9	9	9	9	9	9	9	9	9	9	
ANIMAL ID	8	8	8	8	8	8	8	8	9	9	9	
NO CREAM13.7SSLF	2	3	4	5	6	7	8	9	0	1	2	* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	36
Cyst Epithelial Inclusion											X	1
Hyperplasia, Squamous												1 1.0
Dermis, Inflammation, Chronic Active			4									1 4.0

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	
	3	2	2	2	2	2	2	2	2	3	2	
	4	5	6	7	8	5	9	4	6	2	6	
	6	6	4	2	9	6	2	1	5	7	5	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
ANIMAL ID	9	9	9	9	9	9	9	9	9	9	9	
	8	8	8	8	8	8	8	8	9	9	9	
NO CREAM13.7SSLF	2	3	4	5	6	7	8	9	0	1	2	
												* TOTALS
Epidermis, Inflammation, Suppurative												1 4.0
Epidermis, Ulcer	4											2 4.0
.....												
Skin, Site Of Application	+	+	+	+	+	+	+	+	+	+	+	36
Cyst Epithelial Inclusion	X											2
Hyperplasia, Squamous Atypical, One, Focal												4
Hyperplasia, Squamous Atypical, Two, Focal						X		X				4
Hyperplasia, Squamous Atypical, Three, Focal									X			4
Hyperplasia, Squamous Atypical, Four, Focal	X		X		X							5
Hyperplasia, Squamous Atypical, Five, Focal												3
Hyperplasia, Squamous Atypical, Greater Than Five, Focal		X		X			X			X		13
Hyperplasia, Squamous	1		1	1	1	2	2	1	1			28 1.5
Dermis, Inflammation, Chronic Active			1		1	1						12 1.6
Epidermis, Inflammation, Suppurative												1 2.0
Epidermis, Necrosis												2 1.5
Epidermis, Ulcer												1 3.0

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0
	3	2	2	2	2	2	2	2	2	3	2
	4	5	6	7	8	5	9	4	6	2	6
	6	6	4	2	9	6	2	1	5	7	5

**SKH-1 HAIRLESS MICE (NCTR)
MICE FEMALE**

ANIMAL ID

NO CREAM13.7SSLF

0	0	0	0	0	0	0	0	0	0	0	0
6	6	6	6	6	6	6	6	6	6	6	6
9	9	9	9	9	9	9	9	9	9	9	9
8	8	8	8	8	8	8	8	8	9	9	9
2	3	4	5	6	7	8	9	0	1	2	

*** TOTALS**

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

	0	0	0	0	0	0	0	0	0	0	0	
DAY ON TEST	2	2	2	2	2	3	3	2	2	3	3	
	7	6	3	5	7	2	3	6	1	0	2	
	2	3	5	6	2	0	2	5	9	6	0	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	7	7	7	7	7	7	7	7	7	7	7	
	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	1	1	2	2	2	2	2	2	2	2	2	
PH 7.0 13.7SSLF	8	9	0	1	2	3	4	5	6	7	8	* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	36
Cyst Epithelial Inclusion		X			X							4
Hyperplasia, Squamous Atypical, Focal			X									1
Hyperplasia, Squamous												1 2.0

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	3	3	2	2	3	3
	7	6	3	5	7	2	3	6	1	0	2
	2	3	5	6	2	0	2	5	9	6	0
<hr/>											
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0
MICE FEMALE	7	7	7	7	7	7	7	7	7	7	7
	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	1	1	2	2	2	2	2	2	2	2	2
PH 7.0 13.7SSLF	8	9	0	1	2	3	4	5	6	7	8
											* TOTALS

Skin, Site Of Application	+	+	+	+	+	+	+	+	+	+	+	36
Cyst Epithelial Inclusion				X				X	X	X		9
Hyperplasia, Squamous Atypical, One, Focal											X	5
Hyperplasia, Squamous Atypical, Three, Focal					X							5
Hyperplasia, Squamous Atypical, Four, Focal			X									2
Hyperplasia, Squamous Atypical, Five, Focal												1
Hyperplasia, Squamous Atypical, Greater Than Five, Focal	X	X		X		X		X		X		20
Hyperplasia, Squamous Dermis, Inflammation, Chronic Active	2	3	2	2	2	1	1	2	1	2	2	33 1.9
Epidermis, Inflammation, Suppurative			1	2	2				1	2		18 1.8
Epidermis, Necrosis											1	3 2.0
Epidermis, Ulcer										2		3 1.3
												2 3.0

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 44

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	3	3	2	2	3	3
	7	6	3	5	7	2	3	6	1	0	2
	2	3	5	6	2	0	2	5	9	6	0

**SKH-1 HAIRLESS MICE (NCTR)
MICE FEMALE**

ANIMAL ID

PH 7.0 13.7SSLF

	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	7	7	7	7
	0	0	0	0	0	0	0	0	0	0	0
	1	1	2	2	2	2	2	2	2	2	2
	8	9	0	1	2	3	4	5	6	7	8

*** TOTALS**

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2	2
	4	0	4	4	2	2	3	2	2	2	3
	1	8	1	1	2	8	4	1	8	8	4

**SKH-1 HAIRLESS MICE (NCTR)
MICE FEMALE**

ANIMAL ID

.1% RP 13.7SSLF

0	0	0	0	0	0	0	0	0	0	0	0
7	7	7	7	7	7	7	7	7	7	7	7
0	0	0	0	0	0	0	0	0	0	0	0
5	5	5	5	5	5	6	6	6	6	6	6
4	5	6	7	8	9	0	1	2	3	4	

*** TOTALS**

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	36
Cyst Epithelial Inclusion												2
Dermis, Inflammation, Chronic Active												1 3.0

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	
	2	2	2	2	2	2	2	2	2	2	2	
	4	0	4	4	2	2	3	2	2	2	3	
	1	8	1	1	2	8	4	1	8	8	4	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	7	7	7	7	7	7	7	7	7	7	7	
	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	5	5	5	5	5	5	6	6	6	6	6	
.1% RP 13.7SSLF	4	5	6	7	8	9	0	1	2	3	4	
												* TOTALS
Skin, Site Of Application	+	+	+	+	+	+	+	+	+	+	+	36
Cyst Epithelial Inclusion												1
Hyperplasia, Squamous Atypical, One, Focal	X											1
Hyperplasia, Squamous Atypical, Two, Focal												1
Hyperplasia, Squamous Atypical, Three, Focal			X	X								6
Hyperplasia, Squamous Atypical, Four, Focal												4
Hyperplasia, Squamous Atypical, Five, Focal		X				X		X		X		5
Hyperplasia, Squamous Atypical, Greater Than Five, Focal					X		X	X		X		19
Hyperplasia, Squamous	2	3	2		2	2	2	2		2	2	31 2.5
Dermis, Inflammation, Chronic Active	2	3	2		2	2	1	1		2	2	31 1.9
Epidermis, Inflammation, Suppurative		4										3 3.7
Epidermis, Necrosis		2								2		5 2.0
Epidermis, Ulcer		4										3 3.7

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	
	2	2	2	2	2	2	2	2	2	2	2	
	4	0	4	4	2	2	3	2	2	2	3	
	1	8	1	1	2	8	4	1	8	8	4	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	7	7	7	7	7	7	7	7	7	7	7	
	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	5	5	5	5	5	5	6	6	6	6	6	
.1% RP 13.7SSLF	4	5	6	7	8	9	0	1	2	3	4	* TOTALS

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney

+

1

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	
	2	2	1	1	1	2	2	2	2	1	2	
	3	0	1	8	9	0	1	3	0	8	2	
	5	8	5	7	8	1	2	4	1	7	8	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	7	7	7	7	7	7	7	7	7	7	7	
	0	0	0	0	0	0	0	0	0	0	1	
ANIMAL ID	9	9	9	9	9	9	9	9	9	9	0	
.5% RP 13.7SSLF	0	1	2	3	4	5	6	7	8	9	0	* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	36
Edema												1 4.0
Hyperplasia, Squamous										1		6 1.3
Dermis, Inflammation, Suppurative												1 3.0

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0
	2	2	1	1	1	2	2	2	2	1	2
3	0	1	8	9	0	1	3	0	8	2	
5	8	5	7	8	1	2	4	1	7	8	

SKH-1 HAIRLESS MICE (NCTR) MICE FEMALE	0	0	0	0	0	0	0	0	0	0	0
7	7	7	7	7	7	7	7	7	7	7	7
0	0	0	0	0	0	0	0	0	0	0	1
ANIMAL ID	9	9	9	9	9	9	9	9	9	9	0
.5% RP 13.7SSLF	0	1	2	3	4	5	6	7	8	9	0

* TOTALS

Dermis, Inflammation, Chronic Active												1	2	2.0			
Epidermis, Necrosis													1	2.0			
<hr/>																	
Skin, Site Of Application	+	+	+	+	+	+	+	+	+	+	+	36					
Hyperplasia, Squamous Atypical, One, Focal													3				
Hyperplasia, Squamous Atypical, Two, Focal												X		3			
Hyperplasia, Squamous Atypical, Three, Focal	X														2		
Hyperplasia, Squamous Atypical, Four, Focal												X	X	4			
Hyperplasia, Squamous Atypical, Five, Focal	X													X	X	X	4
Hyperplasia, Squamous Atypical, Greater Than Five, Focal												X	X	14			
Hyperplasia, Squamous	2	3	2	3	4	3	3	2	3	2	3	35	2.9				
Dermis, Inflammation, Chronic Active	2	3	2	2	3	1	2	2	2	2	2	33	2.4				
Epidermis, Inflammation, Suppurative												2	2	9	2.3		
Epidermis, Necrosis	2													3	2	14	2.1
Epidermis, Ulcer														6	3.2		

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 20117 - 02

Test Type: 1-YEAR

Route: SKIN APPLICATION

Species/Strain: MICE/SKH-1/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

All-trans-retinyl palmitate

CAS Number: 79-81-2

Date Report Requested: 06/29/2009

Time Report Requested: 16:32:02

First Dose M/F: NA / 06/22/03

Lab: NCTR

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0
	2	2	1	1	1	2	2	2	2	1	2
	3	0	1	8	9	0	1	3	0	8	2
	5	8	5	7	8	1	2	4	1	7	8

SKH-1 HAIRLESS MICE (NCTR)
MICE FEMALE

ANIMAL ID

.5% RP 13.7SSLF

0	0	0	0	0	0	0	0	0	0	0	0
7	7	7	7	7	7	7	7	7	7	7	7
0	0	0	0	0	0	0	0	0	0	0	1
9	9	9	9	9	9	9	9	9	9	9	0
0	1	2	3	4	5	6	7	8	9	0	

* TOTALS

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	6	6	2	4	2	1	4	4	2	5	5	4	4	2	3	1	3	1	2	4	4	4	4	0	
	3	6	9	7	9	5	3	0	2	6	6	3	9	3	3	5	6	5	9	2	2	8	2	9	
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
ANIMAL ID	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
NOCREAMF20.55SSL	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	
	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3

females (cont...)

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Abscess					4																			
Cyst Epithelial Inclusion				X					X					X										
Hyperplasia, Squamous																						2		

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	6	6	2	4	2	1	4	4	2	5	5	4	4	2	3	1	3	1	2	4	4	4	4	0	
	3	6	9	7	9	5	3	0	2	6	6	3	9	3	3	5	6	5	9	2	2	8	2	9	
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
NOCREAMF20.55SSL	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
ANIMAL ID	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3

females (cont...)

Skin, Site Of Application	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Abscess																								3
Cyst Epithelial Inclusion																								X
Hyperplasia, Squamous Atypical, One, Focal		X						X																
Hyperplasia, Squamous Atypical, Two, Focal	X						X	X					X	X				X			X		X	
Hyperplasia, Squamous Atypical, Three, Focal					X	X						X						X						X
Hyperplasia, Squamous Atypical, Four, Focal			X	X						X								X				X		
Hyperplasia, Squamous Atypical, Five, Focal														X	X									
Hyperplasia, Squamous Atypical, Greater Than Five, Focal									X	X														
Hyperplasia, Squamous	2	4		2			1	2	1	2	2	2			2	1	2	2	2	2	2	1	2	1
Dermis, Inflammation, Chronic Active	2	2	4	1				2		2	2	2			2			4	1			4	2	
Epidermis, Inflammation, Suppurative				2														2					4	
Epidermis, Necrosis		2																						
Epidermis, Ulcer			4										2					4				4		

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
	6	6	2	4	2	1	4	4	2	5	5	4	4	2	3	1	3	1	2	4	4	4	4	4	0		
	3	6	9	7	9	5	3	0	2	6	6	3	9	3	3	5	6	5	9	2	2	8	2	2	9		
.....																											
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
ANIMAL ID	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
NOCREAMF20.55SSL	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	
	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3		

females (cont...)

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked
 Page 60

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	
	2	2	1	2	2	2	2	2	2	2	2	
	2	4	8	3	3	2	3	2	3	3	2	
	8	1	7	5	5	1	4	8	4	4	8	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	7	7	7	7	7	7	7	7	7	7	7	
	2	2	2	2	2	2	2	2	2	2	2	
ANIMAL ID	3	3	3	3	3	3	4	4	4	4	4	
NOCREAMF20.55SSL	4	5	6	7	8	9	0	1	2	3	4	* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	36
Abscess												1 4.0
Cyst Epithelial Inclusion	X											4
Hyperplasia, Squamous												1 2.0

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0
	2	2	1	2	2	2	2	2	2	2	2
	2	4	8	3	3	2	3	2	3	3	2
	8	1	7	5	5	1	4	8	4	4	8
<hr/>											
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0
MICE FEMALE	7	7	7	7	7	7	7	7	7	7	7
	2	2	2	2	2	2	2	2	2	2	2
ANIMAL ID	3	3	3	3	3	3	4	4	4	4	4
NOCREAMF20.55SSL	4	5	6	7	8	9	0	1	2	3	4
											* TOTALS

Skin, Site Of Application	+	+	+	+	+	+	+	+	+	+	+	36		
Abscess													1	3.0
Cyst Epithelial Inclusion				X								2		
Hyperplasia, Squamous Atypical, One, Focal						X	X					4		
Hyperplasia, Squamous Atypical, Two, Focal											X	9		
Hyperplasia, Squamous Atypical, Three, Focal			X						X			7		
Hyperplasia, Squamous Atypical, Four, Focal				X						X		7		
Hyperplasia, Squamous Atypical, Five, Focal					X			X				4		
Hyperplasia, Squamous Atypical, Greater Than Five, Focal	X	X										4		
Hyperplasia, Squamous	2	2		1		2	2	1	1	2	2	28	1.8	
Dermis, Inflammation, Chronic Active	2			1		1	1	1	1	1	1	21	1.9	
Epidermis, Inflammation, Suppurative												3	2.7	
Epidermis, Necrosis												1	2.0	
Epidermis, Ulcer												4	3.5	

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 62

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	
	2	2	1	2	2	2	2	2	2	2	2	
	2	4	8	3	3	2	3	2	3	3	2	
	8	1	7	5	5	1	4	8	4	4	8	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	7	7	7	7	7	7	7	7	7	7	7	
	2	2	2	2	2	2	2	2	2	2	2	
ANIMAL ID	3	3	3	3	3	3	4	4	4	4	4	
NOCREAMF20.55SSL	4	5	6	7	8	9	0	1	2	3	4	* TOTALS

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

*** END OF REPORT ***

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked