

TDMS No. 20117 - 01

Test Type: 1-YEAR

Route: SKIN APPLICATION

Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

All-trans-retinyl palmitate

CAS Number: 79-81-2

Date Report Requested: 06/29/2009

Time Report Requested: 16:29:37

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

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: Male

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

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 MALE	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
	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
ANIMAL ID	4	4	4	4	4	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7
NO CREAMNO SSL-M	5	6	7	8	9	0	2	3	4	5	6	7	8	9	0	1	2	4	5	6	7	8	9	0	1

males (cont...)

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control

+ +

Skin, Site Of Application

+ +

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

TDMS No. 20117 - 01

Test Type: 1-YEAR

Route: SKIN APPLICATION

Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

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

Lab: NCTR

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| 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 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | | |
| | 3 | 8 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 0 | 6 | | |
| | 1 | 4 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 0 | 8 | 8 | 8 | 8 | 8 | 0 | 8 | 8 | 8 | 8 | 8 | 8 | 0 | 8 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 MALE | 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 | | |
| NO CREAMNO SSL-M | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | | |
| | 5 | 6 | 7 | 8 | 9 | 0 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | | |

males
(cont...)

Squamous Cell Papilloma, One

X

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

* .. Total animals with tissue examined microscopically; Total animals with tumor
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue

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

| | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|-----------------|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 2 |
| | 6 | 6 | 6 | 6 | 6 | 9 | 6 | 6 | 7 |
| | 8 | 8 | 8 | 8 | 8 | 3 | 8 | 8 | 7 |
| | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 |
| NO CREAMNO SSL-M | 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 | + | + | + | + | + | + | + | + | + | 34 |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | 34 |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

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

Squamous Cell Papilloma, One

1

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + +

34

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| 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 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | |
| | 0 | 6 | 3 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | |
| | 5 | 8 | 1 | 8 | 8 | 8 | 8 | 4 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 5 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 MALE | 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 | 3 | 3 | 3 | 3 | 3 | | |
| PH 7.0 NO SSL-M | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | | |
| | 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 | |

males (cont...)

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 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 | 0 |
| DAY ON TEST | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| | 0 | 6 | 3 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 5 | 8 | 1 | 8 | 8 | 8 | 8 | 4 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 5 |
| 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 | 0 |
| MICE MALE | 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 | 7 |
| ANIMAL ID | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| PH 7.0 NO SSL-M | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 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 | | males (cont...) |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|--|---|---|--|---|---|--|---|--|--|---|---|--|--|--|--|--|---|--|---|--|--|--|--|--|--|---|
| Keratoacanthoma, One | X | | | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Squamous Cell Carcinoma, One | X | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, One | X | | X | X | | | | | X | | | X | X | | | | | | X | | X | | | | | | | |
| Squamous Cell Papilloma, Two | | | | | | X | X | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, Four | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

MUSCULOSKELETAL SYSTEM
NONE

NERVOUS SYSTEM
NONE

RESPIRATORY SYSTEM
NONE

SPECIAL SENSES SYSTEM
NONE

URINARY SYSTEM
NONE

SYSTEMIC LESIONS

* .. Total animals with tissue examined microscopically; Total animals with tumor
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | 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 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | |
| | 0 | 6 | 3 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| | 5 | 8 | 1 | 8 | 8 | 8 | 8 | 4 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 5 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 MALE | 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 | 3 | 3 | 3 | 3 | 3 | 3 | |
| PH 7.0 NO SSL-M | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 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 | | |
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

males (cont...)

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|----------|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | |
| | 2 | 6 | 6 | 4 | 6 | 6 | 6 | 6 | 0 | 6 | 6 | |
| | 0 | 8 | 8 | 7 | 8 | 8 | 8 | 8 | 9 | 8 | 8 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| PH 7.0 NO SSL-M | 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 |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

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

| | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|--|---|--|---|--|---|---|-----------|
| Keratoacanthoma, One | X | | | | | | | | | | | 3 |
| Squamous Cell Carcinoma, One | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, One | | | X | | | X | | X | | | X | 12 |
| Squamous Cell Papilloma, Two | | | | X | | | | | | X | | 4 |
| Squamous Cell Papilloma, Four | | X | | | | | | | | | | 1 |

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| DAY ON TEST | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | |
| | 2 | 6 | 6 | 4 | 6 | 6 | 6 | 6 | 0 | 6 | 6 | |
| | 0 | 8 | 8 | 7 | 8 | 8 | 8 | 8 | 9 | 8 | 8 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| PH 7.0 NO SSL-M | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | * TOTALS |
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | 36 |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

TDMS No. 20117 - 01
 Test Type: 1-YEAR
 Route: SKIN APPLICATION
 Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 All-trans-retinyl palmitate
 CAS Number: 79-81-2

Date Report Requested: 06/29/2009
 Time Report Requested: 16:29:37
 First Dose M/F: 06/22/03 / NA
 Lab: NCTR

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
| 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 | 0 |
| | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 2 | |
| | 8 | 8 | 6 | 6 | 6 | 6 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 8 | |
| | 3 | 9 | 8 | 8 | 8 | 8 | 2 | 0 | 8 | 8 | 8 | 8 | 2 | 8 | 8 | 8 | 8 | 8 | 8 | 2 | 8 | 8 | 8 | 3 | | |
| 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 MALE | 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 | |
| NO CREAM6.75SSLM | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| ANIMAL ID | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | males (cont...) |
| | 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 | |

ALIMENTARY SYSTEM
 NONE

CARDIOVASCULAR SYSTEM
 NONE

ENDOCRINE SYSTEM
 NONE

GENERAL BODY SYSTEM
 NONE

GENITAL SYSTEM
 NONE

HEMATOPOIETIC SYSTEM
 NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Sarcoma | | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Squamous Cell Papilloma | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

TDMS No. 20117 - 01
 Test Type: 1-YEAR
 Route: SKIN APPLICATION
 Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

All-trans-retinyl palmitate

CAS Number: 79-81-2

Date Report Requested: 06/29/2009

Time Report Requested: 16:29:37

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

Lab: NCTR

| 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 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 2 |
| | 8 | 8 | 6 | 6 | 6 | 6 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 8 |
| | 3 | 9 | 8 | 8 | 8 | 8 | 2 | 0 | 8 | 8 | 8 | 8 | 2 | 8 | 8 | 8 | 8 | 8 | 8 | 2 | 8 | 8 | 8 | 3 | |
| 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 MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| NO CREAM6.75SSLM | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| ANIMAL ID | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

males
(cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Squamous Cell Carcinoma, One | | | | | | | | | | | | | | | | | | | | | | | | X |
| Squamous Cell Carcinoma In Situ, One | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, One | | | | | | X | | | | | | | X | | | | | | | | | | X | |
| Squamous Cell Papilloma, Three | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, Five | | | | | | | | | | | | | | | | | | | | | | | | X |

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 tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

TDMS No. 20117 - 01
Test Type: 1-YEAR
Route: SKIN APPLICATION
Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
All-trans-retinyl palmitate
CAS Number: 79-81-2

Date Report Requested: 06/29/2009
Time Report Requested: 16:29:37
First Dose M/F: 06/22/03 / NA
Lab: NCTR

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 2 |
| | 8 | 8 | 6 | 6 | 6 | 6 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 8 | |
| | 3 | 9 | 8 | 8 | 8 | 8 | 2 | 0 | 8 | 8 | 8 | 8 | 2 | 8 | 8 | 8 | 8 | 8 | 8 | 2 | 8 | 8 | 8 | 3 | |
| SKH-1 HAIRLESS MICE (NCTR)
MICE MALE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| ANIMAL ID | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | |
| NO CREAM6.75SSLM | 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 |

males (cont...)

SYSTEMIC LESIONS

Multiple Organ

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

* .. Total animals with tissue examined microscopically; Total animals with tumor
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue

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

| | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| DAY ON TEST | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | 1 | 6 | 6 | 6 | 6 | 6 | 5 | 4 | 6 | 6 | 6 | |
| | 9 | 8 | 8 | 8 | 8 | 8 | 4 | 7 | 8 | 8 | 8 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| ANIMAL ID | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | |
| NO CREAM6.75SSLM | 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 | + | + | + | + | + | + | + | + | + | + | + | 35 |
| Sarcoma | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma | | | | | | X | | | | | | 1 |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

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

| | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 35 |
| Squamous Cell Carcinoma, One | | | | | | | X | | | | | 2 |
| Squamous Cell Carcinoma In Situ, One | | | | | | | | X | | | | 1 |
| Squamous Cell Papilloma, One | | | | | | X | | | | | | 4 |
| Squamous Cell Papilloma, Three | | | | | | | X | | | | | 1 |
| Squamous Cell Papilloma, Five | | | | | | | | | | | | 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 tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

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

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + +

35

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

TDMS No. 20117 - 01
 Test Type: 1-YEAR
 Route: SKIN APPLICATION
 Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 All-trans-retinyl palmitate
 CAS Number: 79-81-2

Date Report Requested: 06/29/2009
 Time Report Requested: 16:29:37
 First Dose M/F: 06/22/03 / NA
 Lab: NCTR

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | |
| | 3 | 2 | 2 | 2 | 3 | 2 | 0 | 2 | 1 | 2 | 2 | 3 | 2 | 1 | 3 | 2 | 2 | 3 | 2 | 2 | 0 | 2 | 2 | 2 | 2 |
| | 1 | 8 | 6 | 9 | 2 | 7 | 2 | 5 | 9 | 6 | 5 | 1 | 7 | 8 | 2 | 9 | 2 | 6 | 2 | 4 | 1 | 3 | 7 | 7 | 6 |
| | 7 | 3 | 1 | 1 | 7 | 7 | 3 | 4 | 2 | 3 | 4 | 3 | 7 | 1 | 0 | 9 | 9 | 8 | 2 | 9 | 6 | 5 | 1 | 6 | 3 |
| 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 MALE | 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 |
| PH 7.0 6.75SSLM | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| ANIMAL ID | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 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 |

males
(cont...)

ALIMENTARY SYSTEM
 NONE

CARDIOVASCULAR SYSTEM
 NONE

ENDOCRINE SYSTEM
 NONE

GENERAL BODY SYSTEM
 NONE

GENITAL SYSTEM
 NONE

HEMATOPOIETIC SYSTEM
 NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| 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 | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 2 | 2 | 2 | 3 | 2 | 0 | 2 | 1 | 2 | 2 | 3 | 2 | 1 | 3 | 2 | 2 | 3 | 2 | 2 | 0 | 2 | 2 | 2 | 2 |
| | 1 | 8 | 6 | 9 | 2 | 7 | 2 | 5 | 9 | 6 | 5 | 1 | 7 | 8 | 2 | 9 | 2 | 6 | 2 | 4 | 1 | 3 | 7 | 7 | 6 |
| | 7 | 3 | 1 | 1 | 7 | 7 | 3 | 4 | 2 | 3 | 4 | 3 | 7 | 1 | 0 | 9 | 9 | 8 | 2 | 9 | 6 | 5 | 1 | 6 | 3 |
| 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 MALE | 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 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| PH 7.0 6.75SSLM | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 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 |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|---|---|---|---|--|---|---|---|---|---|---|--|---|---|---|---|---|---|--|---|---|---|---|
| Squamous Cell Carcinoma, One | | | | | | X | | | | | | | | | X | | X | X | | | | | | | X |
| Squamous Cell Carcinoma, Two | | | | | X | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Carcinoma In Situ, One | | X | | | X | | | | | | | | | | | | | | | | | X | | | |
| Squamous Cell Carcinoma In Situ, Two | | | X | | | | | | | X | | | | | | | | | | | | | | | |
| Squamous Cell Carcinoma In Situ, Four | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Squamous Cell Papilloma, One | | | | | | X | | | | | | | | | | | | | | | | | X | | |
| Squamous Cell Papilloma, Two | | | | | | | | | X | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, Three | | X | | X | | | | | | | | X | | | X | | | | | | | | | | |
| Squamous Cell Papilloma, Four | | | | | | | | | | X | | | | | | X | | X | | | | X | | | |
| Squamous Cell Papilloma, Five | | | | | | | | X | | | | | X | | | | | | | | | | | | |
| Squamous Cell Papilloma, Greater Than Five | | | X | | X | | | | | | X | | | | | | X | | X | X | | | X | X | |

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

- * .. Total animals with tissue examined microscopically; Total animals with tumor
- + .. Tissue examined microscopically
- x .. Lesion present
- I .. Insufficient tissue

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

Test Type: 1-YEAR

All-trans-retinyl palmitate

Time Report Requested: 16:29:37

Route: SKIN APPLICATION

CAS Number: 79-81-2

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

Species/Strain: MICE/SKH-1/NCTR

Lab: NCTR

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | |
| | 3 | 2 | 2 | 2 | 3 | 2 | 0 | 2 | 1 | 2 | 2 | 3 | 2 | 1 | 3 | 2 | 2 | 3 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | |
| | 1 | 8 | 6 | 9 | 2 | 7 | 2 | 5 | 9 | 6 | 5 | 1 | 7 | 8 | 2 | 9 | 2 | 6 | 2 | 4 | 1 | 3 | 7 | 7 | 6 | |
| | 7 | 3 | 1 | 1 | 7 | 7 | 3 | 4 | 2 | 3 | 4 | 3 | 7 | 1 | 0 | 9 | 9 | 8 | 2 | 9 | 6 | 5 | 1 | 6 | 3 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 MALE | 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 |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| ANIMAL ID | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| PH 7.0 6.75SSLM | 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 | |

males (cont...)

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

+ +

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|----------|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | |
| | 2 | 9 | 6 | 3 | 6 | 4 | 0 | 9 | 6 | 3 | 8 | |
| | 0 | 9 | 9 | 3 | 3 | 0 | 8 | 2 | 2 | 5 | 3 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| ANIMAL ID | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | |
| PH 7.0 6.75SSLM | 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 |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

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

| | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Squamous Cell Carcinoma, One | X | | | | | | | | | | X | 7 |
| Squamous Cell Carcinoma, Two | | | | | | X | | | | | | 2 |
| Squamous Cell Carcinoma In Situ, One | | | | | | | | X | X | | | 5 |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | | | | | | 2 |
| Squamous Cell Carcinoma In Situ, Four | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, One | X | X | | | | X | | | | | | 5 |
| Squamous Cell Papilloma, Two | | | | X | | | | | | | | 2 |
| Squamous Cell Papilloma, Three | | | | | | | X | | | | | 5 |
| Squamous Cell Papilloma, Four | | | | | | | | | | | | 4 |
| Squamous Cell Papilloma, Five | | | X | | | | | X | X | | | 5 |
| Squamous Cell Papilloma, Greater Than Five | | | | | X | | | | | X | | 10 |

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

- * .. Total animals with tissue examined microscopically; Total animals with tumor
- + .. Tissue examined microscopically
- x .. Lesion present
- I .. Insufficient tissue

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

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

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + +

36

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | |
| | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 9 | 2 | 3 | 6 | 7 | 7 | 9 | 7 | 4 | 5 | 5 | 7 | 4 | 5 | 5 | 3 | 8 | 0 | 8 | 7 | 0 | 7 | 6 | 7 | |
| | 2 | 8 | 5 | 2 | 0 | 6 | 9 | 6 | 3 | 4 | 5 | 6 | 8 | 5 | 6 | 4 | 5 | 7 | 3 | 6 | 7 | 0 | 2 | 6 | |
| SKH-1 HAIRLESS MICE (NCTR)
MICE MALE
ANIMAL ID
.1% RP 6.75SSLM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | |
| | 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 |

males
(cont...)

ALIMENTARY SYSTEM
NONE

CARDIOVASCULAR SYSTEM
NONE

ENDOCRINE SYSTEM
NONE

GENERAL BODY SYSTEM
NONE

GENITAL SYSTEM
NONE

HEMATOPOIETIC SYSTEM
NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

TDMS No. 20117 - 01
 Test Type: 1-YEAR
 Route: SKIN APPLICATION
 Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 All-trans-retinyl palmitate
 CAS Number: 79-81-2

Date Report Requested: 06/29/2009
 Time Report Requested: 16:29:37
 First Dose M/F: 06/22/03 / NA
 Lab: 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 | | |
| DAY ON TEST | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| | 9 | 2 | 3 | 6 | 7 | 7 | 9 | 7 | 4 | 5 | 5 | 7 | 4 | 5 | 5 | 3 | 8 | 0 | 8 | 7 | 0 | 7 | 6 | 7 | 4 | | |
| | 2 | 8 | 5 | 2 | 0 | 6 | 9 | 6 | 3 | 4 | 5 | 6 | 8 | 5 | 6 | 4 | 5 | 7 | 3 | 6 | 7 | 0 | 2 | 6 | 2 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 MALE | 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 | |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| ANIMAL ID | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | |
| .1% RP 6.75SSLM | 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 | | |

males
(cont...)

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

.....
 +

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| DAY ON TEST | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | |
| | 4 | 6 | 1 | 3 | 5 | 2 | 8 | 5 | 3 | 3 | 2 | |
| | 2 | 9 | 4 | 3 | 5 | 6 | 1 | 6 | 5 | 5 | 7 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| ANIMAL ID | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| .1% RP 6.75SSLM | 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 |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | |
| | 4 | 6 | 1 | 3 | 5 | 2 | 8 | 5 | 3 | 3 | 2 | |
| | 2 | 9 | 4 | 3 | 5 | 6 | 1 | 6 | 5 | 5 | 7 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| .1% RP 6.75SSLM | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 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 |

| | | | | | | | | | | | | |
|--|---|---|---|---|---|---|--|---|---|---|---|-----------|
| Keratoacanthoma, One | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma, One | | | | | X | | | X | | | | 5 |
| Squamous Cell Carcinoma, Two | | | | | | | | | | | | 3 |
| Squamous Cell Carcinoma In Situ, One | | | | | X | X | | | | X | | 7 |
| Squamous Cell Carcinoma In Situ, Two | X | | | | | | | | | | | 3 |
| Squamous Cell Carcinoma In Situ, Three | | | | X | | | | | | | | 1 |
| Squamous Cell Papilloma, One | | | | | X | | | | | | | 4 |
| Squamous Cell Papilloma, Two | | | | | | | | | | | | 3 |
| Squamous Cell Papilloma, Three | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, Four | | | | | | X | | X | | | | 3 |
| Squamous Cell Papilloma, Five | | | | | | | | | | | X | 3 |
| Squamous Cell Papilloma, Greater Than Five | X | X | X | X | | | | | X | X | | 18 |

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

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

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

.....
+ + + + + + + + + + +

36

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

TDMS No. 20117 - 01
 Test Type: 1-YEAR
 Route: SKIN APPLICATION
 Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 All-trans-retinyl palmitate
 CAS Number: 79-81-2

Date Report Requested: 06/29/2009
 Time Report Requested: 16:29:37
 First Dose M/F: 06/22/03 / NA
 Lab: NCTR

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | |
| | 6 | 5 | 3 | 7 | 0 | 7 | 7 | 1 | 1 | 2 | 4 | 2 | 3 | 3 | 4 | 1 | 4 | 2 | 5 | 8 | 3 | 4 | 5 | 4 | 3 |
| | 2 | 5 | 5 | 0 | 1 | 0 | 6 | 4 | 4 | 8 | 8 | 1 | 4 | 6 | 8 | 4 | 8 | 9 | 5 | 0 | 1 | 0 | 5 | 1 | 4 |
| 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 MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| .5% RP 6.75SSLM | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| ANIMAL ID | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | |
| | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |

males
(cont...)

ALIMENTARY SYSTEM
 NONE

CARDIOVASCULAR SYSTEM
 NONE

ENDOCRINE SYSTEM
 NONE

GENERAL BODY SYSTEM
 NONE

GENITAL SYSTEM
 NONE

HEMATOPOIETIC SYSTEM
 NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

TDMS No. 20117 - 01
Test Type: 1-YEAR
Route: SKIN APPLICATION
Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
All-trans-retinyl palmitate
CAS Number: 79-81-2

Date Report Requested: 06/29/2009
Time Report Requested: 16:29:37
First Dose M/F: 06/22/03 / NA
Lab: NCTR

| 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 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 |
| | 6 | 5 | 3 | 7 | 0 | 7 | 7 | 1 | 1 | 2 | 4 | 2 | 3 | 3 | 4 | 1 | 4 | 2 | 5 | 8 | 3 | 4 | 5 | 4 | 3 |
| | 2 | 5 | 5 | 0 | 1 | 0 | 6 | 4 | 4 | 8 | 8 | 1 | 4 | 6 | 8 | 4 | 8 | 9 | 5 | 0 | 1 | 0 | 5 | 1 | 4 |
| SKH-1 HAIRLESS MICE (NCTR)
MICE MALE | 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 |
| | 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 |
| | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| .5% RP 6.75SSLM | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|--|---|---|--|
| Basal Cell Adenoma | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Carcinoma, One | X | X | | X | X | | X | X | X | X | | | | | X | X | X | | X | | | X | | | | |
| Squamous Cell Carcinoma, Two | | | | | | | | | | | | | | | | | | | X | | | | | | | |
| Squamous Cell Carcinoma In Situ, One | | | | X | | | | | X | | | | X | | | | | X | X | | | | | X | | |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, One | | | | | | | | | | | | | | | | | | | | | | X | | | | |
| Squamous Cell Papilloma, Two | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, Three | | | | X | | | | | | | | | | | | | | | | | | | | | X | |
| Squamous Cell Papilloma, Four | X | | | | | | | | X | X | | | | X | X | | | | | | | | | | | |
| Squamous Cell Papilloma, Five | | | | | | | X | | | | | | | | | | | | | X | | | | | | |
| Squamous Cell Papilloma, Greater Than Five | | X | | X | X | | | | | | X | X | X | | | | | X | X | X | | X | | X | X | |

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with tumor
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | 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 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | | |
| | 6 | 5 | 3 | 7 | 0 | 7 | 7 | 1 | 1 | 2 | 4 | 2 | 3 | 3 | 4 | 1 | 4 | 2 | 5 | 8 | 3 | 4 | 5 | 4 | 3 | | |
| | 2 | 5 | 5 | 0 | 1 | 0 | 6 | 4 | 4 | 8 | 8 | 1 | 4 | 6 | 8 | 4 | 8 | 9 | 5 | 0 | 1 | 0 | 5 | 1 | 4 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 MALE | 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 | |
| .5% RP 6.75SSLM | 4 | 4 | 4 | 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 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | |
| | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | | |

males
(cont...)

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

.....
+ +

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|-----------------|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | |
| | 3 | 0 | 1 | 5 | 4 | 1 | 2 | 3 | 3 | 9 | |
| | 4 | 7 | 5 | 5 | 2 | 5 | 7 | 5 | 5 | 9 | |
| | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| ANIMAL ID | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | |
| .5% RP 6.75SSLM | 2 | 3 | 4 | 5 | 6 | 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 | + | + | + | + | + | + | + | + | + | + | 35 |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | 35 |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

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

| | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|-----------|
| Basal Cell Adenoma | | | | | | | | | | X | 1 |
| Squamous Cell Carcinoma, One | | | | | | X | X | | | | 15 |
| Squamous Cell Carcinoma, Two | | | | | | | | | | X | 2 |
| Squamous Cell Carcinoma In Situ, One | | | | X | X | | | | | | 8 |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, One | | | | | | | | | | X | 2 |
| Squamous Cell Papilloma, Two | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, Three | | X | | | | | | | | | 3 |
| Squamous Cell Papilloma, Four | | | | | X | | | | | | 6 |
| Squamous Cell Papilloma, Five | | | X | | | | | | | | 3 |
| Squamous Cell Papilloma, Greater Than Five | X | | | X | | X | X | X | X | | 19 |

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

- * .. Total animals with tissue examined microscopically; Total animals with tumor
- + .. Tissue examined microscopically
- x .. Lesion present
- I .. Insufficient tissue

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

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

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + +

35

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

TDMS No. 20117 - 01
 Test Type: 1-YEAR
 Route: SKIN APPLICATION
 Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 All-trans-retinyl palmitate
 CAS Number: 79-81-2

Date Report Requested: 06/29/2009
 Time Report Requested: 16:29:37
 First Dose M/F: 06/22/03 / NA
 Lab: 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 |
| DAY ON TEST | 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 |
| | 8 | 4 | 7 | 8 | 7 | 8 | 8 | 7 | 6 | 6 | 8 | 8 | 8 | 6 | 9 | 6 | 8 | 7 | 8 | 5 | 6 | 9 | 8 | 7 | 7 |
| | 3 | 6 | 1 | 3 | 1 | 3 | 4 | 6 | 4 | 4 | 4 | 4 | 5 | 9 | 9 | 9 | 5 | 7 | 5 | 0 | 2 | 2 | 5 | 0 | 7 |
| | 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 |
| SKH-1 HAIRLESS MICE (NCTR) | 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 |
| MICE MALE | 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 |
| ANIMAL ID | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| NO CREAM13.7SSLM | 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 |

males
(cont...)

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| 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 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 8 | 4 | 7 | 8 | 7 | 8 | 8 | 7 | 6 | 6 | 8 | 8 | 8 | 6 | 9 | 6 | 8 | 7 | 8 | 5 | 6 | 9 | 8 | 7 | 7 |
| | 3 | 6 | 1 | 3 | 1 | 3 | 4 | 6 | 4 | 4 | 4 | 4 | 5 | 9 | 9 | 9 | 5 | 7 | 5 | 0 | 2 | 2 | 5 | 0 | 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 MALE | 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 |
| NO CREAM13.7SSLM | 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 |
| ANIMAL ID | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 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 |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Squamous Cell Carcinoma, One | X | | | | X | | | | | | X | X | X | X | | X | X | X | | | | | | |
| Squamous Cell Carcinoma, Two | | | | X | | | | | | | X | | | | | | | X | | | | | | |
| Squamous Cell Carcinoma, Three | | | X | | | X | X | | | X | | | | | | | | | | | | X | | |
| Squamous Cell Carcinoma, Five | | | | | | | | | X | | | | | | | | | | | | | | | |
| Squamous Cell Carcinoma In Situ, One | | | X | | | | X | | | | | | X | | | | | | | | X | | X | |
| Squamous Cell Carcinoma In Situ, Two | X | | | | | | | | | X | | | | | | | | | | | X | | | |
| Squamous Cell Carcinoma In Situ, Three | | | | | X | | X | | | | | | | | | | X | | | | | | | |
| Squamous Cell Carcinoma In Situ, Four | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, One | | X | | | | X | | | | | X | | | | | | | | X | X | | X | X | |
| Squamous Cell Papilloma, Two | | | | | X | | | | X | X | | | | | | | X | X | | | X | | | |
| Squamous Cell Papilloma, Three | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, Four | | | | | | | | | | | | | X | X | X | | | | | | | | | |
| Squamous Cell Papilloma, Greater Than Five | | | | | | | | | | | | | | | | | | | | | | | | |

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| | 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 | 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 | | |
| | 8 | 4 | 7 | 8 | 7 | 8 | 8 | 7 | 6 | 6 | 8 | 8 | 8 | 6 | 9 | 6 | 8 | 7 | 8 | 5 | 6 | 9 | 8 | 7 | 7 | | |
| | 3 | 6 | 1 | 3 | 1 | 3 | 4 | 6 | 4 | 4 | 4 | 4 | 5 | 9 | 9 | 9 | 5 | 7 | 5 | 0 | 2 | 2 | 5 | 0 | 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 MALE | 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 | | |
| | 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 | | |
| ANIMAL ID | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | | | |
| NO CREAM13.7SSLM | 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 | | |

males (cont...)

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| DAY ON TEST | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | |
| | 4 | 5 | 6 | 6 | 9 | 9 | 2 | 9 | 7 | 6 | 3 | |
| | 3 | 5 | 3 | 9 | 9 | 2 | 7 | 2 | 8 | 2 | 9 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| ANIMAL ID | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| NO CREAM13.7SSLM | 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 |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

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

| | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Squamous Cell Carcinoma, One | | | | X | X | | X | X | | | | 13 |
| Squamous Cell Carcinoma, Two | X | X | X | | | | | | X | | | 7 |
| Squamous Cell Carcinoma, Three | | | | | | | X | | | | | 6 |
| Squamous Cell Carcinoma, Five | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, One | | | | X | | | | | | X | | 7 |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | | | | | | 3 |
| Squamous Cell Carcinoma In Situ, Three | | | | | | | | | | | | 3 |
| Squamous Cell Carcinoma In Situ, Four | | | | | | X | | | | | | 1 |
| Squamous Cell Papilloma, One | | | X | | X | | X | X | | | X | 12 |
| Squamous Cell Papilloma, Two | | | | | | | | | | | | 6 |
| Squamous Cell Papilloma, Three | | | | | | | | | X | | | 1 |
| Squamous Cell Papilloma, Four | | | | | | | | | | | | 3 |
| Squamous Cell Papilloma, Greater Than Five | | | | | | | | | | X | | 1 |

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

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

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

.....
+ + + + + + + + + + +

36

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

TDMS No. 20117 - 01

Test Type: 1-YEAR

Route: SKIN APPLICATION

Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

All-trans-retinyl palmitate

CAS Number: 79-81-2

Date Report Requested: 06/29/2009

Time Report Requested: 16:29:37

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

Lab: NCTR

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 |
| | 2 | 3 | 5 | 7 | 7 | 5 | 5 | 4 | 7 | 5 | 9 | 3 | 4 | 4 | 0 | 5 | 7 | 5 | 9 | 4 | 9 | 6 | 9 | 7 |
| | 6 | 4 | 0 | 1 | 1 | 0 | 5 | 3 | 6 | 4 | 8 | 7 | 1 | 1 | 2 | 7 | 7 | 7 | 2 | 0 | 9 | 2 | 2 | 0 |
| 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 MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 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 |
| ANIMAL ID | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 |
| PH 7.0 13.7SSLM | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

males (cont...)

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control

Squamous Cell Papilloma

.....

+ +

X

.....

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| 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 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 |
| | 2 | 3 | 5 | 7 | 7 | 5 | 5 | 4 | 7 | 5 | 9 | 3 | 4 | 4 | 0 | 5 | 7 | 5 | 9 | 4 | 9 | 6 | 9 | 7 |
| | 6 | 4 | 0 | 1 | 1 | 0 | 5 | 3 | 6 | 4 | 8 | 7 | 1 | 1 | 2 | 7 | 7 | 7 | 2 | 0 | 9 | 2 | 2 | 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 |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 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 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| 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 MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| PH 7.0 13.7SSLM | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

males
(cont...)

| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Keratoacanthoma, One | | | | | | | | | | | | | | | | | | | | | | | | X |
| Squamous Cell Carcinoma, One | | | | X | | | X | | | | | | | | X | X | | X | X | | X | X | | |
| Squamous Cell Carcinoma, Two | | | | | | | | | | X | | | | | | | | | | | X | | | |
| Squamous Cell Carcinoma, Three | | X | X | | | X | | | | | | X | X | | | | | | | | | | | |
| Squamous Cell Carcinoma, Five | | | | | | | | | | | | | | | X | | | | | | | | | |
| Squamous Cell Carcinoma In Situ, One | | X | X | | X | | | | X | | | | X | | | | X | X | X | | X | | | X |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | | | | | | | | | | | | | | | | | X | |
| Squamous Cell Carcinoma In Situ, Three | | | | | | | | | | X | | | | | | | | | | | | | | |
| Squamous Cell Carcinoma In Situ, Four | | | | | | | | | | | | | | X | | | | | | | X | | | |
| Squamous Cell Carcinoma In Situ, Five | | | | | | | | | | | | | | | X | | | | | | | | | |
| Squamous Cell Carcinoma In Situ, Greater Than Five | | | | | | X | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, One | | | | | | | | X | X | | | | | | | | | | | | | | | X |
| Squamous Cell Papilloma, Two | | | X | | | | | | | | | | | | | X | | | | | X | | X | |
| Squamous Cell Papilloma, Three | | | | | X | | | | | | | | | | | | | | X | | | | | |
| Squamous Cell Papilloma, Four | | | | | | | | | | | | | | | X | X | | | | | | | | |
| Squamous Cell Papilloma, Five | | | | | | | | | | | | X | | | | | | | | | | | | |
| Squamous Cell Papilloma, Greater Than Five | X | | | X | X | | | | X | X | | | | | | | | | | X | | | | |

MUSCULOSKELETAL SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

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

SKH-1 HAIRLESS MICE (NCTR)

MICE MALE

ANIMAL ID

PH 7.0 13.7SSLM

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

males
(cont...)

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

.....

+ +

* .. Total animals with tissue examined microscopically; Total animals with tumor
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue

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

| | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| DAY ON TEST | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | |
| | 4 | 4 | 2 | 7 | 0 | 2 | 3 | 9 | 9 | 4 | 2 | |
| | 3 | 3 | 2 | 8 | 6 | 0 | 6 | 1 | 9 | 1 | 0 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE MALE | 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 | 0 | 0 | 0 | 1 | 1 | 1 | |
| PH 7.0 13.7SSLM | 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 |
| Squamous Cell Papilloma | | | | | | | | | | | | 1 |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

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

| | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |
| Keratoacanthoma, One | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma, One | | | X | | | | | | | X | | 10 |
| Squamous Cell Carcinoma, Two | | | | | | | | | | | | 2 |
| Squamous Cell Carcinoma, Three | | X | | | | | | | | | | 6 |
| Squamous Cell Carcinoma, Five | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, One | | | | | | X | X | | | | | 12 |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | | X | | X | | 3 |
| Squamous Cell Carcinoma In Situ, Three | | | X | | | | | | | | | 2 |
| Squamous Cell Carcinoma In Situ, Four | | | | | | | | | X | | | 3 |
| Squamous Cell Carcinoma In Situ, Five | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, Greater Than Five | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, One | | | | | | | | | | | | 3 |
| Squamous Cell Papilloma, Two | X | | | | | | X | | X | X | | 8 |
| Squamous Cell Papilloma, Three | | X | | | | | | | | | | 3 |
| Squamous Cell Papilloma, Four | | | | | | | | | | | | 2 |
| Squamous Cell Papilloma, Five | | | | | X | | | | | | | 2 |
| Squamous Cell Papilloma, Greater Than Five | | | X | | | X | | X | | X | | 10 |

MUSCULOSKELETAL SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

TDMS No. 20117 - 01
 Test Type: 1-YEAR
 Route: SKIN APPLICATION
 Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 All-trans-retinyl palmitate
 CAS Number: 79-81-2

Date Report Requested: 06/29/2009
 Time Report Requested: 16:29:37
 First Dose M/F: 06/22/03 / NA
 Lab: NCTR

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

NERVOUS SYSTEM
 NONE

RESPIRATORY SYSTEM
 NONE

SPECIAL SENSES SYSTEM
 NONE

URINARY SYSTEM
 NONE

SYSTEMIC LESIONS

Multiple Organ

.....
 + + + + + + + + + + +

36

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

TDMS No. 20117 - 01
Test Type: 1-YEAR
Route: SKIN APPLICATION
Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 All-trans-retinyl palmitate
CAS Number: 79-81-2

Date Report Requested: 06/29/2009
Time Report Requested: 16:29:37
First Dose M/F: 06/22/03 / NA
Lab: NCTR

| 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 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 |
| | 0 | 1 | 2 | 0 | 9 | 9 | 3 | 2 | 1 | 2 | 1 | 8 | 8 | 2 | 1 | 8 | 5 | 1 | 1 | 1 | 7 | 1 | 7 | 2 | 6 |
| | 5 | 3 | 3 | 5 | 2 | 2 | 6 | 1 | 6 | 1 | 6 | 5 | 7 | 0 | 4 | 7 | 0 | 4 | 3 | 3 | 1 | 3 | 1 | 2 | 4 |
| SKH-1 HAIRLESS MICE (NCTR)
MICE MALE | 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 |
| | 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 | 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 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| .1% RP 13.7SSLM | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

males
(cont...)

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 |
| | 0 | 1 | 2 | 0 | 9 | 9 | 3 | 2 | 1 | 2 | 1 | 8 | 8 | 2 | 1 | 8 | 5 | 1 | 1 | 1 | 7 | 1 | 7 | 2 | 6 |
| | 5 | 3 | 3 | 5 | 2 | 2 | 6 | 1 | 6 | 1 | 6 | 5 | 7 | 0 | 4 | 7 | 0 | 4 | 3 | 3 | 1 | 3 | 1 | 2 | 4 |
| 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 MALE | 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 |
| .1% RP 13.7SSLM | 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 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

males (cont...)

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

+ +

* .. Total animals with tissue examined microscopically; Total animals with tumor
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue

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

| | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 9 | 1 | 0 | 1 | 0 | 9 | 9 | 2 | 6 | 7 | |
| | 0 | 8 | 5 | 6 | 5 | 8 | 9 | 9 | 8 | 0 | 8 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| ANIMAL ID | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| .1% RP 13.7SSLM | 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 |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 9 | 1 | 0 | 1 | 0 | 9 | 9 | 2 | 6 | 7 | |
| | 0 | 8 | 5 | 6 | 5 | 8 | 9 | 9 | 8 | 0 | 8 | |
| <hr/> | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| ANIMAL ID | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| .1% RP 13.7SSLM | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | * TOTALS |

| | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|--|---|--|-----------|
| Keratoacanthoma, One | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma, One | | | | | X | | | | | | | 7 |
| Squamous Cell Carcinoma, Two | X | | | | | | | | | | | 7 |
| Squamous Cell Carcinoma, Three | | | | | | | X | | | | | 1 |
| Squamous Cell Carcinoma In Situ, One | | | | | | | | | | X | | 10 |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | | | | | | 3 |
| Squamous Cell Carcinoma In Situ, Three | | | X | | | | | | | | | 2 |
| Squamous Cell Carcinoma In Situ, Four | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, Greater Than Five | | X | | | | | | | | | | 1 |
| Squamous Cell Papilloma, One | | | X | | X | | | X | | | | 4 |
| Squamous Cell Papilloma, Two | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, Three | | | | | X | | | | | | | 4 |
| Squamous Cell Papilloma, Four | | | | | | | | X | | | | 6 |
| Squamous Cell Papilloma, Five | | | | | | | | | | | | 4 |
| Squamous Cell Papilloma, Greater Than Five | X | X | | X | | X | | | | | | 15 |

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

TDMS No. 20117 - 01
 Test Type: 1-YEAR
 Route: SKIN APPLICATION
 Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 All-trans-retinyl palmitate
 CAS Number: 79-81-2

Date Report Requested: 06/29/2009
 Time Report Requested: 16:29:37
 First Dose M/F: 06/22/03 / NA
 Lab: NCTR

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

RESPIRATORY SYSTEM
 NONE

SPECIAL SENSES SYSTEM
 NONE

URINARY SYSTEM
 NONE

SYSTEMIC LESIONS

| | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | 36 |
|----------------|---|---|---|---|---|---|---|---|---|---|---|-----------|

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

TDMS No. 20117 - 01
 Test Type: 1-YEAR
 Route: SKIN APPLICATION
 Species/Strain: MICE/SKH-1/NCTR

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 All-trans-retinyl palmitate
 CAS Number: 79-81-2

Date Report Requested: 06/29/2009
 Time Report Requested: 16:29:37
 First Dose M/F: 06/22/03 / NA
 Lab: NCTR

| 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 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 0 |
| | 6 | 0 | 6 | 6 | 0 | 6 | 5 | 9 | 2 | 9 | 9 | 8 | 7 | 8 | 8 | 7 | 9 | 9 | 1 | 8 | 8 | 8 | 7 | 2 | 7 |
| | 3 | 4 | 3 | 4 | 4 | 7 | 6 | 7 | 1 | 7 | 7 | 5 | 8 | 5 | 5 | 8 | 0 | 0 | 3 | 4 | 3 | 8 | 1 | 2 | 6 |
| 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 MALE | 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 |
| .5% RP 13.7SSLM | 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 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 |
| | 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 |
| Keratoacanthoma, One | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Carcinoma, One | | | | | | | | | | | | | X | | | | | | | | | | | | X |
| Squamous Cell Carcinoma, Two | | X | | | | | | | X | | | | | X | | | | X | | | | | | | |
| Squamous Cell Carcinoma, Four | | | | | | | | | | X | | | | | | | | | | | | | | | |
| Squamous Cell Carcinoma In Situ, One | X | | | X | | | | | | X | X | | | | X | X | | X | | | | X | X | X | |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Squamous Cell Carcinoma In Situ, Three | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Carcinoma In Situ, Five | | | | | | | | X | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, One | | | | | | X | | | | | | | | | | | | | | | | X | | | |
| Squamous Cell Papilloma, Two | X | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, Three | | | | X | | | | | | | | X | | | | | | | | | | | | | |
| Squamous Cell Papilloma, Four | | | | | | X | | | X | | | X | X | X | | | | | | | | | | | |
| Squamous Cell Papilloma, Five | | | | X | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, Greater Than Five | | X | X | | | | | X | X | | X | | | | X | X | | X | X | X | | X | X | X | X |

males
(cont...)

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

- * .. Total animals with tissue examined microscopically; Total animals with tumor
- + .. Tissue examined microscopically
- x .. Lesion present
- I .. Insufficient tissue

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

| | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|----------|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 0 | 7 | 1 | 9 | 0 | 9 | 9 | 9 | 7 | |
| | 0 | 6 | 0 | 7 | 5 | 7 | 8 | 3 | 1 | 3 | 8 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | |
| .5% RP 13.7SSLM | 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 |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

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

| | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Keratoacanthoma, One | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma, One | | X | X | X | | X | | | | | X | 7 |
| Squamous Cell Carcinoma, Two | | | | | | | | | | | | 4 |
| Squamous Cell Carcinoma, Four | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, One | X | | | X | | X | | | | | | 13 |
| Squamous Cell Carcinoma In Situ, Two | | X | | | | | | | X | X | | 4 |
| Squamous Cell Carcinoma In Situ, Three | | | | | X | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, Five | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, One | | X | | | | | | | | | | 3 |
| Squamous Cell Papilloma, Two | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, Three | | | | | | X | | | | | | 3 |
| Squamous Cell Papilloma, Four | | | | | | | | | | | X | 6 |
| Squamous Cell Papilloma, Five | | | | | X | | | | | | | 2 |
| Squamous Cell Papilloma, Greater Than Five | X | | X | X | | | X | X | X | X | | 19 |

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

- * .. Total animals with tissue examined microscopically; Total animals with tumor
- + .. Tissue examined microscopically
- x .. Lesion present
- I .. Insufficient tissue

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

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

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

.....
+ + + + + + + + + + +

36

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|----------|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | |
| | 3 | 0 | 0 | 3 | 9 | 1 | 1 | 7 | 0 | 9 | 0 | |
| | 4 | 8 | 0 | 4 | 2 | 5 | 5 | 0 | 1 | 3 | 1 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| ANIMAL ID | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| NOCREAMM20.55SSL | 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 |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 2 |
| | 3 | 0 | 0 | 3 | 9 | 1 | 1 | 7 | 0 | 9 | 0 |
| | 4 | 8 | 0 | 4 | 2 | 5 | 5 | 0 | 1 | 3 | 1 |
| | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| ANIMAL ID | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| NOCREAMM20.55SSL | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | | | | | | | | | | * TOTALS |

| | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|----------|
| Squamous Cell Carcinoma, One | | | X | X | | | | | X | | 6 |
| Squamous Cell Carcinoma, Two | | X | | | | | | | | | 8 |
| Squamous Cell Carcinoma, Three | | | | | X | | | | X | | 4 |
| Squamous Cell Carcinoma, Four | | | | | | | | | | X | 5 |
| Squamous Cell Carcinoma, Five | | | | | | X | | | | | 3 |
| Squamous Cell Carcinoma, Greater Than Five | | | | | | | X | | | | 2 |
| Squamous Cell Carcinoma In Situ, One | | | | X | | | | | | | 9 |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | | | | | 3 |
| Squamous Cell Carcinoma In Situ, Three | | X | | | | | | | X | | 5 |
| Squamous Cell Carcinoma In Situ, Four | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, Five | | | X | | | X | | | | | 4 |
| Squamous Cell Carcinoma In Situ, Greater Than Five | | | | | | | X | | X | | 3 |
| Squamous Cell Papilloma, One | X | | | | | | | | | X | 7 |
| Squamous Cell Papilloma, Two | | | | | | | X | | | | 3 |
| Squamous Cell Papilloma, Three | | | | | | X | | X | X | | 7 |
| Squamous Cell Papilloma, Four | | | | | | | | | | | 2 |
| Squamous Cell Papilloma, Five | | | | X | | | | | | | 1 |
| Squamous Cell Papilloma, Greater Than Five | | | X | | | | | | | | 2 |

MUSCULOSKELETAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

| | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| DAY ON TEST | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 2 |
| | 3 | 0 | 0 | 3 | 9 | 1 | 1 | 7 | 0 | 9 | 0 |
| | 4 | 8 | 0 | 4 | 2 | 5 | 5 | 0 | 1 | 3 | 1 |
| | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MICE MALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| ANIMAL ID | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| NOCREAMM20.55SSL | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | | | | | | | | | | * TOTALS |

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + +

36

*** END OF MALE DATA ***

*** END OF REPORT ***

* .. Total animals with tissue examined microscopically; Total animals with tumor
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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