

TDMS No. 20117 - 02

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: 16:32:02

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

Lab: NCTR

C Number: C20117

Lock Date: 12/01/2008

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

Study Gender: Female

TDMSE Version: 2.1.0

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

females (cont...)

ALIMENTARY SYSTEM
NONE

CARDIOVASCULAR SYSTEM
NONE

ENDOCRINE SYSTEM
NONE

GENERAL BODY SYSTEM
NONE

GENITAL SYSTEM
NONE

HEMATOPOIETIC SYSTEM
NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
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 - 02

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

females (cont...)

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

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control	+	+	+	+	+	+	+	+	+	+	+	36
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	3	3	3	
	6	6	6	6	5	6	6	6	6	6	6	
	7	7	7	7	4	7	7	7	7	7	7	
.....												
SKH-1 HAIRLESS MICE (NCTR)	0	0	0	0	0	0	0	0	0	0	0	
MICE FEMALE	6	6	6	6	6	6	6	6	6	6	6	
ANIMAL ID	5	5	5	5	5	5	5	5	5	5	5	
	8	8	8	8	9	9	9	9	9	9	9	
NO CREAMNO SSL-F	6	7	8	9	0	1	2	3	4	5	6	* TOTALS

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

+ + + + + + + + + + +

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 | | |
| | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | |
| | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 6 | 6 | 6 | 6 | 4 | 6 | 6 | 6 | 6 | 2 | 6 | 4 | 2 | 6 | 6 | 6 | 6 | | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 0 | 7 | 7 | 7 | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 0 | 7 | 7 | 7 | 7 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | |
| ANIMAL ID | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | |
| PH 7.0 NO SSL-F | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |

females (cont...)

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| 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 | | | | | | | | | | | | | | | | | | | | | | | | females
(cont...) |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 6 | 6 | 6 | 6 | 4 | 6 | 6 | 6 | 6 | 6 | 2 | 6 | 4 | 2 | 6 | 6 | 6 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 0 | 7 | 7 | 7 | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 0 | 7 | 7 | 7 | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| PH 7.0 NO SSL-F | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |
| ANIMAL ID | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Keratoacanthoma, One | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Lymphoma Malignant | | | | | | | X | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, One | | | | | | | | | | | | | | | X | | | | | X | | | X | | |
| Squamous Cell Papilloma, Two | | | | X | | | | | | | | | | | | | | X | | | | | | | |

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 |
| DAY ON TEST | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 6 | 6 | 6 | 6 | 4 | 6 | 6 | 6 | 6 | 2 | 6 | 4 | 2 | 6 | 6 | 6 | 6 |
| | 7 | 7 | 7 | 7 | 7 | 7 | 0 | 7 | 7 | 7 | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 0 | 7 | 7 | 7 | 7 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| ANIMAL ID | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| PH 7.0 NO SSL-F | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 |
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Lymphoma Malignant | | | | | | | X | | | | | | | | | | | | | | | | | |

females (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 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | 6 | 6 | 6 | 6 | 7 | 6 | 4 | 3 | 6 | 6 | 6 | |
| | 7 | 7 | 7 | 7 | 0 | 7 | 9 | 4 | 7 | 7 | 7 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| ANIMAL ID | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| PH 7.0 NO SSL-F | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | |
| | 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
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M .. Missing tissue
 A .. Autolysis precludes evaluation
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| | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| DAY ON TEST | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | 6 | 6 | 6 | 6 | 7 | 6 | 4 | 3 | 6 | 6 | 6 | |
| | 7 | 7 | 7 | 7 | 0 | 7 | 9 | 4 | 7 | 7 | 7 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| ANIMAL ID | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| PH 7.0 NO SSL-F | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | |
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | * TOTALS |

| | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |
| Keratoacanthoma, One | | | | | | | | | | | | 1 |
| Lymphoma Malignant | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, One | X | | | X | | | | | | | | 5 |
| Squamous Cell Papilloma, Two | | | | | | | | | | | | 2 |

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

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

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

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P04: NEOPLASMS BY INDIVIDUAL ANIMAL

All-trans-retinyl palmitate

CAS Number: 79-81-2

Date Report Requested: 06/29/2009

Time Report Requested: 16:32:02

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

Lab: NCTR

| DAY ON TEST | Data Columns | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 |
| 6 | 6 | 6 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 2 | 6 | |
| 7 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 0 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | |

| ANIMAL ID | Data Columns | | | | | | | | | | | | | | | | | | | | | | females
(cont...) | |
|-----------|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fibroma | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | 0 | 0 |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 |
| | 6 | 6 | 6 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 2 | 6 | 6 |
| | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 |
| SKH-1 HAIRLESS MICE (NCTR)
MICE FEMALE | 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 |
| | 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 | 6 |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| NO CREAM6.75SSLF | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

females
(cont...)

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

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

females (cont...)

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

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | 36 |
| Fibroma | X | | | | | | | | | | | 1 |
| Squamous Cell Papilloma | | | | | | | | X | | | | 2 |

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

| | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |
| Squamous Cell Carcinoma, One | | | | | | X | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, One | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, One | | | | | X | | X | | X | | | 11 |
| Squamous Cell Papilloma, Three | | | | | | | | | | | | 2 |

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

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 - 02
 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: 16:32:02

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

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

females
(cont...)

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| 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 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 |
| | 6 | 3 | 6 | 6 | 6 | 3 | 3 | 6 | 3 | 6 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 9 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 7 | 4 | 7 | 7 | 7 | 4 | 4 | 7 | 4 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 7 |

| SKH-1 HAIRLESS MICE (NCTR)
MICE FEMALE
ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| PH 7.0 6.75SSLF | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females (cont...)

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

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| | 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 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | |
| | 6 | 3 | 6 | 6 | 6 | 3 | 3 | 6 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 9 | 6 | 6 | 6 | 6 | 6 | 6 | | |
| | 7 | 4 | 7 | 7 | 7 | 4 | 4 | 7 | 4 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | |
| | 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 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | | | |
| PH 7.0 6.75SSLF | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | | |

females
(cont...)

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

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | 36 |
| 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 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 7 | 3 | 4 | 2 | 1 | 6 | 6 | 6 | 0 | 6 | 6 |
| | 2 | 5 | 6 | 8 | 4 | 7 | 7 | 7 | 6 | 7 | 7 |
| | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| PH 7.0 6.75SSLF | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |

* TOTALS

| | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|----|
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |
| Basal Cell Carcinoma | | | | | | | | | | | | 1 |
| Keratoacanthoma, One | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma, One | | | | | | | | | X | | | 5 |
| Squamous Cell Carcinoma, Two | | | X | | | | | | | | | 3 |
| Squamous Cell Carcinoma, Three | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, One | | | | | | | | | X | | | 3 |
| Squamous Cell Carcinoma In Situ, Two | | | X | | | | | | | | | 2 |
| Squamous Cell Carcinoma In Situ, Three | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, Four | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, One | | | X | | X | | | | X | X | | 9 |
| Squamous Cell Papilloma, Two | | X | | X | | | | | | | | 8 |
| Squamous Cell Papilloma, Three | | | | | | | | | X | | | 6 |
| Squamous Cell Papilloma, Four | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, Five | X | | | | | | | X | | | | 3 |
| Squamous Cell Papilloma, Greater Than Five | | | | | | | | | | | | 4 |

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

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

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

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 - 02
 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: 16:32:02
 First Dose M/F: NA / 06/22/03
 Lab: NCTR

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 1 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 |
| | 8 | 6 | 4 | 8 | 6 | 5 | 6 | 5 | 4 | 8 | 4 | 9 | 7 | 7 | 8 | 2 | 4 | 9 | 1 | 1 | 6 | 1 | 4 | 6 | 5 |
| | 3 | 7 | 8 | 3 | 2 | 5 | 7 | 6 | 1 | 4 | 8 | 9 | 0 | 7 | 5 | 0 | 2 | 2 | 3 | 3 | 7 | 3 | 2 | 3 | 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 FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| .1% RP 6.75SSLF | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 |
| ANIMAL ID | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 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 |

females
(cont...)

ALIMENTARY SYSTEM
 NONE

CARDIOVASCULAR SYSTEM
 NONE

ENDOCRINE SYSTEM
 NONE

GENERAL BODY SYSTEM
 NONE

GENITAL SYSTEM
 NONE

HEMATOPOIETIC SYSTEM
 NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| 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

TDMS No. 20117 - 02
 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: 16:32:02
 First Dose M/F: NA / 06/22/03
 Lab: NCTR

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 1 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | |
| | 8 | 6 | 4 | 8 | 6 | 5 | 6 | 5 | 4 | 8 | 4 | 9 | 7 | 7 | 8 | 2 | 4 | 9 | 1 | 1 | 6 | 1 | 4 | 6 | 5 | |
| | 3 | 7 | 8 | 3 | 2 | 5 | 7 | 6 | 1 | 4 | 8 | 9 | 0 | 7 | 5 | 0 | 2 | 2 | 3 | 3 | 7 | 3 | 2 | 3 | 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 FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| .1% RP 6.75SSLF | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| ANIMAL ID | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 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 | |

females
(cont...)

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

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

TDMS No. 20117 - 02
 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: 16:32:02
 First Dose M/F: NA / 06/22/03
 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 | |
| DAY ON TEST | 2 | 1 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 |
| | 8 | 6 | 4 | 8 | 6 | 5 | 6 | 5 | 4 | 8 | 4 | 9 | 7 | 7 | 8 | 2 | 4 | 9 | 1 | 1 | 6 | 1 | 4 | 6 | 5 |
| | 3 | 7 | 8 | 3 | 2 | 5 | 7 | 6 | 1 | 4 | 8 | 9 | 0 | 7 | 5 | 0 | 2 | 2 | 3 | 3 | 7 | 3 | 2 | 3 | 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 FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 |
| .1% RP 6.75SSLF | 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 |

females
(cont...)

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

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | 36 |
| 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 | 3 | 3 | 2 | 2 | 3 | 1 | 3 |
| | 3 | 7 | 5 | 0 | 0 | 2 | 9 | 4 | 6 | 1 | 6 |
| | 5 | 7 | 6 | 7 | 6 | 7 | 9 | 9 | 7 | 1 | 7 |
| | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| .1% RP 6.75SSLF | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 |
| | | | | | | | | | | | * TOTALS |

| | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |
| Squamous Cell Carcinoma, One | | | X | | | | X | | | | | 10 |
| Squamous Cell Carcinoma, Two | | | | | | | | | | | | 2 |
| Squamous Cell Carcinoma, Three | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma, Four | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, One | | | | X | | | | | | | | 8 |
| Squamous Cell Carcinoma In Situ, Three | | X | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, Four | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, One | | | | | | | | X | | | | 6 |
| Squamous Cell Papilloma, Two | | | X | | | | | | | | | 5 |
| Squamous Cell Papilloma, Three | | | | | | | | | X | | | 4 |
| Squamous Cell Papilloma, Four | X | | | | | | | | | | | 4 |
| Squamous Cell Papilloma, Five | | | | | X | | | | | X | | 5 |
| Squamous Cell Papilloma, Greater Than Five | | X | | | | X | X | | | | | 7 |

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

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

ANIMAL ID

.1% RP 6.75SSLF

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

*** 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

TDMS No. 20117 - 02

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: 16:32:02

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

Lab: NCTR

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 4 | 2 | 5 | 6 | 9 | 6 | 4 | 4 | 6 | 5 | 6 | 4 | 7 | 0 | 4 | 4 | 7 | 6 | 8 | 4 | 5 | 6 | 7 | 7 | 6 | 6 | 6 | 6 |
| 7 | 7 | 6 | 9 | 1 | 7 | 0 | 9 | 2 | 6 | 2 | 0 | 0 | 1 | 9 | 9 | 7 | 3 | 3 | 2 | 6 | 3 | 9 | 0 | 3 | 3 | 3 | 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 | 0 |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| ANIMAL ID | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| .5% RP 6.75SSLF | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 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 | 7 | 7 |

**females
(cont...)**

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

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

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

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

TDMS No. 20117 - 02
 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: 16:32:02
 First Dose M/F: NA / 06/22/03
 Lab: NCTR

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 4 | 2 | 5 | 6 | 9 | 6 | 4 | 4 | 6 | 5 | 6 | 4 | 7 | 0 | 4 | 4 | 7 | 6 | 8 | 4 | 5 | 6 | 7 | 7 | 6 | 6 | 6 |
| | 7 | 7 | 6 | 9 | 1 | 7 | 0 | 9 | 2 | 6 | 2 | 0 | 0 | 1 | 9 | 9 | 7 | 3 | 3 | 2 | 6 | 3 | 9 | 0 | 3 | 3 | 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 | 0 |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| .5% RP 6.75SSLF | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| ANIMAL ID | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 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 | 7 | 7 |

females
(cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Squamous Cell Carcinoma, One | | | | | 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 Papilloma, One | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, Two | X | | | | X | | | | | | | X | | | | | | X | X | | | | | | | | |
| Squamous Cell Papilloma, Three | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, Four | | | | | | | | X | X | X | 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 | | | | | | | | |

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

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

females (cont...)

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

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | 36 |
| 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 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 4 | 3 | 5 | 2 | 1 | 6 | 2 | 6 | 3 | 6 | 4 |
| | 1 | 5 | 6 | 8 | 3 | 5 | 1 | 5 | 4 | 5 | 9 |
| <hr/> | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| .5% RP 6.75SSLF | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| ANIMAL ID | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

* TOTALS

| | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|----|
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |
| Squamous Cell Carcinoma, One | | X | | X | X | X | X | | | X | X | 15 |
| Squamous Cell Carcinoma, Two | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, One | X | | X | | | | | | | X | | 9 |
| Squamous Cell Papilloma, One | | | | X | | | | | | | | 3 |
| Squamous Cell Papilloma, Two | | | | | | | | | X | X | | 7 |
| Squamous Cell Papilloma, Three | | | | | | X | | | | | | 2 |
| Squamous Cell Papilloma, Four | | | X | | | | | X | | | X | 10 |
| Squamous Cell Papilloma, Five | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, Greater Than Five | X | X | | | X | | X | | | | | 13 |

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

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

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 - 02

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: 16:32:02

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

Lab: NCTR

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 0 | 3 | 2 | 3 | 2 | 3 | 2 | |
| | 1 | 9 | 7 | 9 | 6 | 6 | 3 | 2 | 2 | 8 | 8 | 9 | 6 | 9 | 6 | 0 | 2 | 8 | 7 | 6 | 3 | 1 | 6 | 2 | 5 |
| | 7 | 9 | 6 | 1 | 9 | 9 | 4 | 0 | 0 | 4 | 4 | 9 | 2 | 2 | 2 | 3 | 0 | 5 | 6 | 7 | 5 | 3 | 3 | 6 | 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 FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| ANIMAL ID | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | |
| NO CREAM13.7SSLF | 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 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

females (cont...)

ALIMENTARY SYSTEM
NONE

CARDIOVASCULAR SYSTEM
NONE

ENDOCRINE SYSTEM
NONE

GENERAL BODY SYSTEM
NONE

GENITAL SYSTEM
NONE

HEMATOPOIETIC SYSTEM
NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Sebaceous Gland, Adenoma | | | | | | | X | | | | | | | | | | | | | | | | | | |

- * .. Total animals with tissue examined microscopically; Total animals with tumor
- + .. Tissue examined microscopically
- x .. Lesion present
- l .. 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 | 0 | 0 |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 0 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | |
| | 1 | 9 | 7 | 9 | 6 | 6 | 3 | 2 | 2 | 8 | 8 | 9 | 6 | 9 | 6 | 0 | 2 | 8 | 7 | 6 | 3 | 1 | 6 | 2 | 5 | | |
| | 7 | 9 | 6 | 1 | 9 | 9 | 4 | 0 | 0 | 4 | 4 | 9 | 2 | 2 | 2 | 3 | 0 | 5 | 6 | 7 | 5 | 3 | 3 | 6 | 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 | 0 | |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| NO CREAM13.7SSLF | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| ANIMAL ID | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | | |
| | 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 | | |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Basal Cell Carcinoma | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Squamous Cell Carcinoma, One | | | | X | X | | | | | | | X | X | | | X | X | | X | X | X | | | | | | |
| Squamous Cell Carcinoma, Two | X | X | X | | | | X | X | | | | | | X | | | | | | | | | | | X | | |
| Squamous Cell Carcinoma, Three | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| Squamous Cell Carcinoma, Four | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Carcinoma In Situ, One | | | | | | X | | | | | X | X | | X | | | X | X | | | | | | | | | |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | | | X | | | | | | | | | | | | | X | X | | | | |
| Squamous Cell Carcinoma In Situ, Three | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Carcinoma In Situ, Four | | | | X | X | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Carcinoma In Situ, Five | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Squamous Cell Papilloma, One | | X | X | X | | | | X | X | X | X | | X | | | | | | | | | | | | | X | |
| Squamous Cell Papilloma, Two | | | | | | | | | | | | | | | X | | X | X | X | | X | X | | | | | |
| Squamous Cell Papilloma, Three | | | | | | | | X | | | | | | | | | | | | | | | | | X | | |
| Squamous Cell Papilloma, Four | X | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, Five | | | | X | X | | | | | | | X | | | | | | | | | | | | | | | |
| Squamous Cell Papilloma, Greater Than Five | | | | | | | | | | | | | | | | | | | | | | | | | | | |

females (cont...)

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS 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

TDMS No. 20117 - 02
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: 16:32:02
First Dose M/F: NA / 06/22/03
Lab: NCTR

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 0 | 3 | 2 | 3 | 2 | 3 | 2 |
| | 1 | 9 | 7 | 9 | 6 | 6 | 3 | 2 | 2 | 8 | 8 | 9 | 6 | 9 | 6 | 0 | 2 | 8 | 7 | 6 | 3 | 1 | 6 | 2 | 5 |
| | 7 | 9 | 6 | 1 | 9 | 9 | 4 | 0 | 0 | 4 | 4 | 9 | 2 | 2 | 2 | 3 | 0 | 5 | 6 | 7 | 5 | 3 | 3 | 6 | 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 FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| NO CREAM13.7SSLF | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| ANIMAL ID | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 |
| | 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 |

females (cont...)

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

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | 36 |
| Sebacous Gland, Adenoma | | | | | | | | | | | | 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 | |
|--|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | |
| | 4 | 5 | 6 | 7 | 8 | 5 | 9 | 4 | 6 | 2 | 6 | |
| | 6 | 6 | 4 | 2 | 9 | 6 | 2 | 1 | 5 | 7 | 5 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| ANIMAL ID | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | |
| NO CREAM13.7SSLF | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | * TOTALS |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | 36 |
| Basal Cell Carcinoma | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma, One | | X | | | | | | X | | | X | 12 |
| Squamous Cell Carcinoma, Two | | | | | | | | | X | | | 8 |
| Squamous Cell Carcinoma, Three | | | | | | | X | | | X | | 3 |
| Squamous Cell Carcinoma, Four | X | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, One | X | | | | X | X | X | | | | | 10 |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | | | | | | 3 |
| Squamous Cell Carcinoma In Situ, Three | | X | | X | | | | | | | | 2 |
| Squamous Cell Carcinoma In Situ, Four | | | | | | | | | | | | 2 |
| Squamous Cell Carcinoma In Situ, Five | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, One | | | X | X | X | X | | | | | X | 13 |
| Squamous Cell Papilloma, Two | | X | | | | | | | | | | 6 |
| Squamous Cell Papilloma, Three | | | | | | | | | | | | 2 |
| Squamous Cell Papilloma, Four | | | | | | | | | | | | 2 |
| Squamous Cell Papilloma, Five | | | | | | | X | | | | | 4 |
| Squamous Cell Papilloma, Greater Than Five | X | | | | | | | | | X | | 2 |

MUSCULOSKELETAL SYSTEM

NONE

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

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

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 |
| | 2 | 6 | 5 | 6 | 6 | 5 | 4 | 5 | 4 | 7 | 1 | 6 | 3 | 7 | 6 | 7 | 7 | 0 | 6 | 2 | 9 | 6 | 7 | 6 |
| | 7 | 3 | 6 | 3 | 1 | 6 | 9 | 6 | 9 | 7 | 9 | 2 | 6 | 0 | 2 | 0 | 0 | 1 | 2 | 0 | 9 | 3 | 0 | 9 |
| | 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) | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| MICE FEMALE | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| PH 7.0 13.7SSLF | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |

females
(cont...)

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| 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 | 0 | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | | |
| | 2 | 6 | 5 | 6 | 6 | 5 | 4 | 5 | 4 | 7 | 1 | 6 | 3 | 7 | 6 | 7 | 7 | 0 | 6 | 2 | 9 | 6 | 7 | 6 | 7 | | |
| | 7 | 3 | 6 | 3 | 1 | 6 | 9 | 6 | 9 | 7 | 9 | 2 | 6 | 0 | 2 | 0 | 0 | 1 | 2 | 0 | 9 | 3 | 0 | 9 | 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 | | |
| MICE FEMALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| ANIMAL ID | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| PH 7.0 13.7SSLF | 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 | | |

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

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

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

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | 36 |
| 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 | 0 |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | |
| | 7 | 6 | 3 | 5 | 7 | 2 | 3 | 6 | 1 | 0 | 2 | |
| | 2 | 3 | 5 | 6 | 2 | 0 | 2 | 5 | 9 | 6 | 0 | |
| | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE FEMALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| PH 7.0 13.7SSLF | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| | | | | | | | | | | | | * TOTALS |

| | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | + | 36 |
| Keratoacanthoma, One | | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma, One | | | X | X | X | | | | | | | X | 12 |
| Squamous Cell Carcinoma, Two | | | | | | | X | | | | X | | 9 |
| Squamous Cell Carcinoma, Three | | | | | | | X | X | | | | | 3 |
| Squamous Cell Carcinoma, Four | | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, One | X | | X | | | X | | | | | X | | 15 |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | | | | | | | 2 |
| Squamous Cell Carcinoma In Situ, Three | | | | | | | | | | | | | 2 |
| Squamous Cell Papilloma, One | | | | X | | | | | | | | | 5 |
| Squamous Cell Papilloma, Two | X | | X | | | | X | X | | | | | 12 |
| Squamous Cell Papilloma, Three | | | | | | | | | | | X | | 3 |
| Squamous Cell Papilloma, Five | | | | | | | | | | | | | 4 |
| Squamous Cell Papilloma, Greater Than Five | | X | | | | X | | | | | X | | 7 |

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

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

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 - 02
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: 16:32:02
First Dose M/F: NA / 06/22/03
Lab: NCTR

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

females
(cont...)

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

Skin, Control

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

TDMS No. 20117 - 02
 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: 16:32:02
 First Dose M/F: NA / 06/22/03
 Lab: NCTR

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| | 6 | 0 | 2 | 2 | 1 | 4 | 6 | 6 | 4 | 2 | 5 | 5 | 4 | 0 | 5 | 9 | 3 | 5 | 4 | 4 | 1 | 1 | 4 | 2 | 3 | | |
| | 9 | 5 | 2 | 2 | 5 | 7 | 2 | 2 | 3 | 9 | 6 | 6 | 9 | 8 | 5 | 1 | 0 | 5 | 8 | 8 | 5 | 5 | 8 | 9 | 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 | 0 | |
| MICE FEMALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| ANIMAL ID | 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 | |
| .1% RP 13.7SSLF | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | |
| | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | | |

females
(cont...)

NERVOUS SYSTEM
 NONE

RESPIRATORY SYSTEM
 NONE

SPECIAL SENSES SYSTEM
 NONE

URINARY SYSTEM

Kidney

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

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 | | | | | | | | | | X | | 2 |

* .. 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 | |
|--|---|---|---|---|---|---|---|---|---|---|---|-----------------|-----------|
| | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 4 | 0 | 4 | 4 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | |
| | 1 | 8 | 1 | 1 | 2 | 8 | 4 | 1 | 8 | 8 | 8 | 4 | |
| <hr/> | | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE FEMALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ANIMAL ID | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | |
| .1% RP 13.7SSLF | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | | |
| | | | | | | | | | | | | * TOTALS | |
| Skin, Site Of Application | + | + | + | + | + | + | + | + | + | + | + | + | 36 |
| Squamous Cell Carcinoma, One | | X | X | X | | | | X | X | | | | 12 |
| Squamous Cell Carcinoma, Two | | | | | | | X | | | | | | 9 |
| Squamous Cell Carcinoma, Three | X | | | | | | | | | X | | | 3 |
| Squamous Cell Carcinoma, Four | | | | | | X | | | | | | | 5 |
| Squamous Cell Carcinoma In Situ, One | | | | | X | X | | | X | X | | | 8 |
| Squamous Cell Carcinoma In Situ, Two | | | X | X | | | | | | | | | 10 |
| Squamous Cell Carcinoma In Situ, Three | | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, Four | | | | | | | | | | | | | 2 |
| Squamous Cell Carcinoma In Situ, Five | | | | | | | | | | | | | 1 |
| Squamous Cell Carcinoma In Situ, Greater Than Five | | | | | | | | X | | | | | 3 |
| Squamous Cell Papilloma, One | X | | | | | X | | | | | | | 3 |
| Squamous Cell Papilloma, Two | | X | X | | | | | | | | | | 6 |
| Squamous Cell Papilloma, Three | | | | | | | | | | | | | 3 |
| Squamous Cell Papilloma, Four | | | | X | | | | | | | | | 4 |
| Squamous Cell Papilloma, Five | | | | | | X | | | | | | | 3 |
| Squamous Cell Papilloma, Greater Than Five | | | | | | | X | X | X | | | | 13 |

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

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney + 1

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 - 02
 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: 16:32:02
 First Dose M/F: NA / 06/22/03
 Lab: NCTR

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

SKH-1 HAIRLESS MICE (NCTR)
 MICE FEMALE
 .5% RP 13.7SSLF

ANIMAL ID

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

females
(cont...)

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 - 02
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: 16:32:02
First Dose M/F: NA / 06/22/03
Lab: NCTR

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

SKH-1 HAIRLESS MICE (NCTR)
MICE FEMALE

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ANIMAL ID | 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 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | |
| .5% RP 13.7SSLF | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

females (cont...)

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

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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| | 2 | 2 | 2 | 2 | 5 | 2 | 3 | 0 | 5 | 1 | 2 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 3 | | |
| | 2 | 2 | 2 | 2 | 0 | 2 | 4 | 3 | 9 | 5 | 2 | 8 | 8 | 8 | 1 | 2 | 1 | 8 | 8 | 1 | 5 | 6 | 5 | 1 | 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 FEMALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| .5% RP 13.7SSLF | 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 | | |
| ANIMAL ID | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | |
| | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |

females (cont...)

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

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | 36 |
| 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 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 |
| | 3 | 0 | 1 | 8 | 9 | 0 | 1 | 3 | 0 | 8 | 2 |
| | 5 | 8 | 5 | 7 | 8 | 1 | 2 | 4 | 1 | 7 | 8 |
| | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MICE FEMALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| .5% RP 13.7SSLF | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| ANIMAL ID | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

| | | | | | | | | | | | | |
|--|---|---|--|---|---|---|---|---|---|---|---|----|
| Squamous Cell Carcinoma, One | | X | | X | | X | | X | X | | X | 9 |
| Squamous Cell Carcinoma, Two | X | | | | | | | | | | | 8 |
| Squamous Cell Carcinoma, Three | | | | | | | | | | | | 5 |
| Squamous Cell Carcinoma, Four | | | | | | | | | | | | 3 |
| Squamous Cell Carcinoma In Situ, One | | | | | | | | | | | | 4 |
| Squamous Cell Carcinoma In Situ, Two | | | | | | | X | | | | | 2 |
| Squamous Cell Carcinoma In Situ, Three | | | | | | | | | X | | X | 5 |
| Squamous Cell Papilloma, One | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, Two | X | | | X | | | | | | | | 3 |
| Squamous Cell Papilloma, Three | | | | | | | | | | | | 3 |
| Squamous Cell Papilloma, Four | | | | | X | | | | | | | 5 |
| Squamous Cell Papilloma, Five | | | | | | | | | X | | | 1 |
| Squamous Cell Papilloma, Greater Than Five | | | | | | X | X | X | | X | X | 15 |

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

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 - 02
 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: 16:32:02
 First Dose M/F: NA / 06/22/03
 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 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 6 | 6 | 2 | 4 | 2 | 1 | 4 | 4 | 2 | 5 | 5 | 4 | 4 | 2 | 3 | 1 | 3 | 1 | 2 | 4 | 4 | 4 | 4 | 4 | 0 | |
| | 3 | 6 | 9 | 7 | 9 | 5 | 3 | 0 | 2 | 6 | 6 | 3 | 9 | 3 | 3 | 5 | 6 | 5 | 9 | 2 | 2 | 8 | 2 | 2 | 9 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE FEMALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 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 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | |
| NOCREAMF20.55SSL | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | |

females
(cont...)

ALIMENTARY SYSTEM
 NONE

CARDIOVASCULAR SYSTEM
 NONE

ENDOCRINE SYSTEM
 NONE

GENERAL BODY SYSTEM
 NONE

GENITAL SYSTEM
 NONE

HEMATOPOIETIC SYSTEM
 NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| 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 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 6 | 6 | 2 | 4 | 2 | 1 | 4 | 4 | 2 | 5 | 5 | 4 | 4 | 2 | 3 | 1 | 3 | 1 | 2 | 4 | 4 | 4 | 4 | 0 | |
| | 3 | 6 | 9 | 7 | 9 | 5 | 3 | 0 | 2 | 6 | 6 | 3 | 9 | 3 | 3 | 5 | 6 | 5 | 9 | 2 | 2 | 8 | 2 | 9 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| MICE FEMALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| NOCREAMF20.55SSL | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| ANIMAL ID | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 |

females (cont...)

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

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 - 02
 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: 16:32:02

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

Lab: NCTR

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

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

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Skin, Control | + | + | + | + | + | + | + | + | + | + | + | 36 |
| 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 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 2 | 4 | 8 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 2 |
| | 8 | 1 | 7 | 5 | 5 | 1 | 4 | 8 | 4 | 4 | 8 |
| | | | | | | | | | | | |
| SKH-1 HAIRLESS MICE (NCTR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MICE FEMALE | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| ANIMAL ID | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| NOCREAMF20.55SSL | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |
| | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |
| | | | | | | | | | | | * TOTALS |

| | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Squamous Cell Carcinoma, One | | X | | X | | X | X | | X | | | 11 |
| Squamous Cell Carcinoma, Two | | | X | | | | | X | | X | | 8 |
| Squamous Cell Carcinoma, Three | | | | | | | | | | | | 4 |
| Squamous Cell Carcinoma, Four | | | | | | | | | | | | 3 |
| Squamous Cell Carcinoma In Situ, One | | X | X | X | | | X | | | | X | 9 |
| Squamous Cell Carcinoma In Situ, Two | | | | | X | | | | | X | | 6 |
| Squamous Cell Carcinoma In Situ, Three | | | | | | X | | | X | | | 4 |
| Squamous Cell Carcinoma In Situ, Four | | | | | | | | | | | | 2 |
| Squamous Cell Carcinoma In Situ, Five | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma, One | | X | X | | | | | | | | | 9 |
| Squamous Cell Papilloma, Two | | | | | | | X | | | | | 4 |
| Squamous Cell Papilloma, Three | | | | | | | | | | X | | 4 |
| Squamous Cell Papilloma, Four | | | | | | | | | X | | | 1 |
| Squamous Cell Papilloma, Five | | | | | X | | | | | | | 1 |
| Squamous Cell Papilloma, Greater Than Five | X | | | X | | X | | | | | | 4 |

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

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

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + +

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*** 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