

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

F1_M3

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

C Number: C20302

Lock Date: 12/07/2005

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

	0	0	0	0	0	0	0	0	0	0
DAY ON TEST	9	9	9	9	9	9	9	9	9	9
	5	5	5	5	5	5	5	5	5	5
B6C3F1 MICE MALE	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
control	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0

*** TOTALS****ALIMENTARY SYSTEM**

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Gallbladder	+	+	+	+	+	+	M	+	+	+	9
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10

* .. Total animals with tissue examined microscopically; Total animals with tumor

M .. Missing tissue

+ .. Tissue examined microscopically

A .. Autolysis precludes evaluation

x .. Lesion present

BLANK .. Not examined microscopically

| .. Insufficient tissue

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

	DAY ON TEST	0	0	0	0	0	0	0	0	0	0
B6C3F1 MICE MALE		9	9	9	9	9	9	9	9	9	9
control	ANIMAL ID	5	5	5	5	5	5	5	5	5	5
		0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	1
		1	2	3	4	5	6	7	8	9	0
		* TOTALS									
Stomach, Glandular		+	+	+	+	+	+	+	+	+	+
											10

CARDIOVASCULAR SYSTEM

Heart	+	+	+	+	+	+	+	+	+	+	+
											10

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+
Parathyroid Gland	M	M	+	+	M	M	+	M	M	M	3
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

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

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

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqsted: 11/17/2006

Time Report Reqsted: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

	DAY ON TEST	0	0	0	0	0	0	0	0	0
B6C3F1 MICE MALE	ANIMAL ID	9	9	9	9	9	9	9	9	9
control		5	5	5	5	5	5	5	5	5
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	1
		1	2	3	4	5	6	7	8	9
										* TOTALS
Epididymis		+	+	+	+	+	+	+	+	10
Preputial Gland		+	+	+	+	+	+	+	+	10
Prostate		+	+	+	+	+	+	+	+	10
Seminal Vesicle		+	+	+	+	+	+	+	+	10
Testes		+	+	+	+	+	+	+	+	10

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Bronchial	+	M	M	+	+	+	+	+	+	+	8
Lymph Node, Mandibular	+	+	+	+	M	M	+	M	+	M	6
Lymph Node, Mediastinal	M	+	+	M	+	M	M	M	M	+	4
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	5	5	5	5	5	5	5	5	5	5
B6C3F1 MICE MALE	0	0	0	0	0	0	0	0	0	0
control	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0

* TOTALS

INTEGUMENTARY SYSTEM

Mammary Gland	M M M M M M M M M M	0
Skin	+ + + + + + + + + +	10

MUSCULOSKELETAL SYSTEM

Bone	+ + + + + + + + + +	10
------	---------------------	----

NERVOUS SYSTEM

Brain	+ + + + + + + + + +	10
-------	---------------------	----

RESPIRATORY SYSTEM

Larynx	+ + + + + + + + + +	10
Lung	+ + + + + + + + + +	10
Nose	+ + + + + + + + + +	10
Trachea	+ + + + + + + + + +	10

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	5	5	5	5	5	5	5	5	5	5
B6C3F1 MICE MALE	0	0	0	0	0	0	0	0	0	0
control	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0

* TOTALS

SPECIAL SENSES SYSTEM

Eye	+	+	+	+	+	+	+	+	+	+	10
Harderian Gland	+	+	+	+	+	+	+	+	+	+	10

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	10
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10

SYSTEMIC LESIONS

Multiple Organ	+	+	+	+	+	+	+	+	+	+	10
----------------	---	---	---	---	---	---	---	---	---	---	----

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqsted: 11/17/2006

Time Report Reqsted: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	5	5	5	5	5	5	5	5	5	5
<hr/>										
B6C3F1 MICE MALE 25 ppm	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0

* TOTALS

ALIMENTARY SYSTEM

Liver + + + + + + + + + 10

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Spleen + + + 3

INTEGUMENTARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	5	5	5	5	5	5	5	5	5	5
B6C3F1 MICE MALE 25 ppm	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0

* TOTALS

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney

+ + + + + + + + + + 10

Urinary Bladder

+ + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqsted: 11/17/2006

Time Report Reqsted: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|----------------------------|---|---|---|---|---|---|---|---|---|---|
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| <hr/> | | | | | | | | | | |
| B6C3F1 MICE MALE
50 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

ALIMENTARY SYSTEM

Liver + + + + + + + + + 10

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|--|---|---|---|---|---|---|---|---|---|---|
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| B6C3F1 MICE MALE
50 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

*** TOTALS**

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

| | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | 10 |

SYSTEMIC LESIONS

| | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | 10 |
|----------------|---|---|---|---|---|---|---|---|---|---|----|

* .. Total animals with tissue examined microscopically; Total animals with tumor

M .. Missing tissue

+ .. Tissue examined microscopically

A .. Autolysis precludes evaluation

x .. Lesion present

BLANK .. Not examined microscopically

| .. Insufficient tissue

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqsted: 11/17/2006

Time Report Reqsted: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| <hr/> | | | | | | | | | | |
| B6C3F1 MICE MALE
100 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

ALIMENTARY SYSTEM

| | | | | | | | | | | | |
|----------|---|---|---|---|---|---|---|---|---|---|----|
| Liver | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas | | | | | + | | | | | | 1 |

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| B6C3F1 MICE MALE
100 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney

+ + + + + + + + + + 10

Urinary Bladder

+ + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqsted: 11/17/2006

Time Report Reqsted: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|------------------|---|---|---|---|---|---|---|---|---|---|
| B6C3F1 MICE MALE | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 200 ppm | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

ALIMENTARY SYSTEM

Liver

+ + + + + + + + + +

10

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| <hr/> | | | | | | | | | | |
| B6C3F1 MICE MALE
200 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

| | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | 10 |

SYSTEMIC LESIONS

| | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | 10 |
|----------------|---|---|---|---|---|---|---|---|---|---|----|

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| B6C3F1 MICE MALE
400 ppm | ANIMAL ID | DAY ON TEST | | | | | | | | | | * TOTALS |
|-----------------------------|-----------|-------------|---|---|---|---|---|---|---|---|---|----------|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Gallbladder | + | + | M | + | + | + | M | M | + | + | | 7 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | | 10 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | | 10 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | | 10 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | | 10 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | | 10 |
| Liver | + | + | + | + | + | + | + | + | + | + | | 10 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | | 10 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | | 10 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | | 10 |

* .. Total animals with tissue examined microscopically; Total animals with tumor

M .. Missing tissue

+ .. Tissue examined microscopically

A .. Autolysis precludes evaluation

x .. Lesion present

BLANK .. Not examined microscopically

| .. Insufficient tissue

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Registered: 11/17/2006

Time Report Requested: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

CARDIOVASCULAR SYSTEM

.....
Heart + + + + + + + + + + + 10

ENDOCRINE SYSTEM

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

Lesion present

.. Lesion present
 Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqsted: 11/17/2006

Time Report Reqsted: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| B6C3F1 MICE MALE
400 ppm | ANIMAL ID | DAY ON TEST | | | | | | | | | | * TOTALS |
|-----------------------------|-----------|-------------|---|---|---|---|---|---|---|---|---|----------|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |

| | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Testes | + | + | + | + | + | + | + | + | + | + | + | 10 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Bronchial | + | M | + | + | + | M | + | + | + | + | + | 8 |
| Lymph Node, Mandibular | + | M | + | M | + | M | M | M | M | + | M | 4 |
| Lymph Node, Mediastinal | M | M | M | M | M | M | M | M | + | M | + | 2 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | 10 |

* .. Total animals with tissue examined microscopically; Total animals with tumor

M .. Missing tissue

+ .. Tissue examined microscopically

A .. Autolysis precludes evaluation

x .. Lesion present

BLANK .. Not examined microscopically

| .. Insufficient tissue

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|---|----------|---|---|---|---|---|---|---|---|---|
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| B6C3F1 MICE MALE
400 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | * TOTALS | | | | | | | | | |

INTEGUMENTARY SYSTEM

| | | |
|---------------|---------------------|----|
| Mammary Gland | M M M M M M M M M M | 0 |
| Skin | + + + + + + + + + + | 10 |

MUSCULOSKELETAL SYSTEM

| | | |
|------|---------------------|----|
| Bone | + + + + + + + + + + | 10 |
|------|---------------------|----|

NERVOUS SYSTEM

| | | |
|-------|---------------------|----|
| Brain | + + + + + + + + + + | 10 |
|-------|---------------------|----|

RESPIRATORY SYSTEM

| | | |
|---------|---------------------|----|
| Larynx | + + + + + + + + + + | 10 |
| Lung | + + + + + + + + + + | 10 |
| Nose | + + + + + + + + + + | 10 |
| Trachea | + + + + + + + + + + | 10 |

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|---|----------|---|---|---|---|---|---|---|---|---|
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| B6C3F1 MICE MALE
400 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | * TOTALS | | | | | | | | | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|----|
| Eye | + | + | + | + | + | + | + | + | + | + | 10 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | 10 |

URINARY SYSTEM

| | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | 10 |

SYSTEMIC LESIONS

| | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | 10 |
|----------------|---|---|---|---|---|---|---|---|---|---|----|

*** END OF MALE DATA ***

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

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

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| | | | | | | | | | | |
|--------------------|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| <hr/> | | | | | | | | | | |
| B6C3F1 MICE FEMALE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| control | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

*** TOTALS****ALIMENTARY SYSTEM**

| | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | 10 |
| Gallbladder | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | 10 |

* .. Total animals with tissue examined microscopically; Total animals with tumor

M .. Missing tissue

+ .. Tissue examined microscopically

A .. Autolysis precludes evaluation

x .. Lesion present

BLANK .. Not examined microscopically

| .. Insufficient tissue

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

B6C3F1 MICE FEMALE

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

*** TOTALS**

Stomach, Glandular

+ + + + + + + + + + 10

CARDIOVASCULAR SYSTEM

Heart

+ + + + + + + + + + 10

ENDOCRINE SYSTEM

Adrenal Cortex

+ + + + + + + + + + 10

Adrenal Medulla

+ + + + + + + + + + 10

Islets, Pancreatic

+ + + + + + + + + + 10

Parathyroid Gland

+ + M + + + + + M M 7

Pituitary Gland

+ + + + + + + + + + 10

Thyroid Gland

+ + + + + + + + + + 10

GENERAL BODY SYSTEM

NONE

GENITAL 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. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Requested: 11/17/2006

Time Report Requested: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

HEMATOPOIETIC SYSTEM

INTEGUMENTARY SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with tumor

† = Tissue examined microscopically

- + .. Tissue examined
- x Lesion present

.. Lesion present
 Insufficient tissue

M .. Missing tissue

A - Autolysis precludes evaluation

BLANK Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| | | | | | | | | | | |
|-------------------------------|-------------|---|---|---|---|---|---|---|---|---|
| | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| <hr/> | | | | | | | | | | |
| B6C3F1 MICE FEMALE | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| control | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| <hr/> | | | | | | | | | | |
| Mammary Gland | | + | + | + | + | + | + | + | + | + |
| Skin | | + | + | + | + | + | + | + | + | + |
| <hr/> | | | | | | | | | | |
| MUSCULOSKELETAL SYSTEM | | | | | | | | | | |
| Bone | | + | + | + | + | + | + | + | + | + |
| <hr/> | | | | | | | | | | |
| NERVOUS SYSTEM | | | | | | | | | | |
| Brain | | + | + | + | + | + | + | + | + | + |
| <hr/> | | | | | | | | | | |
| RESPIRATORY SYSTEM | | | | | | | | | | |
| Larynx | | + | + | + | + | + | + | + | + | + |
| Lung | | + | + | + | + | + | + | + | + | + |
| Nose | | + | + | + | + | + | + | + | + | + |
| Trachea | | + | + | + | + | + | + | + | + | + |
| <hr/> | | | | | | | | | | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | |
| Eye | | + | + | + | + | + | + | + | + | + |
| <hr/> | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|--------------------|---|---|---|---|---|---|---|---|---|---|
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| B6C3F1 MICE FEMALE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| control | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

Harderian Gland

+ + + + + + + + + + 10

URINARY SYSTEM

Kidney

+ + + + + + + + + + 10

Urinary Bladder

+ + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

* .. 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. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqsted: 11/17/2006

Time Report Reqsted: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|------------------------------|----------|---|---|---|---|---|---|---|---|---|
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| B6C3F1 MICE FEMALE
25 ppm | 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 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | * TOTALS | | | | | | | | | |

ALIMENTARY SYSTEM

Liver + + + + + + + + + 10

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|------------------------------|---|---|---|---|---|---|---|---|---|---|
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| B6C3F1 MICE FEMALE
25 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

| | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | 10 |

SYSTEMIC LESIONS

| | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | 10 |
|----------------|---|---|---|---|---|---|---|---|---|---|----|

* .. Total animals with tissue examined microscopically; Total animals with tumor

M .. Missing tissue

+ .. Tissue examined microscopically

A .. Autolysis precludes evaluation

x .. Lesion present

BLANK .. Not examined microscopically

| .. Insufficient tissue

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqsted: 11/17/2006

Time Report Reqsted: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|------------------------------|---|---|---|---|---|---|---|---|---|---|
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| B6C3F1 MICE FEMALE
50 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

ALIMENTARY SYSTEM

Liver + + + + + + + + + + 10

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

B6C3F1 MICE FEMALE**50 ppm**

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

*** TOTALS**

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

| | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | 10 |

SYSTEMIC LESIONS

| | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | 10 |
|----------------|---|---|---|---|---|---|---|---|---|---|----|

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqsted: 11/17/2006

Time Report Reqsted: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| B6C3F1 MICE FEMALE
100 ppm | 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 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| * TOTALS | | | | | | | | | | |

ALIMENTARY SYSTEM

Liver + + + + + + + + + + 10

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

B6C3F1 MICE FEMALE

100 ppm

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

* TOTALS

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney

..... + + + + + + + + + + 10

Urinary Bladder

..... + + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

..... + + + + + + + + + + 10

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqsted: 11/17/2006

Time Report Reqsted: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| <hr/> | | | | | | | | | | |
| B6C3F1 MICE FEMALE
200 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

ALIMENTARY SYSTEM

Liver

+ + + + + + + + + +

10

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

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

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

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

B6C3F1 MICE FEMALE

200 ppm

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

* TOTALS

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney

..... + + + + + + + + + + 10

Urinary Bladder

..... + + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

..... + + + + + + + + + + 10

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| B6C3F1 MICE FEMALE
400 ppm | ANIMAL ID | DAY ON TEST | | | | | | | | | | * TOTALS |
|-------------------------------|-----------|-------------|---|---|---|---|---|---|---|---|---|----------|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Gallbladder | + | M | + | + | + | + | + | M | + | M | | 7 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | 10 |

* .. Total animals with tissue examined microscopically; Total animals with tumor

M .. Missing tissue

+ .. Tissue examined microscopically

A .. Autolysis precludes evaluation

x .. Lesion present

BLANK .. Not examined microscopically

| .. Insufficient tissue

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Registered: 11/17/2006

Time Report Requested: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

CARDIOVASCULAR SYSTEM

.....
Heart + + + + + + + + + + + 10

ENDOCRINE SYSTEM

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

Lesion present

.. Lesion present
 Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqsted: 11/17/2006

Time Report Reqsted: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| B6C3F1 MICE FEMALE
400 ppm | ANIMAL ID | DAY ON TEST | | | | | | | | | | * TOTALS |
|-------------------------------|-----------|-------------|---|---|---|---|---|---|---|---|---|----------|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |

| | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|--|----|
| Clitoral Gland | + | + | M | + | + | + | + | M | + | + | | 8 |
| Ovary | + | + | + | + | + | + | + | + | + | + | | 10 |
| Uterus | + | + | + | + | + | + | + | + | + | + | | 10 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|--|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | | 10 |
| Lymph Node, Bronchial | M | + | + | + | + | + | + | + | + | + | | 8 |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | M | | 9 |
| Lymph Node, Mediastinal | M | M | M | + | M | M | M | M | M | M | | 2 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | | 10 |
| Spleen | + | + | + | + | + | + | + | + | + | + | | 10 |
| Thymus | + | + | + | + | + | + | + | + | + | + | | 10 |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|--|----|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | | 10 |
|---------------|---|---|---|---|---|---|---|---|---|---|--|----|

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqsted: 11/17/2006

Time Report Reqsted: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| | | | | | | | | | | |
|---------------------------|------------------|---|---|---|---|---|---|---|---|---|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| <hr/> | | | | | | | | | | |
| B6C3F1 MICE FEMALE | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 400 ppm | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | | | |

*** TOTALS**

| | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|---|----|
| Skin | + | + | + | + | + | + | + | + | + | + | 10 |
|------|---|---|---|---|---|---|---|---|---|---|----|

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|---|----|
| Bone | + | + | + | + | + | + | + | + | + | + | 10 |
|------|---|---|---|---|---|---|---|---|---|---|----|

NERVOUS SYSTEM

| | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|---|----|
| Brain | + | + | + | + | + | + | + | + | + | + | 10 |
|-------|---|---|---|---|---|---|---|---|---|---|----|

RESPIRATORY SYSTEM

| | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|----|
| Larynx | + | + | + | + | + | + | + | + | + | + | 10 |
|--------|---|---|---|---|---|---|---|---|---|---|----|

| | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|---|----|
| Lung | + | + | + | + | + | + | + | + | + | + | 10 |
|------|---|---|---|---|---|---|---|---|---|---|----|

| | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|---|----|
| Nose | + | + | + | + | + | + | + | + | + | + | 10 |
|------|---|---|---|---|---|---|---|---|---|---|----|

| | | | | | | | | | | | |
|---------|---|---|---|---|---|---|---|---|---|---|----|
| Trachea | + | + | + | + | + | + | + | + | + | + | 10 |
|---------|---|---|---|---|---|---|---|---|---|---|----|

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|---|---|----|
| Eye | + | + | + | + | + | + | + | + | + | + | 10 |
|-----|---|---|---|---|---|---|---|---|---|---|----|

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20302 - 04

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

ALPHA-PINENE

CAS Number: 80-56-8

Pathologist: GRUMBEIN, S. - LIEUALLEN, W.

Date Report Reqstd: 11/17/2006

Time Report Reqstd: 07:28:41

First Dose M/F: 03/28/05 / 03/28/05

Lab: BNW

| B6C3F1 MICE FEMALE
400 ppm | ANIMAL ID | DAY ON TEST | | | | | | | | | | * TOTALS |
|-------------------------------|-----------|-------------|---|---|---|---|---|---|---|---|---|----------|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |

Harderian Gland

+ + + + + + + + + + 10

URINARY SYSTEM

Kidney

+ + + + + + + + + + 10

Urinary Bladder

+ + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

*** 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