

TDMS No. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Final 1 Rats

Date Report Reqsted: 11/29/2005

Time Report Reqsted: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

C Number: C88006B

Lock Date: 03/26/2004

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

Note: Animals arranged according to days on test.

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		3	4	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	males (cont...)	
DAY ON TEST		4	9	2	4	5	8	9	0	1	2	4	4	6	6	7	7	8	8	8	8	0	0	1	2		2
		5	5	2	8	4	7	0	3	8	4	2	6	0	6	1	3	1	2	8	8	2	2	8	9		9
FISCHER 344 RATS MALE		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
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	
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	
		4	3	4	4	3	2	4	0	2	0	1	4	1	3	3	2	4	5	0	3	1	1	0	0	0	
		2	9	0	9	6	1	6	9	4	6	6	4	5	0	3	6	8	0	3	1	0	9	7	1	2	

males
(cont...)

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Cecum	+	+	+	A	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum	+	+	+	A	A	A	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Jejunum	+	+	+	A	A	A	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Mesentery				+			+	+		+		+		+				+	+						+
Oral Mucosa																									
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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

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x .. Lesion present

I .. Insufficient tissue

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		3	4	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7			
DAY ON TEST		4	9	2	4	5	8	9	0	1	2	4	4	6	6	7	7	8	8	8	8	8	0	0	1	2	2		
		5	5	2	8	4	7	0	3	8	4	2	6	0	6	1	3	1	2	8	8	2	2	8	9	9			
FISCHER 344 RATS MALE		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
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			
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			
		4	3	4	4	3	2	4	0	2	0	1	4	1	3	3	2	4	5	0	3	1	1	0	0	0			
		2	9	0	9	6	1	6	9	4	6	6	4	5	0	3	6	8	0	3	1	0	9	7	1	2			
		males (cont...)																											
Stomach, Forestomach		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Leiomyosarcoma, Metastatic, Spleen																													
Stomach, Glandular		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
CARDIOVASCULAR SYSTEM																													
Heart		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
ENDOCRINE SYSTEM																													
Adrenal Cortex		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Adrenal Medulla		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Pheochromocytoma Benign																				X							X		
Pheochromocytoma Malignant								X																					
Bilateral, Pheochromocytoma Benign																									X				
Islets, Pancreatic		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Adenoma						X																							
Carcinoma																													
Parathyroid Gland		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	M	+	+	+	+	+			
Pituitary Gland		+	+	+	+	+	+	+	+	+	+	I	+	+	+	+	+	+	+	+	+	+	+	+	+	+			

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		3	4	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7
DAY ON TEST		4	9	2	4	5	8	9	0	1	2	4	4	6	6	7	7	8	8	8	8	0	0	1	2	2
		5	5	2	8	4	7	0	3	8	4	2	6	0	6	1	3	1	2	8	8	2	2	8	9	9
FISCHER 344 RATS MALE CONTROL	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	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	0	0	0	0	0	0	0	0	0	0
		4	3	4	4	3	2	4	0	2	0	1	4	1	3	3	2	4	5	0	3	1	1	0	0	0
		2	9	0	9	6	1	6	9	4	6	6	4	5	0	3	6	8	0	3	1	0	9	7	1	2
		males (cont...)																								

males
(cont...)

Adenoma

X X X X X X X X X X X X X X X X X X X X

Thyroid Gland

+ +

C-cell, Adenoma

X X X

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Epididymis

+ +

Penis

+

Preputial Gland

+ +

Carcinoma

X X

Prostate

+ +

Seminal Vesicle

+ +

Testes

+ +

Bilateral, Interstitial Cell, Adenoma

X X X X X X X X

Interstitial Cell, Adenoma

X X X X X X X X

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+ .. Tissue examined microscopically

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| | | |
|----------------------------------|--|-----------------|
| DAY ON TEST | | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | |
| | | 4 | 9 | 2 | 4 | 5 | 8 | 9 | 0 | 1 | 2 | 4 | 4 | 6 | 6 | 7 | 7 | 8 | 8 | 8 | 8 | 0 | 0 | 1 | 2 | 2 |
| | | 5 | 5 | 2 | 8 | 4 | 7 | 0 | 3 | 8 | 4 | 2 | 6 | 0 | 6 | 1 | 3 | 1 | 2 | 8 | 8 | 2 | 2 | 8 | 9 | 9 |
| | | |
| FISCHER 344 RATS MALE
CONTROL | | ANIMAL ID | 0 |
| | | 0 | 0 |
| | | 0 | 0 |
| | | 4 | 3 | 4 | 4 | 3 | 2 | 4 | 0 | 2 | 0 | 1 | 4 | 1 | 3 | 3 | 2 | 4 | 5 | 0 | 3 | 1 | 1 | 0 | 0 | 0 |
| | | 2 | 9 | 0 | 9 | 6 | 1 | 6 | 9 | 4 | 6 | 6 | 4 | 5 | 0 | 3 | 6 | 8 | 0 | 3 | 1 | 0 | 9 | 7 | 1 | 2 |
| | | males (cont...) | |

HEMATOPOIETIC SYSTEM

| |
|-------------------------|
| Bone Marrow | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Lymph Node | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Lymph Node, Bronchial | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Lymph Node, Mandibular | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Lymph Node, Mediastinal | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Lymph Node, Mesenteric | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Spleen | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Leiomyosarcoma | |
| Thymus | |

INTEGUMENTARY SYSTEM

| |
|---------------|
| Mammary Gland | |
| Fibroadenoma | |
| Skin | |

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| | |
|--------------------------------------|-----------|
| DAY ON TEST | | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | |
| | | 4 | 9 | 2 | 4 | 5 | 8 | 9 | 0 | 1 | 2 | 4 | 4 | 6 | 6 | 7 | 7 | 8 | 8 | 8 | 8 | 0 | 0 | 1 | 2 | 2 |
| | | 5 | 5 | 2 | 8 | 4 | 7 | 0 | 3 | 8 | 4 | 2 | 6 | 0 | 6 | 1 | 3 | 1 | 2 | 8 | 8 | 2 | 2 | 8 | 9 | 9 |
| | |
| FISCHER 344 RATS MALE

CONTROL | ANIMAL ID | 0 | |
| | | 0 | |
| | | 0 | |
| | | 4 | 3 | 4 | 4 | 3 | 2 | 4 | 0 | 2 | 0 | 1 | 4 | 1 | 3 | 3 | 2 | 4 | 5 | 0 | 3 | 1 | 1 | 0 | 0 | 0 |
| | | 2 | 9 | 0 | 9 | 6 | 1 | 6 | 9 | 4 | 6 | 6 | 4 | 5 | 0 | 3 | 6 | 8 | 0 | 3 | 1 | 0 | 9 | 7 | 1 | 2 |
| males (cont...) | |

Basal Cell Adenoma

Keratoacanthoma

Subcutaneous Tissue, FibromaX X

Subcutaneous Tissue, Fibroma, MultipleX

Subcutaneous Tissue, Fibrosarcoma

Subcutaneous Tissue, Lipoma

MUSCULOSKELETAL SYSTEM

| | |
|---|---|
| Bone | + |
| Skeletal Muscle | + | |
| Squamous Cell Carcinoma, Metastatic, Lung | x | |

NERVOUS SYSTEM

| |
|---------------------|
| Brain | + |
| Medulloblastoma Mal | |
| Peripheral Nerve |
| Spinal Cord |

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| | | |
|--------------------------------------|--|-----------------|
| DAY ON TEST | | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | |
| | | 4 | 9 | 2 | 4 | 5 | 8 | 9 | 0 | 1 | 2 | 4 | 4 | 6 | 6 | 7 | 7 | 8 | 8 | 8 | 8 | 0 | 0 | 1 | 2 | 2 |
| | | 5 | 5 | 2 | 8 | 4 | 7 | 0 | 3 | 8 | 4 | 2 | 6 | 0 | 6 | 1 | 3 | 1 | 2 | 8 | 8 | 2 | 2 | 8 | 9 | 9 |
| | | |
| FISCHER 344 RATS MALE

CONTROL | | ANIMAL ID | 0 | |
| | | 0 | 0 | |
| | | 0 | 0 | |
| | | 4 | 3 | 4 | 4 | 3 | 2 | 4 | 0 | 2 | 0 | 1 | 4 | 1 | 3 | 3 | 2 | 4 | 5 | 0 | 3 | 1 | 1 | 0 | 0 | 0 |
| | | 2 | 9 | 0 | 9 | 6 | 1 | 6 | 9 | 4 | 6 | 6 | 4 | 5 | 0 | 3 | 6 | 8 | 0 | 3 | 1 | 0 | 9 | 7 | 1 | 2 |
| | | males (cont...) | |

RESPIRATORY SYSTEM

| | |
|---|---|
| Larynx | + |
| Lung | + |
| Squamous Cell Carcinoma | X | |
| Nose | + |
| Pleura | + | | | | | | | | | | | | | + | | + | | | | | | | | | |
| Squamous Cell Carcinoma, Metastatic, Lung | X | |
| Trachea | + |

SPECIAL SENSES SYSTEM

| |
|-----------------|
| Eye | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Harderian Gland | + |

URINARY SYSTEM

| |
|--------|
| Kidney | + |
|--------|

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| | | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 |
|-----------------------|--|-----------------|
| DAY ON TEST | | 4 | 9 | 2 | 4 | 5 | 8 | 9 | 0 | 1 | 2 | 4 | 4 | 6 | 6 | 7 | 7 | 8 | 8 | 8 | 8 | 0 | 0 | 1 | 2 | 2 |
| | | 5 | 5 | 2 | 8 | 4 | 7 | 0 | 3 | 8 | 4 | 2 | 6 | 0 | 6 | 1 | 3 | 1 | 2 | 8 | 8 | 2 | 2 | 8 | 9 | 9 |
| | | |
| FISCHER 344 RATS MALE | | 0 | 0 |
| | | 0 | 0 |
| ANIMAL ID | | 0 | 0 |
| CONTROL | | 4 | 3 | 4 | 4 | 3 | 2 | 4 | 0 | 2 | 0 | 1 | 4 | 1 | 3 | 3 | 2 | 4 | 5 | 0 | 3 | 1 | 1 | 0 | 0 | 0 |
| | | 2 | 9 | 0 | 9 | 6 | 1 | 6 | 9 | 4 | 6 | 6 | 4 | 5 | 0 | 3 | 6 | 8 | 0 | 3 | 1 | 0 | 9 | 7 | 1 | 2 |
| | | males (cont...) | |

Urinary Bladder

+ +

SYSTEMIC LESIONS

Multiple Organ

+ +

Histiocytic Sarcoma

X

Leukemia Mononuclear

X

X

X

X

X

X

X

X

X

X

X

X

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| | | |
|---|--|-----------|
| DAY ON TEST | | 7 | 7 | |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| <hr style="border-top: 1px dotted black;"/> | | |
| FISCHER 344 RATS MALE

CONTROL | | ANIMAL ID | |
| | | 0 | 0 | |
| | | 0 | 0 | |
| | | 0 | 0 | |
| | | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 4 |
| | | 5 | 8 | 1 | 3 | 4 | 8 | 2 | 3 | 7 | 2 | 5 | 8 | 1 | 3 | 7 | 4 | 2 | 7 | 0 | 5 | 8 | 9 | 4 |
| | | * TOTALS | |

ALIMENTARY SYSTEM

| | |
|---------------------------|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Intestine Small, Jejunum | + | 46 |
| Liver | + | 50 |
| Mesentery | | | | | | + | | | | | | + | + | | | | + | + | + | | | | | 15 |
| Oral Mucosa | 1 |
| Pancreas | + | 50 |
| Salivary Glands | + | 50 |

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| | DAY ON TEST | 7 | |
|-----------------------|-------------|----------|
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 0 | |
| FISCHER 344 RATS MALE | ANIMAL ID | 0 | |
| | | 0 | |
| CONTROL | | 0 | |
| | | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 0 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | |
| | | 5 | 8 | 1 | 3 | 4 | 8 | 2 | 3 | 7 | 2 | 5 | 8 | 1 | 3 | 7 | 4 | 2 | 7 | 0 | 5 | 8 | 9 | 4 | 7 | 5 | * TOTALS |
| Adenoma | | X | X | X | X | X | X | X | X | X | X | | X | | | | | | X | X | X | X | X | | X | X | 34 |
| Thyroid Gland | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | 49 |
| C-cell, Adenoma | | 3 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | |
|---------------------------------------|----|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Penis |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Bilateral, Interstitial Cell, Adenoma | X | X | | | X | | | X | | X | X | | X | X | | | X | | | | | | | X | X | | 17 |
| Interstitial Cell, Adenoma | | | | X | | | X | | | | | | | | X | X | | X | X | | X | X | X | | | | 16 |

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| | | | |
|----------------------------------|--|----------|--|
| DAY ON TEST | | 7 | 7 | |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| FISCHER 344 RATS MALE
CONTROL | | | |
| | | 0 | 0 | |
| | | 0 | 0 | |
| | | 0 | 0 | |
| | | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 4 | |
| | | 5 | 8 | 1 | 3 | 4 | 8 | 2 | 3 | 7 | 2 | 5 | 8 | 1 | 3 | 7 | 4 | 2 | 7 | 0 | 5 | 8 | 9 | 4 | |
| | | * TOTALS | |

HEMATOPOIETIC SYSTEM

| | |
|-------------------------|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node | + |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 |
| Lymph Node, Bronchial | + | M | M | M | M | M | M | M | M | M | M | + | + | M | M | M | M | M | M | M | + | M | M | M | 10 |
| Lymph Node, Mandibular | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 0 |
| Lymph Node, Mediastinal | M | + | + | M | M | M | M | + | M | M | M | M | M | M | M | M | + | M | M | M | M | + | + | M | 17 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leiomyosarcoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | | 1 |
| Thymus | + | + | + | M | + | + | + | + | + | + | + | M | + | M | + | M | + | + | + | + | + | + | + | M | 42 |

INTEGUMENTARY SYSTEM

| | |
|---------------|----|
| Mammary Gland | M | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Fibroadenoma | | | | | | | | | | | X | | | | | | | | | | | | | | 1 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | DAY ON TEST | 7 |
|-----------------------|-------------|----------|
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FISCHER 344 RATS MALE | | 0 |
| ANIMAL ID | | 0 |
| CONTROL | | 0 |
| | | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 4 |
| | | 5 | 8 | 1 | 3 | 4 | 8 | 2 | 3 | 7 | 2 | 5 | 8 | 1 | 3 | 7 | 4 | 2 | 7 | 0 | 5 | 8 | 9 | 4 |
| | | * TOTALS |

| | |
|--|---|
| Basal Cell Adenoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Keratoacanthoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Subcutaneous Tissue, Fibroma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 |
| Subcutaneous Tissue, Fibroma, Multiple |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Subcutaneous Tissue, Fibrosarcoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Subcutaneous Tissue, Lipoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |

MUSCULOSKELETAL SYSTEM

| | |
|---|----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Skeletal Muscle |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |
| Squamous Cell Carcinoma, Metastatic, Lung |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |

NERVOUS SYSTEM

| | |
|---------------------|----|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Medulloblastoma Mal |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Peripheral Nerve |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Spinal Cord |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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

| | | |
|----------------------------------|-------------|----------|
| FISCHER 344 RATS MALE
CONTROL | DAY ON TEST | 7 | 7 |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | ANIMAL ID | 0 | 0 |
| | | 0 | 0 |
| | | 0 | 0 |
| | | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 4 |
| | | 5 | 8 | 1 | 3 | 4 | 8 | 2 | 3 | 7 | 2 | 5 | 8 | 1 | 3 | 7 | 4 | 2 | 7 | 0 | 5 | 8 | 9 | 4 |
| | | * TOTALS | |

RESPIRATORY SYSTEM

| | |
|---|----|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Squamous Cell Carcinoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Pleura | | | | | | | | | | | | | + | | | | + | | | | + | | | 6 |
| Squamous Cell Carcinoma, Metastatic, Lung |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

SPECIAL SENSES SYSTEM

| | |
|-----------------|----|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

URINARY SYSTEM

| | |
|--------|----|
| Kidney | + | 50 |
|--------|----|

* .. 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

| | | 7 | 7 |
|-----------------------|--|----------|
| DAY ON TEST | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FISCHER 344 RATS MALE | | 0 | 0 |
| ANIMAL ID | | 0 | 0 |
| CONTROL | | 0 | 0 |
| | | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 0 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 4 |
| | | 5 | 8 | 1 | 3 | 4 | 8 | 2 | 3 | 7 | 2 | 5 | 8 | 1 | 3 | 7 | 4 | 2 | 7 | 0 | 5 | 8 | 9 | 4 | 7 | 5 |
| | | * TOTALS | |

Urinary Bladder

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

50

SYSTEMIC LESIONS

Multiple Organ

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

50

Histiocytic Sarcoma

1

Leukemia Mononuclear

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|---|---|--|---|--|--|---|--|---|--|---|---|---|---|---|---|---|---|--|--|---|--|--|--|
| X | | | X | X | | X | | | X | | X | | X | X | X | X | X | X | X | X | | | X | | | |
|---|--|--|---|---|--|---|--|--|---|--|---|--|---|---|---|---|---|---|---|---|--|--|---|--|--|--|

26

* .. 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 | | males
(cont...) |
| | | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | | 2 | 6 | 7 | 0 | 1 | 2 | 3 | 3 | 4 | 6 | 6 | 8 | 8 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | | 9 | 2 | 9 | 3 | 2 | 4 | 3 | 7 | 6 | 0 | 3 | 4 | 4 | 0 | 5 | 8 | 3 | 6 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| FISCHER 344 RATS MALE
100 PPM | | ANIMAL ID | |
| | | 0 | 0 |
| | | 0 | 0 |
| | | 2 | 2 |
| | | 3 | 3 | 0 | 4 | 2 | 4 | 0 | 1 | 0 | 3 | 4 | 1 | 4 | 2 | 3 | 4 | 1 | 3 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| | | 4 | 1 | 8 | 0 | 3 | 9 | 2 | 0 | 4 | 7 | 2 | 7 | 5 | 4 | 6 | 3 | 3 | 0 | 1 | 7 | 2 | 4 | 6 | 8 | 9 |

ALIMENTARY SYSTEM

| |
|---------------------------|
| Esophagus | + |
| Intestine Large, Cecum | + | + | + | + | + | A | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Intestine Large, Colon | + | + | + | + | + | A | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum | + |
| Intestine Small, Duodenum | + | + | + | + | + | A | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | A | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | A | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Liver | + |
| Mesentery | | | | + | | | | | + | | | + | | + | | | | + | | | | | | + |
| Pancreas | + |
| Salivary Glands | + |
| Stomach, Forestomach | + |
| Squamous Cell Papilloma |

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

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

| | | DAY ON TEST | |
|--------------------------------------|--|---|-----------------------|--------------------|
| | | 5
2
9 | 5
6
2 | 5
7
9 | 6
0
3 | 6
1
2 | 6
2
4 | 6
3
3 | 6
3
7 | 6
4
6 | 6
6
0 | 6
6
3 | 6
8
4 | 6
8
4 | 7
0
0 | 7
0
5 | 7
0
8 | 7
2
3 | 7
2
6 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | |
| FISCHER 344 RATS MALE

100 PPM | | ANIMAL ID | males
(cont...) |
| | | 0
0
2
3
4 | 0
0
2
3
1 | 0
0
2
0
8 | 0
0
2
4
0 | 0
0
2
2
3 | 0
0
2
4
9 | 0
0
2
0
2 | 0
0
2
1
0 | 0
0
2
0
4 | 0
0
2
3
7 | 0
0
2
4
2 | 0
0
2
1
7 | 0
0
2
4
5 | 0
0
2
2
4 | 0
0
2
3
6 | 0
0
2
4
3 | 0
0
2
1
3 | 0
0
2
0
0 | 0
0
2
1
7 | 0
0
2
1
2 | 0
0
2
1
4 | 0
0
2
1
6 | 0
0
2
1
8 | 0
0
2
1
9 | |
| | | | | |
| | | | | |
| | | | | |
| Mammary Gland | | + | | |
| Skin | | + | | |
| Basal Cell Adenoma | | X | | |
| Pinna, Neural Crest Tumor | | X | | |
| Subcutaneous Tissue, Fibrosarcoma | | | | |

MUSCULOSKELETAL SYSTEM

| |
|-------------------------------|
| Bone | + |
| Intervertebral Disc, Chordoma | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | + | | | | | | |
| Chordoma, Metastatic, Bone | | | | | | | | | | | | | | | | | | | X | | | | | | |

NERVOUS SYSTEM

| | |
|--|---|
| Brain | + |
| Carcinoma, Metastatic, Pituitary Gland | | | | | X | |
| Glioma Malignant | | | | | | | | | | | X | | | | | | | | | | | | | | |

RESPIRATORY SYSTEM

| |
|--------|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + |
|--------|

* .. 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

Species/Strain: RATS/F 344

Pathologist: RENNE, R.

Lab: BNW

| | | |
|----------------------------------|-------------|-----------------|
| FISCHER 344 RATS MALE
100 PPM | DAY ON TEST | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 2 | 6 | 7 | 0 | 1 | 2 | 3 | 3 | 4 | 6 | 6 | 8 | 8 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | 9 | 2 | 9 | 3 | 2 | 4 | 3 | 7 | 6 | 0 | 3 | 4 | 4 | 0 | 5 | 8 | 3 | 6 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | ANIMAL ID | 0 | 0 |
| | | 0 | 0 |
| | | 2 | 2 |
| | | 3 | 3 | 0 | 4 | 2 | 4 | 0 | 1 | 0 | 3 | 4 | 1 | 4 | 2 | 3 | 4 | 1 | 3 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| | | 4 | 1 | 8 | 0 | 3 | 9 | 2 | 0 | 4 | 7 | 2 | 7 | 5 | 4 | 6 | 3 | 3 | 0 | 1 | 7 | 2 | 4 | 6 | 8 | 9 |
| | | males (cont...) | |

SYSTEMIC LESIONS

| |
|------------------------|
| Multiple Organ | + |
| Leukemia Mononuclear | | X | X | X | | | X | | | | | X | X | | X | X | X | X | | X | X | X | X | | |
| Mesothelioma Malignant | |

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | |
|---|--|----------|
| DAY ON TEST | | 7 | 7 | |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| <hr style="border-top: 1px dotted black;"/> | | |
| FISCHER 344 RATS MALE
100 PPM | | 0 | 0 | |
| | | 0 | 0 | |
| | | 2 | 2 | |
| | | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | |
| | | 1 | 2 | 9 | 8 | 9 | 1 | 6 | 7 | 8 | 3 | 5 | 6 | 9 | 1 | 5 | 0 | 5 | 6 | 7 | 8 | 2 | 3 | 5 |
| | | * TOTALS | |

ALIMENTARY SYSTEM

| | |
|---------------------------|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Mesentery | + | | | + | + | | | + | + | + | | | | | | + | | + | | | | + | | 15 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Squamous Cell Papilloma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | | | | 1 |

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

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | DAY ON TEST | 7 | 7 |
|-----------------------|-------------|----------|
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 |
| FISCHER 344 RATS MALE | ANIMAL ID | 0 | 0 |
| | | 0 | 0 |
| 100 PPM | | 2 | 2 |
| | | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 5 |
| | | 1 | 2 | 9 | 8 | 9 | 1 | 6 | 7 | 8 | 3 | 5 | 6 | 9 | 1 | 5 | 0 | 5 | 6 | 7 | 8 | 2 | 3 | 5 | 4 |
| | | * TOTALS | |

Stomach, Glandular

+ 50

Tongue

1

CARDIOVASCULAR SYSTEM

Blood Vessel

1

Heart

+ 50

ENDOCRINE SYSTEM

Adrenal Cortex

+ 50

Adrenal Medulla

+ 50

Pheochromocytoma Benign

X

X

X

8

Pheochromocytoma Malignant

1

Islets, Pancreatic

+ 50

Adenoma

X

X

X

5

Adenoma, Multiple

X

1

Carcinoma

X

2

Parathyroid Gland

+ + + + + + + + + + + + + + + + + + + M + + + + 49

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | DAY ON TEST | 7 |
|-----------------------|-------------|----------|
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FISCHER 344 RATS MALE | | 0 |
| ANIMAL ID | | 0 |
| 100 PPM | | 2 |
| | | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 5 |
| | | 1 | 2 | 9 | 8 | 9 | 1 | 6 | 7 | 8 | 3 | 5 | 6 | 9 | 1 | 5 | 0 | 5 | 6 | 7 | 8 | 2 | 3 | 5 | 4 |
| | | * TOTALS |

Pituitary Gland

+ 49

Adenoma

X 36

Carcinoma

1

Thyroid Gland

+ 50

C-cell, Adenoma

X 7

C-cell, Carcinoma

X 2

Follicular Cell, Adenoma

X 1

GENERAL BODY SYSTEM

Peritoneum

+ + 2

GENITAL SYSTEM

Epididymis

+ 50

Preputial Gland

+ 50

Carcinoma

X 3

Prostate

+ 50

Seminal Vesicle

+ 50

* .. 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 | | 7 | 7 | |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | |
| FISCHER 344 RATS MALE

100 PPM | | ANIMAL ID | 0 | |
| | | 0 | 0 | |
| | | 2 | 2 | |
| | | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | |
| | | 1 | 2 | 9 | 8 | 9 | 1 | 6 | 7 | 8 | 3 | 5 | 6 | 9 | 1 | 5 | 0 | 5 | 6 | 7 | 8 | 2 | 3 | 5 | 4 |
| | | * TOTALS | |

| | |
|---------------------------------------|----|
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Bilateral, Interstitial Cell, Adenoma | X | X | X | | | X | X | X | X | X | X | X | X | X | X | X | X | X | | | X | X | X | X | 31 |
| Interstitial Cell, Adenoma | | | | X | X | | | | | | | | X | | | | | X | X | | | | | | 13 |

HEMATOPOIETIC SYSTEM

| | | |
|-------------------------|----|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Lymph Node |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 | |
| Lymph Node, Bronchial | M | M | M | M | M | M | M | M | M | + | M | M | + | M | M | M | M | M | M | M | M | + | M | M | 8 | |
| Lymph Node, Mandibular | M | + | M | M | M | 2 | |
| Lymph Node, Mediastinal | M | + | + | + | M | + | + | M | M | + | M | M | + | + | M | M | + | + | + | M | M | M | M | + | M | 25 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |

INTEGUMENTARY 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

Species/Strain: RATS/F 344

Pathologist: RENNE, R.

Lab: BNW

| | | |
|----------------------------------|-------------|----------|
| FISCHER 344 RATS MALE
100 PPM | DAY ON TEST | 7 |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | ANIMAL ID | 0 |
| | | 0 |
| | | 2 |
| | | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 5 |
| | | 1 | 2 | 9 | 8 | 9 | 1 | 6 | 7 | 8 | 3 | 5 | 6 | 9 | 1 | 5 | 0 | 5 | 6 | 7 | 8 | 2 | 3 | 5 | 4 |
| | | * TOTALS |

SYSTEMIC LESIONS

| | |
|------------------------|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear | | | X | X | X | X | | X | X | X | X | X | X | | | X | | X | X | | | X | X | X | 32 |
| Mesothelioma Malignant | | | | | | | | X | | | 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

TDMS No. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | |
|----------------------------------|--------------------|--|
| FISCHER 344 RATS MALE
300 PPM | DAY ON TEST | 2
1
0 | 5
5
8 | 5
6
0 | 5
6
3 | 5
6
5 | 5
9
6 | 6
1
8 | 6
1
8 | 6
1
9 | 6
4
9 | 6
5
2 | 6
5
6 | 6
5
7 | 6
7
4 | 6
7
4 | 6
7
4 | 6
7
4 | 6
8
0 | 6
8
1 | 6
8
4 | 6
8
8 | 6
8
8 | 6
9
8 | 7
0
5 | 7
0
8 | males
(cont...) | |
| | | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
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4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | | |
| | ANIMAL ID | 4
2
4 | 4
2
6 | 4
1
9 | 4
4
6 | 4
1
6 | 4
2
2 | 4
0
4 | 4
4
7 | 4
4
0 | 4
4
5 | 4
4
8 | 4
4
8 | 4
4
4 | 4
4
3 | 4
4
1 | 4
4
5 | 4
4
0 | 4
2
3 | 4
0
6 | 4
0
2 | 4
4
0 | 4
4
2 | 4
0
9 | 4
0
3 | 4
1
1 | | |
| | | |
| | | |

males
(cont...)

ALIMENTARY SYSTEM

Esophagus

+ +

Intestine Large, Cecum

+ + A A + + + + + + + A + + + + + A + + + + + + + +

Intestine Large, Colon

+ + + + + + + + + + + A + + + + + + + + + + + + + +

Intestine Large, Rectum

+ + + + + + + + + + + A + + + + + + + + + + + + + +

Intestine Small, Duodenum

A + A + + + + + + + + A + + + + + + + + + + + + + +

Leiomyosarcoma

X

Intestine Small, Ileum

A + A A + + + + A + + A + + + + + A + + + + + + + +

Intestine Small, Jejunum

A + A A + + + + A + + A + + + + + A + + + + + + + +

Liver

+ +

Mesentery

+ + +

Pancreas

+ +

Salivary Glands

+ +

Stomach, Forestomach

+ + + + + + + + + + + A + + + + + + + + + + + + + +

* .. 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

| FISCHER 344 RATS MALE
300 PPM | | ANIMAL ID | | DAY ON TEST | | 2 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | | | | | |
|----------------------------------|--|-----------|--|-------------|--|--------------------|
| | | | | | | 1 | 5 | 6 | 6 | 6 | 9 | 1 | 1 | 1 | 4 | 5 | 5 | 5 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 0 | 0 |
| | | | | | | 0 | 8 | 0 | 3 | 5 | 6 | 8 | 8 | 9 | 9 | 2 | 6 | 7 | 4 | 4 | 4 | 4 | 4 | 0 | 1 | 4 | 8 | 8 | 8 | 5 | 8 |
| FISCHER 344 RATS MALE
300 PPM | | ANIMAL ID | | DAY ON TEST | | 0 | | | | |
| | | | | | | 0 | | |
| | | | | | | 4 | |
| | | | | | | 2 | 2 | 1 | 4 | 1 | 2 | 0 | 4 | 5 | 4 | 2 | 1 | 3 | 1 | 2 | 3 | 4 | 2 | 0 | 0 | 2 | 4 | 0 | 0 | 1 | males
(cont...) |
| | | | | | | 4 | 6 | 9 | 6 | 6 | 2 | 4 | 7 | 0 | 5 | 8 | 4 | 8 | 3 | 1 | 5 | 0 | 3 | 6 | 2 | 0 | 2 | 9 | 3 | 1 | |

| |
|--------------------|
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Tooth | | | | | | | + | | | | | | | | | | | | | | | | | | |

CARDIOVASCULAR SYSTEM

| |
|--------------|
| Blood Vessel | | | | + | |
| Heart | + |

ENDOCRINE SYSTEM

| |
|------------------------------------|
| Adrenal Cortex | + |
| Adenoma | | | | | | | | | | | | | | | X | | | | | | | | | | |
| Adrenal Medulla | + |
| Ganglioneuroma | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Pheochromocytoma Benign | | | | | | | | | | | | X | | | | | | | | X | | | | | |
| Pheochromocytoma Malignant |
| Bilateral, Pheochromocytoma Benign | |
| Islets, Pancreatic | + |
| Adenoma |

* .. 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 | | 2 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | |
| | | 1 | 5 | 6 | 6 | 6 | 9 | 1 | 1 | 1 | 4 | 5 | 5 | 5 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 9 | 0 | 0 |
| | | 0 | 8 | 0 | 3 | 5 | 6 | 8 | 8 | 9 | 9 | 2 | 6 | 7 | 4 | 4 | 4 | 4 | 0 | 1 | 4 | 8 | 8 | 8 | 5 | 8 |
| FISCHER 344 RATS MALE
300 PPM
ANIMAL ID | | |
| | | 0 | 0 |
| | | 0 | 0 |
| | | 4 | 4 |
| | | 2 | 2 | 1 | 4 | 1 | 2 | 0 | 4 | 5 | 4 | 2 | 1 | 3 | 1 | 2 | 3 | 4 | 2 | 0 | 0 | 2 | 4 | 0 | 0 | 1 |
| | | 4 | 6 | 9 | 6 | 6 | 2 | 4 | 7 | 0 | 5 | 8 | 4 | 8 | 3 | 1 | 5 | 0 | 3 | 6 | 2 | 0 | 2 | 9 | 3 | 1 |
| | | males (cont...) | |

males
(cont...)

| |
|---------------------------------------|
| Prostate | + |
| Seminal Vesicle | + |
| Testes | + |
| Bilateral, Interstitial Cell, Adenoma | | | | X | | | X | X | X | | | | X | | | | | | | | X | X | X | | |
| Interstitial Cell, Adenoma | | | | | | | | | | X | X | X | | | X | X | X | X | X | | X | | | | X |

HEMATOPOIETIC SYSTEM

| |
|-------------------------|
| Bone Marrow | + |
| Lymph Node | | | | | | | | | | + | | | | + | | + | | | + | | | | | | |
| Lymph Node, Bronchial | M | M | M | M | M | + | M | M | M | + | M | M | M | + | + | M | M | M | M | + | M | + | M | M | M |
| Lymph Node, Mandibular | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M |
| Lymph Node, Mediastinal | + | M | + | + | + | M | M | + | M | M | + | M | + | + | M | M | + | M | M | M | + | + | M | M | M |
| Lymph Node, Mesenteric | + |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Thymus | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | | |
|--------------------------------------|---|-------------|--------------------|
| | | DAY ON TEST | |
| | | 2 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | |
| | | 1 | 5 | 6 | 6 | 6 | 9 | 1 | 1 | 1 | 4 | 5 | 5 | 5 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 0 | 0 |
| | | 0 | 8 | 0 | 3 | 5 | 6 | 8 | 8 | 9 | 9 | 2 | 6 | 7 | 4 | 4 | 4 | 4 | 0 | 1 | 4 | 8 | 8 | 8 | 5 | 8 | |
| FISCHER 344 RATS MALE

300 PPM | | ANIMAL ID | |
| | | 0 | 0 |
| | | 0 | 0 |
| | | 4 | 4 |
| | | 2 | 2 | 1 | 4 | 1 | 2 | 0 | 4 | 5 | 4 | 2 | 1 | 3 | 1 | 2 | 3 | 4 | 2 | 0 | 0 | 2 | 4 | 0 | 0 | 1 | males
(cont...) |
| 4 | 6 | 9 | 6 | 6 | 2 | 4 | 7 | 0 | 5 | 8 | 4 | 8 | 3 | 1 | 5 | 0 | 3 | 6 | 2 | 0 | 2 | 9 | 3 | 1 | | | |

INTEGUMENTARY SYSTEM

Mammary Gland

+ +

Fibroadenoma

X

Skin

+ +

Basal Cell Adenoma

Basal Cell Carcinoma

Squamous Cell Papilloma

X

Sebaceous Gland, Adenoma

Subcutaneous Tissue, Fibroma

X X

Subcutaneous Tissue, Lipoma

Subcutaneous Tissue, Schwannoma
Benign

X

MUSCULOSKELETAL SYSTEM

Bone

+ +

Intervertebral Disc, Chordoma

X

Skeletal Muscle

+

Liposarcoma

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 | | 2 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | | |
| | | 1 | 5 | 6 | 6 | 6 | 9 | 1 | 1 | 1 | 4 | 5 | 5 | 5 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 9 | 0 | 0 | |
| | | 0 | 8 | 0 | 3 | 5 | 6 | 8 | 8 | 9 | 9 | 2 | 6 | 7 | 4 | 4 | 4 | 4 | 0 | 1 | 4 | 8 | 8 | 8 | 5 | 8 | |
| FISCHER 344 RATS MALE

300 PPM | | |
| | | |
| | | |
| | | |
| | | |
| ANIMAL ID | | 0 | | |
| | | 0 | | |
| | | 4 | | |
| | | 2 | 2 | 1 | 4 | 1 | 2 | 0 | 4 | 5 | 4 | 2 | 1 | 3 | 1 | 2 | 3 | 4 | 2 | 0 | 0 | 2 | 4 | 0 | 0 | 1 | |
| | | 4 | 6 | 9 | 6 | 6 | 2 | 4 | 7 | 0 | 5 | 8 | 4 | 8 | 3 | 1 | 5 | 0 | 3 | 6 | 2 | 0 | 2 | 9 | 3 | 1 | males
(cont...) |

NERVOUS SYSTEM

| | |
|--|---|
| Brain | + |
| Carcinoma, Metastatic, Pituitary Gland | |
| Spinal Cord |

RESPIRATORY SYSTEM

| |
|----------------------------|
| Larynx | + |
| Lung | + |
| Chordoma, Metastatic, Bone | |
| Nose | + |
| Pleura |
| Trachea | + |

SPECIAL SENSES SYSTEM

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

* .. 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 | | 2 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | |
| | | 1 | 5 | 6 | 6 | 6 | 9 | 1 | 1 | 1 | 4 | 5 | 5 | 5 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 9 | 0 | 0 |
| | | 0 | 8 | 0 | 3 | 5 | 6 | 8 | 8 | 9 | 9 | 2 | 6 | 7 | 4 | 4 | 4 | 4 | 0 | 1 | 4 | 8 | 8 | 8 | 5 | 8 |
| | | |
| FISCHER 344 RATS MALE

300 PPM | | 0 | 0 | |
| | | 0 | 0 | |
| | | 4 | 4 | |
| | | 2 | 2 | 1 | 4 | 1 | 2 | 0 | 4 | 5 | 4 | 2 | 1 | 3 | 1 | 2 | 3 | 4 | 2 | 0 | 0 | 2 | 4 | 0 | 0 | 1 |
| | | 4 | 6 | 9 | 6 | 6 | 2 | 4 | 7 | 0 | 5 | 8 | 4 | 8 | 3 | 1 | 5 | 0 | 3 | 6 | 2 | 0 | 2 | 9 | 3 | 1 |
| ANIMAL ID | | males (cont...) | |

| | |
|-----------------|-------|
| Harderian Gland | + | + |
| Zymbal's Gland | ..... |  |
| Carcinoma | | | + | | | | | | + | | | | | | | | | | | | | | | | |

URINARY SYSTEM

| | |
|-------------------------|-------|
| Kidney | + | + |
| Renal Tubule, Adenoma | ..... |  |
| Renal Tubule, Carcinoma | ..... |  |
| Urinary Bladder | + | + |

SYSTEMIC LESIONS

| |
|----------------------|
| Multiple Organ | + |
| Leukemia Mononuclear | | X | X | | | X | X | X | X | X | X | | X | X | X | X | X | | | X | X | | | | 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | FISCHER 344 RATS MALE | |
|-------------|--|-----------------------|
| | | 300 PPM | |
| DAY ON TEST | | 7
1
6 | 7
1
6 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
3 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 |
| ANIMAL ID | | 0
0
4
1
5 | 0
0
4
4
4 | 0
0
4
0
1 | 0
0
4
0
7 | 0
0
4
0
8 | 0
0
4
1
8 | 0
0
4
2
5 | 0
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3
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4
3
2 | 0
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5 | 0
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4
1
2 | 0
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4
1
7 | 0
0
4
2
9 | 0
0
4
2
7 | 0
0
4
3
1 | 0
0
4
3
4 | 0
0
4
4
3 | 0
0
4
4
8 |
| | | * TOTALS | |

ALIMENTARY SYSTEM

| | |
|---------------------------|----|
| Esophagus | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Leiomyosarcoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Mesentery | | + | | | | | | | | | + | | | | | + | | | | + | | | + | 8 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |

* .. 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

| | | |
|----------------------------------|-----------|----------|
| | | 7 | 7 | |
| | | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 6 | 6 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | |
| FISCHER 344 RATS MALE
300 PPM | ANIMAL ID | 0 | 0 | |
| | | 0 | 0 | |
| | | 4 | 4 | |
| | | 1 | 4 | 0 | 0 | 0 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 |
| | | 5 | 4 | 1 | 7 | 8 | 8 | 5 | 0 | 2 | 3 | 6 | 7 | 9 | 1 | 5 | 0 | 2 | 7 | 7 | 9 | 1 | 4 | 3 | 8 |
| | | * TOTALS | |

Stomach, Glandular

+ +

49

Tooth

+

2

CARDIOVASCULAR SYSTEM

Blood Vessel

+

2

Heart

+ +

50

ENDOCRINE SYSTEM

Adrenal Cortex

+ +

50

Adenoma

X

2

Adrenal Medulla

+ +

50

Ganglioneuroma

1

Pheochromocytoma Benign

X X

9

Pheochromocytoma Malignant

X

1

Bilateral, Pheochromocytoma Benign

X

1

Islets, Pancreatic

+ +

50

Adenoma

X

X

3

* .. 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. 88006 - 03

Test Type: CHRONIC

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ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

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Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | 7
1
6 | 7
1
6 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
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0 | 7
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0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | |
|----------------------------|--|---|-------------|--|
| DAY ON TEST | | | | |
| | | | | |
| FISCHER 344 RATS MALE | | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
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4 | 0
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4 | 0
0
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0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | 0
0
4 | |
| 300 PPM | | 1
5 | 4
4 | 0
1 | 0
7 | 0
8 | 1
8 | 2
5 | 3
0 | 3
2 | 3
3 | 3
3 | 3
3 | 3
3 | 4
1 | 0
5 | 1
0 | 1
2 | 1
7 | 2
7 | 2
9 | 3
1 | 3
4 | 4
3 | 4
8 | 4
9 | |
| | | * TOTALS | | |
| Carcinoma | | X1 | | |
| Parathyroid Gland | | + + + + + + + M + + + + + + M + + + + + + + + +48 | | |
| Pituitary Gland | | +49 | | |
| Adenoma | | X34 | | |
| Carcinoma | | X1 | | |
| Pars Intermedia, Carcinoma | | X1 | | |
| Thyroid Gland | | +50 | | |
| C-cell, Adenoma | | X4 | | |
| C-cell, Carcinoma | | X1 | | |
| Follicular Cell, Adenoma | | X2 | | |
| Follicular Cell, Carcinoma | | X1 | | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | |
|-----------------|----|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. 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. 88006 - 03

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ALPHA-METHYLSTYRENE

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Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | DAY ON TEST | 7 |
|-----------------------|-------------|----------|
| | | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 6 | 6 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 |
| FISCHER 344 RATS MALE | ANIMAL ID | 0 |
| | | 0 |
| 300 PPM | | 4 |
| | | 1 | 4 | 0 | 0 | 0 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 |
| | | 5 | 4 | 1 | 7 | 8 | 8 | 5 | 0 | 2 | 3 | 6 | 7 | 9 | 1 | 5 | 0 | 2 | 7 | 7 | 9 | 1 | 4 | 3 | 8 |
| | | * TOTALS |

| | |
|----------|----|
| Prostate | + | 50 |
|----------|----|

| | |
|-----------------|----|
| Seminal Vesicle | + | 50 |
|-----------------|----|

| | |
|--------|----|
| Testes | + | 50 |
|--------|----|

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|--|--|---|---|---|--|---|---|---|--|---|---|--|---|---|--|---|---|--|---|---|---|--|--|----|
| Bilateral, Interstitial Cell, Adenoma | | | X | X | X | | X | X | X | | X | X | | X | X | | X | X | | X | X | X | | | 23 |
|---------------------------------------|--|--|---|---|---|--|---|---|---|--|---|---|--|---|---|--|---|---|--|---|---|---|--|--|----|

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|--|--|--|--|--|---|--|--|--|---|--|--|---|--|--|---|--|--|--|---|--|---|---|--|----|
| Interstitial Cell, Adenoma | | | | | | X | | | | X | | | X | | | X | | | | X | | X | X | | 18 |
|----------------------------|--|--|--|--|--|---|--|--|--|---|--|--|---|--|--|---|--|--|--|---|--|---|---|--|----|

HEMATOPOIETIC SYSTEM

| | |
|-------------|----|
| Bone Marrow | + | 50 |
|-------------|----|

| | | | | |
|------------|--|--|---|---|
| Lymph Node | | | + | 6 |
|------------|--|--|---|---|

| | |
|-----------------------|----|
| Lymph Node, Bronchial | M | M | + | M | M | + | M | M | M | + | + | M | M | + | M | + | M | + | M | M | M | M | + | M | 14 |
|-----------------------|----|

| |
|------------------------|
| Lymph Node, Mandibular | M | M | M | M | M | M | M | M | M | M | + | M | M | M | M | M | M | M | M | M | M | M | M | M | 1 |
|------------------------|

| | |
|-------------------------|----|
| Lymph Node, Mediastinal | M | + | M | + | M | M | M | + | M | M | M | + | M | + | M | M | + | M | M | + | + | M | M | M | 20 |
|-------------------------|----|

| | |
|------------------------|----|
| Lymph Node, Mesenteric | + | M | + | + | + | 49 |
|------------------------|----|

| | |
|--------|----|
| Spleen | + | 49 |
|--------|----|

| | |
|--------|----|
| Thymus | + | + | M | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
|--------|----|

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 11/29/2005

Time Report Reqsted: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| DAY ON TEST | | 7 | 7 |
|-----------------------|--|----------|
| | | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 6 | 6 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FISCHER 344 RATS MALE | | 0 | 0 |
| ANIMAL ID | | 0 | 0 |
| 300 PPM | | 4 | 4 |
| | | 1 | 4 | 0 | 0 | 0 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 |
| | | 5 | 4 | 1 | 7 | 8 | 8 | 5 | 0 | 2 | 3 | 6 | 7 | 9 | 1 | 5 | 0 | 2 | 7 | 7 | 9 | 1 | 4 | 3 | 8 |
| | | * TOTALS | |

INTEGUMENTARY SYSTEM

| | |
|--|----|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Fibroadenoma | | | | | | | | | | | | | | | X | | | | | | | X | | | 3 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Basal Cell Adenoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | | | | 1 |
| Basal Cell Carcinoma | | | | | | | | | | X | | | | | | | | | | | | | | | 1 |
| Squamous Cell Papilloma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Sebaceous Gland, Adenoma | | | | | | | | | | | | | | | | X | | | | | | | | | 1 |
| Subcutaneous Tissue, Fibroma | | | | | | | | | | | | X | X | | | | | | | | | | | | 4 |
| Subcutaneous Tissue, Lipoma | | | | | | | | | | | | | | | | | | | X | | | | | | 1 |
| Subcutaneous Tissue, Schwannoma Benign |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |

MUSCULOSKELETAL SYSTEM

| | |
|-------------------------------|----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intervertebral Disc, Chordoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Skeletal Muscle |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Liposarcoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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

Species/Strain: RATS/F 344

Pathologist: RENNE, R.

Lab: BNW

NERVOUS SYSTEM

[illegible]

RESPIRATORY SYSTEM

[illegible]

SPECIAL SENSES SYSTEM

[illegible]

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | |
|--------------------------------------|--|-----------------------|
| | | DAY ON TEST | |
| | | 7
1
6 | 7
1
6 | 7
2
9 | 7
2
9 | 7
2
9 | 7
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9 | 7
2
9 | 7
2
9 | 7
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9 | 7
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0 | 7
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0 | 7
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0 |
| | | <hr/> | |
| FISCHER 344 RATS MALE

300 PPM | | ANIMAL ID | |
| | | 0
0
4
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4
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4
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1 | 0
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7 | 0
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9 |
| | | <hr/> | |
| | | |
| | | * TOTALS | |

Harderian Gland

+ 50

Zymbal's Gland

2

Carcinoma

1

URINARY SYSTEM

| | |
|-------------------------|----|
| Kidney | + | 50 |
| Renal Tubule, Adenoma | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Renal Tubule, Carcinoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | | | 1 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

SYSTEMIC LESIONS

| | |
|----------------------|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear | | X | X | | X | | | X | X | X | X | X | | | | X | | X | | X | X | | X | | | 29 |

* .. 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

| | | | | |
|-----------------------------------|--|-------------|--------------------|-----------------------|
| FISCHER 344 RATS MALE
1000 PPM | | DAY ON TEST | 2
0
0 | 3
6
7 | 4
0
1 | 5
1
9 | 5
5
8 | 5
6
2 | 5
6
2 | 5
6
5 | 5
7
9 | 5
8
6 | 6
0
0 | 6
2
8 | 6
4
6 | 6
5
3 | 6
5
6 | 6
6
0 | 6
6
8 | 6
8
4 | 6
8
8 | 7
0
1 | 7
0
2 | 7
0
2 | 7
0
9 | males
(cont...) | |
| | | | | |
| | | ANIMAL ID | 0
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6
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6
4
3 |

ALIMENTARY SYSTEM

| |
|-------------------------------|
| Esophagus | + |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon | + |
| Intestine Large, Rectum | + |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + |
| Liver | + |
| Carcinoma, Metastatic, Kidney | | | | | | | | | | | | | | | | | | | | X | | | |
| Mesentery | | | | | | | | | + | | | + | | | | + | | | | | | | |
| Oral Mucosa |
| Pancreas | + |
| Salivary Glands | + |

* .. 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

| | | |
|-----------------------------------|-------------|-----------------|
| FISCHER 344 RATS MALE
1000 PPM | DAY ON TEST | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 |
| | | 0 | 6 | 0 | 1 | 5 | 6 | 6 | 6 | 7 | 8 | 0 | 2 | 4 | 5 | 5 | 6 | 6 | 6 | 8 | 8 | 8 | 0 | 0 |
| | | 0 | 7 | 1 | 9 | 8 | 2 | 2 | 5 | 9 | 6 | 0 | 8 | 6 | 3 | 6 | 0 | 8 | 9 | 4 | 8 | 8 | 1 | 2 |
| | | 0 | 7 | 1 | 9 | 8 | 2 | 2 | 5 | 9 | 6 | 0 | 8 | 6 | 3 | 6 | 0 | 8 | 9 | 4 | 8 | 8 | 1 | 2 |
| ANIMAL ID | | 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 |
| | | 3 | 4 | 3 | 2 | 2 | 0 | 1 | 2 | 5 | 0 | 4 | 4 | 3 | 0 | 2 | 4 | 2 | 1 | 3 | 0 | 3 | 1 | 1 |
| | | 2 | 3 | 0 | 8 | 4 | 8 | 1 | 0 | 0 | 2 | 4 | 2 | 7 | 9 | 7 | 0 | 2 | 8 | 1 | 7 | 9 | 2 | 4 |
| | | males (cont...) | |

Stomach, Forestomach

+ +

Stomach, Glandular

+ +

Tongue

CARDIOVASCULAR SYSTEM

Heart

+ +

ENDOCRINE SYSTEM

Adrenal Cortex

+ +

Adrenal Medulla

+ +

Pheochromocytoma Benign

X X

Pheochromocytoma Complex

Pheochromocytoma Malignant

Islets, Pancreatic

+ +

Adenoma

Carcinoma

Parathyroid Gland

+ + + + + + + + + + + + + M + + + + + + + M + +

* .. 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 | | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | |
| | | 0 | 6 | 0 | 1 | 5 | 6 | 6 | 6 | 6 | 7 | 8 | 0 | 2 | 4 | 5 | 5 | 6 | 6 | 8 | 8 | 8 | 0 | 0 | 0 | 0 |
| | | 0 | 7 | 1 | 9 | 8 | 2 | 2 | 5 | 9 | 6 | 0 | 8 | 6 | 3 | 6 | 0 | 8 | 9 | 4 | 8 | 8 | 1 | 2 | 2 | 9 |
| | | |
| FISCHER 344 RATS MALE

1000 PPM | | 0 | 0 | |
| | | 0 | 0 | |
| | | 6 | 6 | |
| | | 3 | 4 | 3 | 2 | 2 | 0 | 1 | 2 | 5 | 0 | 4 | 4 | 3 | 0 | 2 | 4 | 2 | 1 | 3 | 0 | 3 | 1 | 1 | 2 | 0 |
| | | 2 | 3 | 0 | 8 | 4 | 8 | 1 | 0 | 0 | 2 | 4 | 2 | 7 | 9 | 7 | 0 | 2 | 8 | 1 | 7 | 9 | 2 | 4 | 3 | 5 |
| | | males
(cont...) | |

TDMS No. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | DAY ON TEST | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 |
|-----------------------------------|-------------|
| | | 0 | 6 | 0 | 1 | 5 | 6 | 6 | 6 | 7 | 8 | 0 | 2 | 4 | 5 | 5 | 6 | 6 | 6 | 8 | 8 | 8 | 0 | 0 |
| | | 0 | 7 | 1 | 9 | 8 | 2 | 2 | 5 | 9 | 6 | 0 | 8 | 6 | 3 | 6 | 0 | 8 | 9 | 4 | 8 | 8 | 1 | 2 |
| FISCHER 344 RATS MALE
1000 PPM | ANIMAL ID | 0 |
| | | 0 |
| | | 6 |
| | | 3 | 4 | 3 | 2 | 2 | 0 | 1 | 2 | 5 | 0 | 4 | 4 | 3 | 0 | 2 | 4 | 2 | 1 | 3 | 0 | 3 | 1 | 1 |
| | | 2 | 3 | 0 | 8 | 4 | 8 | 1 | 0 | 0 | 2 | 4 | 2 | 7 | 9 | 7 | 0 | 2 | 8 | 1 | 7 | 9 | 2 | 4 |

males
(cont...)

Bilateral, Interstitial Cell, Adenoma

X X

X X X X

X X X

X X X X X X

Interstitial Cell, Adenoma

X

X

X

X

HEMATOPOIETIC SYSTEM

Bone Marrow

+ +

Carcinoma, Metastatic, Kidney

X

Lymph Node

+ +

+

+

+

+

+

+

+

Deep Cervical, Carcinoma, Metastatic,
Kidney

X

Lymph Node, Bronchial

M M M M M + M M M M M M M + M M M + M M M M M M +

Lymph Node, Mandibular

M M

Lymph Node, Mediastinal

M + M + + + M M M M M + M + + M M + M M M + M M M M M

Carcinoma, Metastatic, Kidney

X

Lymph Node, Mesenteric

+ +

Spleen

+ +

Thymus

+ M + + +

* .. 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

| | | | | |
|-----------------------------------|--|-------------|--------------------|-----------------------|
| FISCHER 344 RATS MALE
1000 PPM | | DAY ON TEST | 2
0
0 | 3
6
7 | 4
0
1 | 5
1
9 | 5
5
8 | 5
6
2 | 5
6
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6
5 | 5
7
9 | 5
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6 | 6
0
0 | 6
2
8 | 6
4
6 | 6
5
3 | 6
5
6 | 6
6
0 | 6
6
8 | 6
8
4 | 6
8
8 | 7
0
1 | 7
0
2 | 7
0
2 | 7
0
9 | males
(cont...) | |
| | | | | |
| | | ANIMAL ID | 0
0
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9 | 0
0
6
1
2 | 0
0
6
1
4 | 0
0
6
2
3 | | 0
0
6
0
5 |

INTEGUMENTARY SYSTEM

| |
|------------------------------|
| Mammary Gland | + |
| Fibroadenoma | | | | | | | | | | | | | | X | | | | | | | | | | | |
| Fibroadenoma, Multiple | | | | | | | | | | | | | | | | | X | | | | | | | | |
| Skin | + |
| Basal Cell Carcinoma |
| Keratoacanthoma | | | | | | | | | | | | | | X | | | | | | | | | | | |
| Squamous Cell Carcinoma | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Subcutaneous Tissue, Fibroma | | | | | | | | X | | | | | | | | | | | | | | | | | |

MUSCULOSKELETAL SYSTEM

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

NERVOUS SYSTEM

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

RESPIRATORY SYSTEM

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

* .. 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 | | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | |
| | | 0 | 6 | 0 | 1 | 5 | 6 | 6 | 6 | 6 | 7 | 8 | 0 | 2 | 4 | 5 | 5 | 6 | 6 | 8 | 8 | 8 | 0 | 0 | 0 | 0 |
| | | 0 | 7 | 1 | 9 | 8 | 2 | 2 | 5 | 9 | 6 | 0 | 8 | 6 | 3 | 6 | 0 | 8 | 9 | 4 | 8 | 8 | 1 | 2 | 2 | 9 |
| | | |
| FISCHER 344 RATS MALE

1000 PPM | | 0 | 0 | |
| | | 0 | 0 | |
| | | 6 | 6 | |
| | | 3 | 4 | 3 | 2 | 2 | 0 | 1 | 2 | 5 | 0 | 4 | 4 | 3 | 0 | 2 | 4 | 2 | 1 | 3 | 0 | 3 | 1 | 1 | 2 | 0 |
| | | 2 | 3 | 0 | 8 | 4 | 8 | 1 | 0 | 0 | 2 | 4 | 2 | 7 | 9 | 7 | 0 | 2 | 8 | 1 | 7 | 9 | 2 | 4 | 3 | 5 |
| ANIMAL ID | | |
| | | males (cont...) | |

| |
|-------------------------------|
| Lung | + |
| Carcinoma, Metastatic, Kidney | | | | | | | | | | | | | | | | | | | | X | | | X |
| Nose | + |
| Pleura | | | | | | | | | + | | | | | | | | | | | | | | |
| Trachea | + |

SPECIAL SENSES SYSTEM

| |
|-----------------|
| Eye | + |
| Harderian Gland | + |
| Zymbal's Gland | | | | | | | | + | | | | | | | | | | | | | + | | |
| Adenoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | | |
| Carcinoma | | | | | | | | X | | | | | | | | | | | | | | | |

URINARY SYSTEM

| |
|-------------------------|
| Kidney | + |
| Renal Tubule, Carcinoma | | | | | | | | | | | | | | | | | | | | X | | | 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 | | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | |
| | | 0 | 6 | 0 | 1 | 5 | 6 | 6 | 6 | 6 | 7 | 8 | 0 | 2 | 4 | 5 | 5 | 6 | 6 | 6 | 8 | 8 | 8 | 0 | 0 | 0 |
| | | 0 | 7 | 1 | 9 | 8 | 2 | 2 | 5 | 9 | 6 | 0 | 8 | 6 | 3 | 6 | 0 | 8 | 9 | 4 | 8 | 8 | 1 | 2 | 2 | 9 |
| | | |
| FISCHER 344 RATS MALE
1000 PPM | ANIMAL ID | 0 | 0 | |
| | | 0 | 0 | |
| | | 6 | 6 | |
| | | 3 | 4 | 3 | 2 | 2 | 0 | 1 | 2 | 5 | 0 | 4 | 4 | 3 | 0 | 2 | 4 | 2 | 1 | 3 | 0 | 3 | 1 | 1 | 2 | 0 |
| | | 2 | 3 | 0 | 8 | 4 | 8 | 1 | 0 | 0 | 2 | 4 | 2 | 7 | 9 | 7 | 0 | 2 | 8 | 1 | 7 | 9 | 2 | 4 | 3 | 5 |
| | | males (cont...) | |
| Urinary Bladder | | + | + | |

SYSTEMIC LESIONS

| |
|------------------------|
| Multiple Organ | + |
| Leukemia Mononuclear | | | X | X | X | X | X | | X | X | X | X | X | X | X | X | | X | X | X | X | X | X | X |
| Mesothelioma Malignant | |

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | FISCHER 344 RATS MALE | |
|-------------|--|-----------------------|
| | | 1000 PPM | |
| DAY ON TEST | | 7
0
9 | 7
1
4 | 7
2
2 | 7
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9 | 7
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6
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8 | 0
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9 | 0
0
6
0
1 | 0
0
6
0
4 | 0
0
6
0
6 | 0
0
6
1
0 | 0
0
6
1
3 | 0
0
6
1
9 | 0
0
6
2
9 | 0
0
6
3
3 | 0
0
6
3
5 | 0
0
6
3
8 | 0
0
6
4
1 | 0
0
6
4
6 |
| | | * TOTALS | |

ALIMENTARY SYSTEM

| | |
|-------------------------------|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | A | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Large, Colon | + | A | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Large, Rectum | + | A | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Small, Duodenum | + | A | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Small, Ileum | + | A | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Small, Jejunum | + | A | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma, Metastatic, Kidney |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Mesentery | | | | | | | | | | + | | | | | | | | | | | + | | | | 5 |
| Oral Mucosa | | | | | | | | | | | | | | | + | | | | | | | | | | 1 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | | | |
|---------------------------------------|--|-----------------------|--|--|
| DAY ON TEST | | 7
0
9 | 7
1
4 | 7
2
2 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 | | | |
| | | | | |
| FISCHER 344 RATS MALE

1000 PPM | | 0
0
6
2
5 | 0
0
6
2
1 | 0
0
6
0
3 | 0
0
6
1
5 | 0
0
6
1
6 | 0
0
6
1
7 | 0
0
6
2
6 | 0
0
6
3
4 | 0
0
6
3
6 | 0
0
6
4
5 | 0
0
6
4
8 | 0
0
6
4
9 | 0
0
6
0
1 | 0
0
6
0
4 | 0
0
6
0
6 | 0
0
6
1
0 | 0
0
6
1
3 | 0
0
6
1
9 | 0
0
6
2
9 | 0
0
6
3
3 | 0
0
6
3
5 | 0
0
6
3
8 | 0
0
6
4
1 | 0
0
6
4
6 | | |
| | | | | |
| | | ANIMAL ID | | | |
| | | | | |
| | | * TOTALS | | | |

Stomach, Forestomach

+ 50

Stomach, Glandular

+ 50

Tongue

+ 1

CARDIOVASCULAR SYSTEM

Heart

+ 50

ENDOCRINE SYSTEM

Adrenal Cortex

+ 50

Adrenal Medulla

+ 50

Pheochromocytoma Benign

X X 6

Pheochromocytoma Complex

X 1

Pheochromocytoma Malignant

X 1

Islets, Pancreatic

+ 50

Adenoma

X 1

Carcinoma

X 1

Parathyroid Gland

+ + + + + + + + + + + + + + + + + + M + + + + 47

* .. 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. 88006 - 03

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First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | |
|---------------------------------------|--|----------|
| DAY ON TEST | | 7 | 7 | |
| | | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 9 | 4 | 2 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FISCHER 344 RATS MALE

1000 PPM | | |
| | | 0 | 0 |
| | | 6 | 6 |
| | | 2 | 2 | 0 | 1 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 4 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 4 |
| | | 5 | 1 | 3 | 5 | 6 | 7 | 6 | 4 | 6 | 5 | 8 | 9 | 1 | 4 | 6 | 0 | 3 | 9 | 9 | 3 | 5 | 8 | 1 | 6 |
| | | * TOTALS | |

Pituitary Gland

Adenoma

| |
|---|
| + |
| | | | | | X | X | X | | | X | | | X | X | X | | X | X | X | X | X | | X | X |
| |

49

24

Thyroid Gland

Carcinoma, Metastatic, Kidney

C-cell, Adenoma

Follicular Cell, Adenoma

Follicular Cell, Carcinoma

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

50

1

2

1

2

GENERAL BODY SYSTEM

Peritoneum

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

3

GENITAL SYSTEM

Epididymis

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

50

Preputial Gland

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

50

Prostate

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

50

Seminal Vesicle

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

50

Testes

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

50

* .. 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. 88006 - 03

Test Type: CHRONIC

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Species/Strain: RATS/F 344

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Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

HEMATOPOIETIC SYSTEM

| | |
|--|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma, Metastatic, Kidney |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Lymph Node | | + | | | | | | | | | | | | | | | | | | | | + | + | | | 12 |
| Deep Cervical, Carcinoma, Metastatic, Kidney |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Lymph Node, Bronchial | M | M | + | + | M | M | + | M | M | M | + | + | M | + | + | + | + | + | M | M | M | M | M | + | M | 15 |
| Lymph Node, Mandibular | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 0 |
| Lymph Node, Mediastinal | + | M | M | M | M | M | M | M | M | M | + | + | + | M | M | M | M | M | + | M | + | + | + | + | | 18 |
| Carcinoma, Metastatic, Kidney |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | M | 47 |

* .. 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 | 7 | 7 |
| | | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 9 | 4 | 2 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FISCHER 344 RATS MALE
1000 PPM | ANIMAL ID | 0 | 0 |
| | | 0 | 0 |
| | | 6 | 6 |
| | | 2 | 2 | 0 | 1 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 4 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 4 |
| | | 5 | 1 | 3 | 5 | 6 | 7 | 6 | 4 | 6 | 5 | 8 | 9 | 1 | 4 | 6 | 0 | 3 | 9 | 9 | 3 | 5 | 8 | 1 | 6 |
| | | * TOTALS | |

INTEGUMENTARY SYSTEM

| | |
|------------------------------|----|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Fibroadenoma | | | | | | | | | | | | | | | | | | X | | | | | | X | 3 |
| Fibroadenoma, Multiple |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Basal Cell Carcinoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | | 1 |
| Keratoacanthoma | | | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |
| Squamous Cell Carcinoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Subcutaneous Tissue, Fibroma | | | | | | | | | | | | X | | | | | | X | X | | | | | | 4 |

MUSCULOSKELETAL SYSTEM

| | |
|------|----|
| Bone | + | 50 |
|------|----|

NERVOUS SYSTEM

| | |
|-------|----|
| Brain | + | 50 |
|-------|----|

RESPIRATORY SYSTEM

| | |
|--------|----|
| Larynx | + | 50 |
|--------|----|

* .. 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

| | | |
|-----------------------------------|-------------|-----------------------|
| FISCHER 344 RATS MALE
1000 PPM | DAY ON TEST | 7
0
9 | 7
1
4 | 7
2
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9 | 7
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9 | 7
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9 | 7
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9 | 7
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0 |
| | ANIMAL ID | 0
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3 | 0
0
6
1
5 | 0
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6
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6 | 0
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2
7 | 0
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6
3
6 | 0
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3
4 | 0
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5 | 0
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8 | 0
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9 | 0
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1 | 0
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4 | 0
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6 | 0
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1 | 0
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6
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1 | 0
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6
2
3 | 0
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3 | 0
0
6
3
4 | 0
0
6
4
1 | 0
0
6
4
6 | 0
0
6
7
7 |
| | | 0 |
| | | 0 |
| | | 6 |
| | | 2 | 2 | 0 | 1 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 4 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 3 | 4 | 4 |
| | | 5 | 1 | 3 | 5 | 6 | 7 | 6 | 4 | 6 | 5 | 8 | 9 | 1 | 4 | 6 | 0 | 3 | 9 | 9 | 3 | 5 | 8 | 1 |
| | | * TOTALS | |

| | |
|-------------------------------|----|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma, Metastatic, Kidney |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |
| Nose | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Pleura | | | | | | | | | | + | | + | | | | | + | | | | | + | | 5 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

SPECIAL SENSES SYSTEM

| | |
|-----------------|----|
| Eye | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Zymbal's Gland |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |
| Adenoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Carcinoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |

URINARY SYSTEM

| | |
|-------------------------|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Renal Tubule, Carcinoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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

| | | |
|-----------------------------------|-------------|-----------------------|
| FISCHER 344 RATS MALE
1000 PPM | DAY ON TEST | 7
0
9 | 7
1
4 | 7
2
2 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
2
9 | 7
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9 | 7
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9 | 7
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9 | 7
3
0 | 7
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3
0 | 7
3
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3
0 | 7
3
0 | 7
3
0 | 7
3
0 | 7
3
0 |
| | ANIMAL ID | 0
0
6
2
5 | 0
0
6
2
1 | 0
0
6
0
3 | 0
0
6
1
5 | 0
0
6
1
6 | 0
0
6
1
7 | 0
0
6
2
6 | 0
0
6
3
4 | 0
0
6
3
6 | 0
0
6
4
5 | 0
0
6
4
8 | 0
0
6
4
9 | 0
0
6
0
1 | 0
0
6
0
4 | 0
0
6
0
6 | 0
0
6
0
0 | 0
0
6
0
1 | 0
0
6
0
1 | 0
0
6
2
3 | 0
0
6
3
3 | 0
0
6
3
5 | 0
0
6
4
8 | 0
0
6
4
1 | 0
0
6
6
7 |
| | | 0 |
| | | 0 |
| | | 6 |
| * TOTALS | | 50 |
| Urinary Bladder | | + |

SYSTEMIC LESIONS

| | |
|------------------------|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear | X | X | X | X | | | X | | | X | X | | X | X | X | X | | X | X | X | X | X | | | 38 |
| Mesothelioma Malignant | | X | | | | | | | | | | | | | | | | | X | X | | | | | 3 |

*** END OF MALE DATA ***

* .. 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 | 1 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| | | 0 | 1 | 7 | 3 | 6 | 0 | 2 | 6 | 7 | 8 | 0 | 1 | 3 | 4 | 6 | 6 | 8 | 8 | 0 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | | |
| | | 9 | 6 | 6 | 9 | 0 | 8 | 1 | 8 | 9 | 5 | 7 | 8 | 8 | 0 | 0 | 2 | 7 | 8 | 2 | 2 | 4 | 8 | 2 | 0 | 0 | 0 | | |
| | | | |
| FISCHER 344 RATS FEMALE
CONTROL | ANIMAL ID | 0 | 0 | | |
| | | 0 | 0 | | |
| | | 1 | 1 | | |
| | | 4 | 0 | 4 | 2 | 1 | 4 | 1 | 0 | 2 | 2 | 2 | 0 | 3 | 4 | 3 | 1 | 0 | 0 | 4 | 3 | 3 | 2 | 1 | 2 | 5 | 5 | | |
| | | 5 | 9 | 6 | 7 | 7 | 9 | 6 | 5 | 2 | 6 | 8 | 1 | 6 | 3 | 2 | 3 | 8 | 4 | 8 | 0 | 5 | 4 | 0 | 1 | 0 | 0 | 0 | |
| | | females (cont...) | |

females
(cont...)

ALIMENTARY SYSTEM

| |
|---------------------------|
| Esophagus | + |
| Intestine Large, Cecum | + | + | + | + | + | + | A | + | A | A | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + | + | + |
| Intestine Large, Colon | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + | + | + |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | + | + | + | A | + | A | A | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | A | + | A | A | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | + | A | + | A | A | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + | + | + |
| Liver | + |
| Mesentery | | | | | | | + | | | | + | | + | | + | | + | | + | | | | | | + | | |
| Oral Mucosa | | | | + | |
| Pancreas | + |
| Salivary Glands | + |

* .. 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 | 1 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|-------------------------|--|-------------------|
| DAY ON TEST | | 0 | 0 | 1 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 9 | 6 | 6 | 9 | 0 | 8 | 1 | 8 | 9 | 5 | 7 | 8 | 8 | 0 | 0 | 2 | 7 | 8 | 2 | 2 | 4 | 8 | 2 | 0 |
| FISCHER 344 RATS 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 |
| 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 |
| CONTROL |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | 4 | 0 | 4 | 2 | 1 | 4 | 1 | 0 | 2 | 2 | 2 | 0 | 3 | 4 | 3 | 1 | 0 | 0 | 4 | 3 | 3 | 2 | 1 | 2 |
| | | 5 | 9 | 6 | 7 | 7 | 9 | 6 | 5 | 2 | 6 | 8 | 1 | 6 | 3 | 2 | 3 | 8 | 4 | 8 | 0 | 5 | 4 | 0 | 1 |
| | | females (cont...) | |
| Stomach, Forestomach | | + | + |
| Stomach, Glandular | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| CARDIOVASCULAR SYSTEM | | |
| Heart | | + | + |
| ENDOCRINE SYSTEM | | |
| Adrenal Cortex | | + | + |
| Adenoma | | | | | | | | | | | | | | | | | | X | | | | | | | X |
| Adrenal Medulla | | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pheochromocytoma Benign | | | | | | | | | | | | | | | | | | | X | | | | | | |
| Islets, Pancreatic | | + | + |
| Adenoma | | |
| Parathyroid Gland | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | M | + | + | + | + | + | M |
| Pituitary Gland | | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma | | | | | | | | X | X | X | X | | X | | X | X | X | X | | X | X | X | X | X | X |
| Thyroid Gland | | + | + |

* .. 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 | 1 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | | 0 | 1 | 7 | 3 | 6 | 0 | 2 | 6 | 7 | 8 | 0 | 1 | 3 | 4 | 6 | 6 | 8 | 8 | 0 | 1 | 1 | 1 | 2 | 3 | 3 |
| | | 9 | 6 | 6 | 9 | 0 | 8 | 1 | 8 | 9 | 5 | 7 | 8 | 8 | 0 | 0 | 2 | 7 | 8 | 2 | 2 | 4 | 8 | 2 | 0 | 0 |
| | | |
| FISCHER 344 RATS FEMALE
CONTROL | | 0 | 0 | |
| | | 0 | 0 | |
| | | 1 | 1 | |
| | | 4 | 0 | 4 | 2 | 1 | 4 | 1 | 0 | 2 | 2 | 2 | 0 | 3 | 4 | 3 | 1 | 0 | 0 | 4 | 3 | 3 | 2 | 1 | 2 | 5 |
| | | 5 | 9 | 6 | 7 | 7 | 9 | 6 | 5 | 2 | 6 | 8 | 1 | 6 | 3 | 2 | 3 | 8 | 4 | 8 | 0 | 5 | 4 | 0 | 1 | 0 |
| ANIMAL ID | | females (cont...) | |

C-cell, Adenoma

C-cell, Carcinoma

X

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| |
|--------------------------------|
| Clitoral Gland | + |
| Carcinoma |
| Fibrosarcoma |
| Ovary | + |
| Granulosa Cell Tumor Malignant | |
| Uterus | + |
| Polyp Stromal |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | |
| Serosa, Hemangioma | | | | | | | | X | | | | | | | | | | | | | | | | | |

HEMATOPOIETIC SYSTEM

| |
|-------------|
| Bone Marrow | + |
| Lymph Node | | | | | | | | | | | | | | + | | | | | | | | + | | | |

* .. 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 | 1 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|-------------------------|--|-------------------|
| DAY ON TEST | | 0 | 1 | 7 | 3 | 6 | 0 | 2 | 6 | 7 | 8 | 0 | 1 | 3 | 4 | 6 | 6 | 8 | 8 | 0 | 1 | 1 | 1 | 2 | 3 |
| | | 9 | 6 | 6 | 9 | 0 | 8 | 1 | 8 | 9 | 5 | 7 | 8 | 8 | 0 | 0 | 2 | 7 | 8 | 2 | 2 | 4 | 8 | 2 | 0 |
| FISCHER 344 RATS FEMALE | | 0 | 0 |
| ANIMAL ID | | 0 | 0 |
| CONTROL | | 1 | 1 |
| | | 4 | 0 | 4 | 2 | 1 | 4 | 1 | 0 | 2 | 2 | 2 | 0 | 3 | 4 | 3 | 1 | 0 | 0 | 4 | 3 | 3 | 2 | 1 | 2 |
| | | 5 | 9 | 6 | 7 | 7 | 9 | 6 | 5 | 2 | 6 | 8 | 1 | 6 | 3 | 2 | 3 | 8 | 4 | 8 | 0 | 5 | 4 | 0 | 1 |
| | | females (cont...) | |

| |
|-------------------------|
| Lymph Node, Bronchial | + | M | + | + | M | M | M | M | M | M | M | M | + | M | M | M | M | M | M | M | M | M | M | M | M |
| Lymph Node, Mandibular | M | M | + | M | M | M | M | M | M | M | M | M | + | M | M | M | M | M | + | M | M | M | M | M | M |
| Lymph Node, Mediastinal | M | + | + | M | M | + | M | + | + | + | + | M | + | M | + | M | + | + | + | + | M | + | + | M | M |
| Lymph Node, Mesenteric | + |
| Spleen | + |
| Thymus | + |
| Thymoma Benign |

INTEGUMENTARY SYSTEM

| |
|------------------------------|
| Mammary Gland | + |
| Carcinoma | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Carcinoma, Multiple |
| Fibroadenoma | | | | | | | | | | | | X | | X | | X | X | | X | | | | X | X | |
| Fibroadenoma, Multiple | | | | | X | | | | | | | | | | X | | X | | X | | | | | | |
| Skin | + |
| Subcutaneous Tissue, Fibroma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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 | 1 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | | 0 | 1 | 7 | 3 | 6 | 0 | 2 | 6 | 7 | 8 | 0 | 1 | 3 | 4 | 6 | 6 | 8 | 8 | 0 | 1 | 1 | 1 | 2 | 3 | 3 |
| | | 9 | 6 | 6 | 9 | 0 | 8 | 1 | 8 | 9 | 5 | 7 | 8 | 8 | 0 | 0 | 2 | 7 | 8 | 2 | 2 | 4 | 8 | 2 | 0 | 0 |
| FISCHER 344 RATS FEMALE
ANIMAL ID
CONTROL | | |
| | | 0 | 0 | |
| | | 0 | 0 | |
| | | 1 | 1 | |
| | | 4 | 0 | 4 | 2 | 1 | 4 | 1 | 0 | 2 | 2 | 2 | 0 | 3 | 4 | 3 | 1 | 0 | 0 | 4 | 3 | 3 | 2 | 1 | 2 | 5 |
| | | 5 | 9 | 6 | 7 | 7 | 9 | 6 | 5 | 2 | 6 | 8 | 1 | 6 | 3 | 2 | 3 | 8 | 4 | 8 | 0 | 5 | 4 | 0 | 1 | 0 |
| | | females (cont...) | |

MUSCULOSKELETAL SYSTEM

| |
|------------------|
| Bone | + |
| Skeletal Muscle | + | |
| Rhabdomyosarcoma | X | |

NERVOUS SYSTEM

| |
|-----------------------|
| Brain | + |
| Astrocytoma Malignant | |
| Glioma Malignant | X | |

RESPIRATORY SYSTEM

| |
|---------|
| Larynx | + |
| Lung | + |
| Nose | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pleura | + | | | | + | | | | | | | | | | | | | | | + | + | | | | |
| Trachea | + |

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | 0 | 0 | 1 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
|-------------------------|--|-------------------|
| DAY ON TEST | | 0 | 1 | 7 | 3 | 6 | 0 | 2 | 6 | 7 | 8 | 0 | 1 | 3 | 4 | 6 | 6 | 8 | 8 | 0 | 1 | 1 | 1 | 2 | 3 | 3 |
| | | 9 | 6 | 6 | 9 | 0 | 8 | 1 | 8 | 9 | 5 | 7 | 8 | 8 | 0 | 0 | 2 | 7 | 8 | 2 | 2 | 4 | 8 | 2 | 0 | 0 |
| | | |
| FISCHER 344 RATS FEMALE | | 0 | 0 |
| ANIMAL ID | | 0 | 0 |
| CONTROL | | 1 | 1 |
| | | 4 | 0 | 4 | 2 | 1 | 4 | 1 | 0 | 2 | 2 | 2 | 0 | 3 | 4 | 3 | 1 | 0 | 0 | 4 | 3 | 3 | 2 | 1 | 2 | 5 |
| | | 5 | 9 | 6 | 7 | 7 | 9 | 6 | 5 | 2 | 6 | 8 | 1 | 6 | 3 | 2 | 3 | 8 | 4 | 8 | 0 | 5 | 4 | 0 | 1 | 0 |
| | | females (cont...) | |

SPECIAL SENSES SYSTEM

| |
|-----------------|
| Eye | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Harderian Gland | + |

URINARY SYSTEM

| |
|-----------------|
| Kidney | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ureter |
| Urinary Bladder | + |

SYSTEMIC LESIONS

| |
|----------------------|
| Multiple Organ | + |
| Leukemia Mononuclear | | | | | | | | | | | X | | X | | X | | X | X | | | | 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

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First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | |
|---|--|----------|
| DAY ON TEST | | 7 | 7 | |
| | | 3 | 3 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| <hr/> | | |
| FISCHER 344 RATS FEMALE
CONTROL
ANIMAL ID | | 0 | 0 | |
| | | 0 | 0 | |
| | | 1 | 1 | |
| | | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 3 |
| | | 3 | 6 | 1 | 2 | 5 | 9 | 3 | 1 | 3 | 8 | 9 | 0 | 1 | 4 | 7 | 2 | 7 | 4 | 8 | 0 | 5 | 9 | 4 |
| | | * TOTALS | |

ALIMENTARY SYSTEM

| | |
|---------------------------|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Mesentery | + | + | + | | + | | | | | | | | + | | | + | | | | + | | | | 14 |
| Oral Mucosa |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. 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 | | 7 | 7 | |
| | | 3 | 3 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| <hr style="border-top: 1px dotted black;"/> | | |
| FISCHER 344 RATS FEMALE
CONTROL | | 0 | 0 | |
| | | 0 | 0 | |
| | | 1 | 1 | |
| | | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 3 |
| | | 3 | 6 | 1 | 2 | 5 | 9 | 3 | 1 | 3 | 8 | 9 | 0 | 1 | 4 | 7 | 2 | 7 | 4 | 8 | 0 | 5 | 9 | 4 | 7 |
| | | * TOTALS | |

Stomach, Forestomach

+ 50

Stomach, Glandular

+ 49

CARDIOVASCULAR SYSTEM

Heart

+ 50

ENDOCRINE SYSTEM

Adrenal Cortex

+ 50

Adenoma

2

Adrenal Medulla

+ 49

Pheochromocytoma Benign

1

Islets, Pancreatic

+ 50

Adenoma

X X

X 3

Parathyroid Gland

+ + + + + + + + + + M M + M + + + + + M + + + + 43

Pituitary Gland

+ 50

Adenoma

X 35

Thyroid Gland

+ 50

* .. 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

| | | 7 | 7 |
|-------------------------|--|----------|
| DAY ON TEST | | 3 | 3 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| FISCHER 344 RATS FEMALE | | 0 | 0 |
| ANIMAL ID | | 0 | 0 |
| CONTROL | | 1 | 1 |
| | | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 4 |
| | | 3 | 6 | 1 | 2 | 5 | 9 | 3 | 1 | 3 | 8 | 9 | 0 | 1 | 4 | 7 | 2 | 7 | 4 | 8 | 0 | 5 | 9 | 4 | 7 |
| | | * TOTALS | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|---|---|
| C-cell, Adenoma | | | | | | | | | | | | | | | | | | | | | | | | X | 2 |
| C-cell, Carcinoma | | | | | | | | | | | | | | | | | | X | | | | | | | 1 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | |
|--------------------------------|----|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma | | | | | | | | | | | | | | | | X | | | | | | | | | 1 |
| Fibrosarcoma | | | | | | | | | | | | | | | | | X | | | | | | | | 1 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Granulosa Cell Tumor Malignant |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | | 1 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Polyp Stromal | | | | | | | X | | | | | | | X | | X | | X | | | | X | | | 6 |
| Serosa, Hemangioma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |

HEMATOPOIETIC SYSTEM

| | |
|-------------|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

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ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | 7 | 7 |
|------------------------------------|-----------|----------|
| DAY ON TEST | | 3 | 3 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | |
| FISCHER 344 RATS FEMALE
CONTROL | ANIMAL ID | 0 | 0 |
| | | 0 | 0 |
| | | 1 | 1 |
| | | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 3 |
| | | 3 | 6 | 1 | 2 | 5 | 9 | 3 | 1 | 3 | 8 | 9 | 0 | 1 | 4 | 7 | 2 | 7 | 4 | 8 | 0 | 5 | 9 | 4 |
| | | * TOTALS | |

| | |
|-------------------------|----|
| Lymph Node, Bronchial | M | 4 | |
| Lymph Node, Mandibular | M | 3 | |
| Lymph Node, Mediastinal | M | M | + | M | M | M | + | M | + | + | + | M | M | + | + | M | + | M | M | + | M | M | M | + | + | 26 |
| Lymph Node, Mesenteric | + | 50 |
| Spleen | + | 50 |
| Thymus | + | 50 |
| Thymoma Benign | | | | | | | X | | | | | | | | | | | | | | | | | | 1 | |

INTEGUMENTARY SYSTEM

| | |
|------------------------------|----|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Carcinoma, Multiple | | | | | | | | | | | | | | | | | | | X | | | | X | | 2 |
| Fibroadenoma | | X | X | | | X | X | | X | | | | | | | | | | X | | X | | | | 14 |
| Fibroadenoma, Multiple | | | | | X | | | X | | | | | | X | | | | | | X | | | | | 8 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Subcutaneous Tissue, Fibroma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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 | | 7 | 7 | | | |
|------------------------------------|--|-------|----------|
| | | 3 | 3 | | | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | |
| FISCHER 344 RATS FEMALE
CONTROL | | | |
| | | 0 | 0 | | | |
| | | 0 | 0 | | | |
| | | 1 | 1 | | | |
| | | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 4 | | |
| | | 3 | 6 | 1 | 2 | 5 | 9 | 3 | 1 | 3 | 8 | 9 | 0 | 1 | 4 | 7 | 2 | 7 | 4 | 8 | 0 | 5 | 9 | 4 | 7 | 2 | * TOTALS |

MUSCULOSKELETAL SYSTEM

| | |
|------------------|----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Skeletal Muscle | + |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |
| Rhabdomyosarcoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |

NERVOUS SYSTEM

| | |
|-----------------------|----|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Astrocytoma Malignant | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Glioma Malignant |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |

RESPIRATORY SYSTEM

| | |
|---------|----|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Pleura | | | + | | + | + | | + | | + | + | + | | + | | | | + | | + | + | | + | | 16 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. 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 | 7 | 7 |
| | | 3 | 3 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| FISCHER 344 RATS FEMALE
CONTROL | ANIMAL ID | 0 | 0 |
| | | 0 | 0 |
| | | 1 | 1 |
| | | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 4 |
| | | 3 | 6 | 1 | 2 | 5 | 9 | 3 | 1 | 3 | 8 | 9 | 0 | 1 | 4 | 7 | 2 | 7 | 4 | 8 | 0 | 5 | 9 | 4 | 7 |
| | | * TOTALS | |

SPECIAL SENSES SYSTEM

| | |
|-----------------|----|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

URINARY SYSTEM

| | |
|-----------------|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Ureter |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

SYSTEMIC LESIONS

| | |
|----------------------|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear | | | X | X | X | X | | X | X | | | | X | X | | X | | | X | | X | | X | | | 18 |

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | |
|------------------------------------|--|-------------------|
| DAY ON TEST | | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | |
| | | 3 | 9 | 3 | 3 | 5 | 6 | 9 | 0 | 1 | 2 | 4 | 4 | 5 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 9 | 0 | 1 | 1 | 2 |
| | | 5 | 5 | 7 | 7 | 7 | 1 | 0 | 0 | 0 | 1 | 2 | 9 | 2 | 0 | 2 | 3 | 2 | 3 | 4 | 8 | 4 | 4 | 2 | 5 | 1 |
| FISCHER 344 RATS FEMALE
100 PPM | | |
| | | 0 | 0 |
| | | 0 | 0 |
| | | 3 | 3 |
| | | 0 | 3 | 0 | 4 | 0 | 2 | 3 | 5 | 1 | 4 | 2 | 1 | 3 | 1 | 4 | 2 | 4 | 3 | 3 | 0 | 3 | 4 | 3 | 1 | 1 |
| | | 5 | 5 | 2 | 9 | 6 | 3 | 1 | 0 | 1 | 8 | 0 | 9 | 0 | 2 | 1 | 5 | 7 | 3 | 6 | 7 | 4 | 6 | 9 | 7 | 5 |
| | | females (cont...) | |

females
(cont...)

ALIMENTARY SYSTEM

| |
|-------------------------------------|
| Esophagus | + |
| Intestine Large, Cecum | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | A | + | + | + | + | A |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | A | + | + | + | + | A |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | A |
| Intestine Small, Duodenum | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | A |
| Intestine Small, Ileum | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | A | + | + | + | + | A |
| Intestine Small, Jejunum | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | A | + | + | + | + | A |
| Liver | + |
| Mesentery | | | | | | | + | | | | + | | + | | | | | | | | | + | + | + | + |
| Sarcoma Stromal, Metastatic, Uterus | |
| Pancreas | + |
| Salivary Glands | + |
| Stomach, Forestomach | + |

* .. 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 | | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | |
| | | 3 | 9 | 3 | 3 | 5 | 6 | 9 | 0 | 1 | 2 | 4 | 4 | 5 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 9 | 0 | 1 | 1 | 2 |
| | | 5 | 5 | 7 | 7 | 7 | 1 | 0 | 0 | 0 | 1 | 2 | 9 | 2 | 0 | 2 | 3 | 2 | 3 | 4 | 8 | 4 | 4 | 2 | 5 | 1 |
| | | |
| FISCHER 344 RATS FEMALE
100 PPM | | 0 | 0 | |
| | | 0 | 0 | |
| | | 3 | 3 | |
| | | 0 | 3 | 0 | 4 | 0 | 2 | 3 | 5 | 1 | 4 | 2 | 1 | 3 | 1 | 4 | 2 | 4 | 3 | 3 | 0 | 3 | 4 | 3 | 1 | 1 |
| | | 5 | 5 | 2 | 9 | 6 | 3 | 1 | 0 | 1 | 8 | 0 | 9 | 0 | 2 | 1 | 5 | 7 | 3 | 6 | 7 | 4 | 6 | 9 | 7 | 5 |
| | | females (cont...) | |

Stomach, Glandular

+ +

Tongue

CARDIOVASCULAR SYSTEM

Blood Vessel

+

Heart

+ +

ENDOCRINE SYSTEM

Adrenal Cortex

+ +

Adrenal Medulla

+ +

Pheochromocytoma Malignant

X

Islets, Pancreatic

+ +

Parathyroid Gland

+ +

Pituitary Gland

+ M

Adenoma

X X X X X X X X X X X X X X X X X X X X

Carcinoma

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

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

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Lab: BNW

| | DAY ON TEST | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 |
|--|-------------|
| | | 3 | 9 | 3 | 3 | 5 | 6 | 9 | 0 | 1 | 2 | 4 | 4 | 5 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 9 | 0 | 1 | 1 | 2 |
| | | 5 | 5 | 7 | 7 | 7 | 1 | 0 | 0 | 0 | 1 | 2 | 9 | 2 | 0 | 2 | 3 | 2 | 3 | 4 | 8 | 4 | 4 | 2 | 5 | 1 |
| FISCHER 344 RATS FEMALE
100 PPM | ANIMAL ID | 0 |
| | | 0 |
| | | 3 |
| | | 0 | 3 | 0 | 4 | 0 | 2 | 3 | 5 | 1 | 4 | 2 | 1 | 3 | 1 | 4 | 2 | 4 | 3 | 3 | 0 | 3 | 4 | 3 | 1 | 1 |
| | | 5 | 5 | 2 | 9 | 6 | 3 | 1 | 0 | 1 | 8 | 0 | 9 | 0 | 2 | 1 | 5 | 7 | 3 | 6 | 7 | 4 | 6 | 9 | 7 | 5 |

females
(cont...)

Thyroid Gland

+ +

C-cell, Adenoma

X X X

C-cell, Carcinoma

X

Follicular Cell, Adenoma

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Clitoral Gland

+ +

Carcinoma

Ovary

+ +

Granulosa Cell Tumor Benign

X

Uterus

+ +

Polyp Stromal

X X

Polyp Stromal, Multiple

X

Sarcoma Stromal

Vagina

+

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | |
|---|--|-------------------|
| DAY ON TEST | | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | |
| | | 3 | 9 | 3 | 3 | 5 | 6 | 9 | 0 | 1 | 2 | 4 | 4 | 5 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 9 | 0 | 1 | 1 | 2 |
| | | 5 | 5 | 7 | 7 | 7 | 1 | 0 | 0 | 0 | 1 | 2 | 9 | 2 | 0 | 2 | 3 | 2 | 3 | 4 | 8 | 4 | 4 | 2 | 5 | 1 |
| FISCHER 344 RATS FEMALE
ANIMAL ID
100 PPM | | |
| | | 0 | 0 | |
| | | 0 | 0 | |
| | | 3 | 3 | |
| | | 0 | 3 | 0 | 4 | 0 | 2 | 3 | 5 | 1 | 4 | 2 | 1 | 3 | 1 | 4 | 2 | 4 | 3 | 3 | 0 | 3 | 4 | 3 | 1 | 1 |
| | | 5 | 5 | 2 | 9 | 6 | 3 | 1 | 0 | 1 | 8 | 0 | 9 | 0 | 2 | 1 | 5 | 7 | 3 | 6 | 7 | 4 | 6 | 9 | 7 | 5 |
| | | females (cont...) | |

HEMATOPOIETIC SYSTEM

Bone Marrow

+ +

Lymph Node

+ + +

Deep Cervical, Carcinoma, Metastatic,
Thyroid Gland

X

Lymph Node, Bronchial

M M M M M + M M M M M M M + + M M M + M M M M M M

Lymph Node, Mandibular

M M

Lymph Node, Mediastinal

M + M + M M + + M M M + + M + + M + + + + M M + +

Lymph Node, Mesenteric

+ +

Spleen

+ +

Thymus

+ +

INTEGUMENTARY SYSTEM

Mammary Gland

+ +

Adenoma

Carcinoma

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 | | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | |
| | | 3 | 9 | 3 | 3 | 5 | 6 | 9 | 0 | 1 | 2 | 4 | 4 | 5 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 9 | 0 | 1 | 1 | 2 |
| | | 5 | 5 | 7 | 7 | 7 | 1 | 0 | 0 | 0 | 1 | 2 | 9 | 2 | 0 | 2 | 3 | 2 | 3 | 4 | 8 | 4 | 4 | 2 | 5 | 1 |
| | | |
| FISCHER 344 RATS FEMALE
100 PPM
ANIMAL ID | | 0 | 0 | |
| | | 0 | 0 | |
| | | 3 | 3 | |
| | | 0 | 3 | 0 | 4 | 0 | 2 | 3 | 5 | 1 | 4 | 2 | 1 | 3 | 1 | 4 | 2 | 4 | 3 | 3 | 0 | 3 | 4 | 3 | 1 | 1 |
| | | 5 | 5 | 2 | 9 | 6 | 3 | 1 | 0 | 1 | 8 | 0 | 9 | 0 | 2 | 1 | 5 | 7 | 3 | 6 | 7 | 4 | 6 | 9 | 7 | 5 |
| | | females (cont...) | |

FibroadenomaX X X X X X

Fibroadenoma, MultipleX X X X X

Skin+ +

Basal Cell Adenoma

KeratoacanthomaX

Subcutaneous Tissue, FibrosarcomaX

MUSCULOSKELETAL SYSTEM

Bone+ +

Skeletal Muscle+

NERVOUS SYSTEM

Brain+ +

Carcinoma, Metastatic, Pituitary Gland

RESPIRATORY SYSTEM

Larynx+ +

Lung+ +

* .. 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 | | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | |
| | | 3 | 9 | 3 | 3 | 5 | 6 | 9 | 0 | 1 | 2 | 4 | 4 | 5 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 9 | 0 | 1 | 1 | 2 |
| | | 5 | 5 | 7 | 7 | 7 | 1 | 0 | 0 | 0 | 1 | 2 | 9 | 2 | 0 | 2 | 3 | 2 | 3 | 4 | 8 | 4 | 4 | 2 | 5 | 1 |
| | | |
| FISCHER 344 RATS FEMALE
100 PPM
ANIMAL ID | | 0 | 0 | |
| | | 0 | 0 | |
| | | 3 | 3 | |
| | | 0 | 3 | 0 | 4 | 0 | 2 | 3 | 5 | 1 | 4 | 2 | 1 | 3 | 1 | 4 | 2 | 4 | 3 | 3 | 0 | 3 | 4 | 3 | 1 | 1 |
| | | 5 | 5 | 2 | 9 | 6 | 3 | 1 | 0 | 1 | 8 | 0 | 9 | 0 | 2 | 1 | 5 | 7 | 3 | 6 | 7 | 4 | 6 | 9 | 7 | 5 |
| | | females (cont...) | |

Carcinoma, Metastatic, Thyroid Gland

Mediastinum, Sarcoma Stromal, Metastatic, Uterus

X

| |
|---------|
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + |
| Pleura | | | | | | | + | + | | + | | | | + | | | | | | | | | + | | |
| Trachea | + |

SPECIAL SENSES SYSTEM

| |
|-----------------|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + |
| Harderian Gland | + |

URINARY SYSTEM

| |
|------------------------------------|
| Kidney | + |
| Urinary Bladder | + |
| Transitional Epithelium, Carcinoma | |

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

TDMS No. 88006 - 03

Test Type: CHRONIC

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Species/Strain: RATS/F 344

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ALPHA-METHYLSTYRENE

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First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 |
|-------------------------|--|-------------------|
| DAY ON TEST | | 3 | 9 | 3 | 3 | 5 | 6 | 9 | 0 | 1 | 2 | 4 | 4 | 5 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 9 | 0 | 1 | 1 | 2 |
| | | 5 | 5 | 7 | 7 | 7 | 1 | 0 | 0 | 0 | 1 | 2 | 9 | 2 | 0 | 2 | 3 | 2 | 3 | 4 | 8 | 4 | 4 | 2 | 5 | 1 |
| FISCHER 344 RATS FEMALE | | 0 | 0 |
| ANIMAL ID | | 0 | 0 |
| 100 PPM | | 3 | 3 |
| | | 0 | 3 | 0 | 4 | 0 | 2 | 3 | 5 | 1 | 4 | 2 | 1 | 3 | 1 | 4 | 2 | 4 | 3 | 3 | 0 | 3 | 4 | 3 | 1 | 1 |
| | | 5 | 5 | 2 | 9 | 6 | 3 | 1 | 0 | 1 | 8 | 0 | 9 | 0 | 2 | 1 | 5 | 7 | 3 | 6 | 7 | 4 | 6 | 9 | 7 | 5 |
| | | females (cont...) | |

Multiple Organ

Histiocytic Sarcoma

Leukemia Mononuclear

| |
|---|
| + |
| | | | | | | | | | | | | | | | | | | X | | | | | | | |
| | | X | | | | | | | | X | | | X | | | X | | | X | X | X | X | X | X | X |

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

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

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| | | FISCHER 344 RATS FEMALE
100 PPM | | |
|--|--|------------------------------------|----------|
| | | DAY ON TEST | |
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2 | 7
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| | | ANIMAL ID | |
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6 | 0
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8 | 0
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3
2
9 | 0
0
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3
2 | 0
0
3
4
4 | 0
0
3
4
5 | * TOTALS |

ALIMENTARY SYSTEM

| | |
|-------------------------------------|----|
| Esophagus | + | 50 |
| Intestine Large, Cecum | + | 46 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Mesentery | | + | + | | | + | | | | | | + | + | | | + | | + | | + | | | + | 17 |
| Sarcoma Stromal, Metastatic, Uterus | | | | | | | | | | | | | | X | | | | | | | | | | 1 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. 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 | 7 | 7 |
| | | 2 | 3 |
| | | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| FISCHER 344 RATS FEMALE
100 PPM | ANIMAL ID | 0 | 0 |
| | | 0 | 0 |
| | | 3 | 3 |
| | | 4 | 3 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 4 | 4 |
| | | 3 | 7 | 0 | 3 | 6 | 8 | 1 | 7 | 8 | 0 | 2 | 1 | 3 | 4 | 8 | 9 | 4 | 2 | 4 | 6 | 8 | 9 | 2 | 4 |
| | | * TOTALS | |

| | |
|--------------------|----|
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Tongue |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | + | 1 |

CARDIOVASCULAR SYSTEM

| | |
|--------------|----|
| Blood Vessel |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

ENDOCRINE SYSTEM

| | |
|----------------------------|----|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Pheochromocytoma Malignant |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adenoma | X | X | X | X | X | | X | | | X | X | X | | | | X | X | | X | X | X | X | X | X | 29 |
| Carcinoma | | | | | | | | | | X | | | | | | | | | | | | | | | 1 |

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

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| | | | |
|------------------------------------|--|-------------|----------|
| | | DAY ON TEST | |
| | | 7 | 7 | | | |
| | | 2 | 3 | | |
| FISCHER 344 RATS FEMALE
100 PPM | | | |
| | | 0 | 0 | | |
| | | 0 | 0 | | |
| | | 3 | 3 | | |
| | | 4 | 3 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 4 | 4 | | |
| | | 3 | 7 | 0 | 3 | 6 | 8 | 1 | 7 | 8 | 0 | 2 | 1 | 3 | 4 | 8 | 9 | 4 | 2 | 4 | 6 | 8 | 9 | 2 | 4 | 5 | * TOTALS |

| | |
|--------------------------|----|
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| C-cell, Adenoma | | | | | | | | X | | | | | | | | | | X | | | | X | | | | 6 |
| C-cell, Carcinoma | | | | | | X | | | | | | | | | | | | | | | | | | | | 2 |
| Follicular Cell, Adenoma | | | | | | | | | | | | | | | | | | X | | | | | | | | 1 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | |
|-----------------------------|----|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | | 1 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Granulosa Cell Tumor Benign |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Polyp Stromal | | | | | | | | | | | | X | X | | X | | X | | X | X | | X | X | | | 13 |
| Polyp Stromal, Multiple |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Sarcoma Stromal | | | | | | | | | | | | | | | X | | | | | | | | | | | 1 |
| Vagina |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |

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

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

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| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|--|-----------|---|---|---|---|---|---|---|---|---|---|---|---|----|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS 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 | 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 |
| | | 4 | 3 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 4 |
| | | 3 | 7 | 0 | 3 | 6 | 8 | 1 | 7 | 8 | 0 | 2 | 1 | 3 | 4 | 8 | 9 | 4 | 2 | 4 | 6 | 8 | 9 | 2 |
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HEMATOPOIETIC SYSTEM

| | | |
|---|----|----|
| Bone Marrow | + | 50 | |
| Lymph Node | | 3 | |
| Deep Cervical, Carcinoma, Metastatic, Thyroid Gland | | 1 | |
| Lymph Node, Bronchial | M | M | M | M | M | M | M | + | M | M | M | M | M | + | M | M | M | M | M | + | M | M | M | M | M | 7 |
| Lymph Node, Mandibular | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 0 |
| Lymph Node, Mediastinal | M | + | M | + | M | + | I | + | M | M | M | M | M | + | M | + | M | M | M | + | + | + | + | + | M | 25 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | M | + | + | + | + | + | + | + | 48 |

INTEGUMENTARY SYSTEM

| | |
|---------------|----|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Carcinoma | | | | | | | | | | 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 | |
|-------------------------|--|-------------|
| | | 7
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2 |
| FISCHER 344 RATS FEMALE | | 0 |
| ANIMAL ID | | 0 |
| 100 PPM | | 3 |
| | | 4 | 3 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 4 | 4 |
| | | 3 | 7 | 0 | 3 | 6 | 8 | 1 | 7 | 8 | 0 | 2 | 1 | 3 | 4 | 8 | 9 | 4 | 2 | 4 | 6 | 8 | 9 | 2 | 4 |
| | | * TOTALS | |

| | |
|-----------------------------------|----|
| Fibroadenoma | | | | | X | X | | | X | | | | X | | | | X | | X | X | | X | | X | | 16 |
| Fibroadenoma, Multiple | X | X | X | | | | X | | | | X | | | | X | | | X | | | X | | | X | | 14 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Basal Cell Adenoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | | | 1 |
| Keratoacanthoma | | | | | | | | | | | | | | X | | | | | | | | | | | | 2 |
| Subcutaneous Tissue, Fibrosarcoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |

MUSCULOSKELETAL SYSTEM

| | |
|-----------------|----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Skeletal Muscle |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |

NERVOUS SYSTEM

| | |
|--|----|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma, Metastatic, Pituitary Gland | | | | | | | | | X | | | | | | | | | | | | | | | | | 1 |

RESPIRATORY SYSTEM

| | |
|--------|----|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. 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

| | | |
|------------------------------------|-------------|----------|
| | | 7 | |
| | DAY ON TEST | 2 | 3 | |
| | | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | | |
| FISCHER 344 RATS FEMALE
100 PPM | | 0 | |
| | ANIMAL ID | 0 | |
| | | 3 | |
| | | 4 | 3 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 4 | 4 |
| | | 3 | 7 | 0 | 3 | 6 | 8 | 1 | 7 | 8 | 0 | 2 | 1 | 3 | 4 | 8 | 9 | 4 | 2 | 4 | 6 | 8 | 9 | 2 | 4 | 5 |
| | | |
| | | * TOTALS |

| | |
|----------------------|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Histiocytic Sarcoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Leukemia Mononuclear | X | X | X | | | | X | | X | | | X | X | X | | | | | | X | | | | X | | 21 |

* .. 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

| | | |
|------------------------------------|-------------|-------------------|
| FISCHER 344 RATS FEMALE
300 PPM | DAY ON TEST | 4 | 4 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 7 | 9 | 6 | 0 | 0 | 1 | 2 | 4 | 4 | 7 | 8 | 8 | 0 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 7 | 5 | 2 | 0 | 3 | 4 | 6 | 6 | 7 | 7 | 3 | 9 | 5 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | ANIMAL ID | 0 | 0 |
| | | 0 | 0 |
| | | 5 | 5 |
| | | 5 | 4 | 3 | 2 | 3 | 1 | 4 | 0 | 0 | 4 | 1 | 2 | 3 | 3 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 |
| | | 0 | 5 | 2 | 7 | 4 | 6 | 0 | 6 | 5 | 7 | 2 | 4 | 5 | 6 | 4 | 8 | 9 | 1 | 3 | 4 | 7 | 9 | 6 |
| | | females (cont...) | |

ALIMENTARY SYSTEM

| |
|-------------------------------------|
| Esophagus | + |
| Intestine Large, Cecum | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon | + |
| Intestine Large, Rectum | + |
| Intestine Small, Duodenum | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | A | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | A | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + |
| Mesentery | | | + | | | + | | | | | + | | | | + | | | | | + | | | |
| Oral Mucosa |
| Pharyngeal, Squamous Cell Papilloma | |
| Pancreas | + |
| Salivary Glands | + |

* .. 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

| | | |
|------------------------------------|-------------|----------------------|
| FISCHER 344 RATS FEMALE
300 PPM | DAY ON TEST | 4 | 4 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 7 | 9 | 6 | 0 | 0 | 1 | 2 | 4 | 4 | 7 | 8 | 8 | 0 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 7 | 5 | 2 | 0 | 3 | 4 | 6 | 6 | 7 | 7 | 3 | 9 | 5 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | ANIMAL ID | 0 |
| | | 0 |
| | | 5 |
| | | 5 | 4 | 3 | 2 | 3 | 1 | 4 | 0 | 0 | 4 | 1 | 2 | 3 | 3 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| | | 0 | 5 | 2 | 7 | 4 | 6 | 0 | 6 | 5 | 7 | 2 | 4 | 5 | 6 | 4 | 8 | 9 | 1 | 3 | 4 | 7 | 9 | 1 | 5 | 6 |
| | | females
(cont...) |

| |
|----------------------|
| Stomach, Forestomach | + |
| Stomach, Glandular | + |
| Tongue | + | | | | | | | | | | | | | | | | + | | | | | | | | | |

CARDIOVASCULAR SYSTEM

| |
|-------|
| Heart | + |
|-------|

ENDOCRINE SYSTEM

| |
|----------------------------|
| Adrenal Cortex | + |
| Adrenal Medulla | + |
| Pheochromocytoma Malignant | |
| Islets, Pancreatic | + |
| Adenoma |
| Carcinoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |
| Parathyroid Gland | + | + | + | + | M | + | M | + | + | + | + | + | + | + | + | + | M | + | M | M | + | + | + | + | + | + |
| Pituitary Gland | + |

* .. 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

| | | FISCHER 344 RATS FEMALE | | females
(cont...) |
|-----------------|--|-------------------------|----------------------|
| | | 300 PPM | |
| DAY ON TEST | | 4
7
7 | 4
9
5 | 5
6
2 | 6
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| ANIMAL ID | | 0
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4 | 0
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1
7 | 0
0
5
1
9 | 0
0
5
2
1 | 0
0
5
2
5 | 0
0
5
2
6 | |
| Adenoma | | X | | | X | | X | X | X | X | X | | X | X | X | X | | X | X | X | X | | X | X | | | |
| Thyroid Gland | | + | + | |
| C-cell, Adenoma | | | | | | | | X | | | | | | | | X | | | | | | | | | | | |

GENERAL BODY SYSTEM
NONE

GENITAL SYSTEM

| |
|----------------|
| Clitoral Gland | + |
| Carcinoma | | | | | | | | | | | | | X | | | | | | X | | | X | | |
| Ovary | + |
| Uterus | + |
| Polyp Stromal | | | | | | | | | | | | X | | | | X | | | | X | | | | |

HEMATOPOIETIC SYSTEM

| |
|-------------|
| Bone Marrow | + |
| Lymph Node | | | + | | | | | + | | | | | | | | | | | | | | | | | |

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | DAY ON TEST | 4 | 4 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|------------------------------------|-------------|
| | | 7 | 9 | 6 | 0 | 0 | 1 | 2 | 4 | 4 | 7 | 8 | 8 | 0 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 7 | 5 | 2 | 0 | 3 | 4 | 6 | 6 | 7 | 7 | 3 | 9 | 5 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| FISCHER 344 RATS FEMALE
300 PPM | ANIMAL ID | 0 |
| | | 0 |
| | | 5 |
| | | 5 | 4 | 3 | 2 | 3 | 1 | 4 | 0 | 0 | 4 | 1 | 2 | 3 | 3 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 |
| | | 0 | 5 | 2 | 7 | 4 | 6 | 0 | 6 | 5 | 7 | 2 | 4 | 5 | 6 | 4 | 8 | 9 | 1 | 3 | 4 | 7 | 9 | 1 |

females
(cont...)

| |
|-------------------------|
| Lymph Node, Bronchial | M | M | + | M | + | M | M | M | + | M | M | M | M | M | M | M | M | M | M | M | M | + | M | M | M |
| Lymph Node, Mandibular | M | M | + | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M |
| Lymph Node, Mediastinal | + | + | + | M | M | + | M | + | + | M | + | + | M | + | M | + | M | + | M | M | M | M | M | + | M |
| Lymph Node, Mesenteric | + |
| Spleen | + |
| Thymus | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

INTEGUMENTARY SYSTEM

| |
|------------------------|
| Mammary Gland | + |
| Carcinoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | |
| Carcinoma, Multiple |
| Fibroadenoma | | | | | | | | | | X | | | X | | | | X | | | | | | | X | |
| Fibroadenoma, Multiple | | | | | | | | | X | | X | X | | | | | | | | | | X | | X | |
| Skin | + |
| Basal Cell Carcinoma | | | | | | | | | | X | | | | | | | | | | | | | | | |
| Keratoacanthoma |

MUSCULOSKELETAL SYSTEM

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

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

| | | DAY ON TEST | | females
(cont..) |
|-------------------------|--|---------------------|
| | | 4
7
7 | 4
9
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2 | 6
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3 | 6
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9 | 7
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| FISCHER 344 RATS FEMALE | | 0
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| 300 PPM | | |
| ANIMAL ID | | |
| Bone | | + | |
| NERVOUS SYSTEM | | |
| Brain | | + | |
| RESPIRATORY SYSTEM | | |
| Larynx | | + | |
| Lung | | + | |
| Nose | | + | |
| Pleura | | + | | | | | | | + | | | | | | | + | | + | + | | | | + | | + | | |
| Trachea | | + | |
| SPECIAL SENSES SYSTEM | | |
| Eye | | + | |
| Harderian Gland | | + | |

* .. 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

| FISCHER 344 RATS FEMALE
300 PPM | | ANIMAL ID | | DAY ON TEST | | 4 | 4 | 5 | 6 |
|------------------------------------|--|-----------|--|-------------|--|---|
|------------------------------------|--|-----------|--|-------------|--|---|

URINARY SYSTEM

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

SYSTEMIC LESIONS

| |
|----------------------|
| Multiple Organ | + |
| Leukemia Mononuclear | X | X | | X | X | | X | | | X | X | X | X | | | | X | | | | | | 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

Species/Strain: RATS/F 344

Pathologist: RENNE, R.

Lab: BNW

| | | 7
3
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1 | 7
3
1 | 7
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1 | 7
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|------------------------------------|-----------|----------|
| DAY ON TEST | | |
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| FISCHER 344 RATS FEMALE
300 PPM | ANIMAL ID | 0 | |
| | | 0 | |
| | | 5 | |
| | | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | |
| | | 0 | 3 | 8 | 9 | 1 | 2 | 4 | 6 | 1 | 2 | 3 | 7 | 0 | 5 | 8 | 0 | 2 | 3 | 8 | 9 | 1 | 7 | 3 | 8 | 9 | * TOTALS |

| | |
|----------------------|----|
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Tongue |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |

CARDIOVASCULAR SYSTEM

| | |
|-------|----|
| Heart | + | 50 |
|-------|----|

ENDOCRINE SYSTEM

| | |
|----------------------------|----|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | X | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Pheochromocytoma Malignant |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | | 1 |
| Carcinoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | M | + | + | + | + | + | 43 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. 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

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|------------------------------------|--|-----------------------|----------|
| FISCHER 344 RATS FEMALE
300 PPM | | 0
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9 | * TOTALS |
| Adenoma | | | | X | | | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | 37 |
| Thyroid Gland | | + | 50 |
| C-cell, Adenoma | | | | X | | | | | | | | | | | | | | | | X | | | | | | | 4 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | |
|----------------|----|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Polyp Stromal | | | | | X | | | | | | | X | | | | X | | X | | | X | | X | | 9 |

HEMATOPOIETIC SYSTEM

| | |
|-------------|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

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|-------------------------|--|-----------------------|----|----------|
| DAY ON TEST | | | | |
| FISCHER 344 RATS FEMALE | | 0
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8 | | |
| 300 PPM | | | | * TOTALS |
| Lymph Node, Bronchial | | M | M | M | + | + | M | M | M | M | M | M | M | M | M | M | M | M | + | M | + | M | M | M | M | | 8 |
| Lymph Node, Mandibular | | M | | 1 |
| Lymph Node, Mediastinal | | + | M | M | + | M | M | M | M | + | M | + | + | + | M | M | M | M | M | + | + | + | M | M | M | M | 21 |
| Lymph Node, Mesenteric | | + | | 50 |
| Spleen | | + | | 50 |
| Thymus | | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 48 |
| INTEGUMENTARY SYSTEM | | | | |
| Mammary Gland | | + | | 50 |
| Carcinoma | | | | | | | | | | | | | | | X | | | | | | | | | X | | 3 | |
| Carcinoma, Multiple | | | | | | | | | | | X | | | | | | | | | | | | | | | 1 | |
| Fibroadenoma | | | | X | X | | X | X | | X | X | X | X | | | X | | | X | X | | | | | | 16 | |
| Fibroadenoma, Multiple | | X | | X | | 7 | |
| Skin | | | | |
| Basal Cell Carcinoma | | + | | 1 |
| Keratoacanthoma | | | | | | | | | | | | | | X | | | | | | | | | | | | 1 | |

MUSCULOSKELETAL SYSTEM

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

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 94

| | | | | | |
|--------------------------|--|-------------------------|---|---|----------|
| DAY ON TEST | | 7
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| | | | | | |
| | | FISCHER 344 RATS FEMALE | | | | |
| ANIMAL ID

300 PPM | | 0 | 0 | | | |
| | | 0 | 0 | | | |
| | | 5 | 5 | | | |
| | | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | | | |
| | | 0 | 3 | 8 | 9 | 1 | 2 | 4 | 6 | 1 | 2 | 3 | 7 | 0 | 5 | 8 | 0 | 2 | 3 | 8 | 9 | 1 | 7 | 3 | 8 | 9 | * TOTALS |

URINARY SYSTEM

| | |
|-----------------|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

SYSTEMIC LESIONS

| | |
|----------------------|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leukemia Mononuclear | | | X | X | X | | X | | | X | X | | | X | X | | | X | X | | X | | X | 21 |

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | DAY ON TEST | | |
|-------------------------------------|-----------|-------------------|--|--|
| | | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| | | 5 | 0 | 3 | 4 | 6 | 8 | 8 | 1 | 1 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 9 | 0 | 0 | 1 | 2 | 2 | 2 | 3 | | |
| | | 8 | 9 | 4 | 3 | 9 | 1 | 5 | 0 | 9 | 2 | 0 | 2 | 3 | 8 | 8 | 8 | 7 | 8 | 0 | 1 | 2 | 8 | 2 | 3 | 1 | | | |
| | | | | |
| FISCHER 344 RATS FEMALE
1000 PPM | ANIMAL ID | 0 | 0 | | |
| | | 0 | 0 | | |
| | | 7 | 7 | | |
| | | 0 | 0 | 3 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 4 | 4 | 3 | 1 | 2 | 2 | 0 | 1 | 1 | 5 | 0 | 0 | 2 | 4 | 0 | | | |
| | | 9 | 4 | 4 | 6 | 6 | 3 | 4 | 4 | 5 | 7 | 5 | 9 | 9 | 5 | 1 | 6 | 7 | 1 | 0 | 0 | 5 | 8 | 0 | 3 | 1 | | | |
| | | females (cont...) | | |

females
(cont...)

ALIMENTARY SYSTEM

| | |
|--|---|
| Esophagus | + |
| Intestine Large, Cecum | + | + | + | + | + | A | + |
| Intestine Large, Colon | + | + | + | + | + | A | + |
| Intestine Large, Rectum | + |
| Serosa, Fibrosarcoma, Metastatic, Skin | X | |
| Intestine Small, Duodenum | + | + | + | + | + | A | + |
| Intestine Small, Ileum | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | A | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + |
| Liver | + |
| Mesentery | | | | | | | + | + | | | | | | + | + | + | | | | | | | | | | | | |
| Pancreas | + |
| Salivary Glands | + |
| Stomach, Forestomach | + |

* .. 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 | | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | | 5 | 0 | 3 | 4 | 6 | 8 | 8 | 1 | 1 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 9 | 0 | 0 | 1 | 2 | 2 | 3 |
| | | 8 | 9 | 4 | 3 | 9 | 1 | 5 | 0 | 9 | 2 | 0 | 2 | 3 | 8 | 8 | 8 | 7 | 8 | 0 | 1 | 2 | 8 | 2 | 3 | 1 |
| | | |
| FISCHER 344 RATS FEMALE
1000 PPM
ANIMAL ID | | 0 | 0 | |
| | | 0 | 0 | |
| | | 7 | 7 | |
| | | 0 | 0 | 3 | 1 | 0 | 0 | 1 | 2 | 2 | 1 | 4 | 4 | 3 | 1 | 2 | 2 | 0 | 1 | 1 | 5 | 0 | 0 | 2 | 4 | 0 |
| | | 9 | 4 | 4 | 6 | 6 | 3 | 4 | 4 | 5 | 7 | 5 | 9 | 9 | 5 | 1 | 6 | 7 | 1 | 0 | 0 | 5 | 8 | 0 | 3 | 1 |
| | | females (cont...) | |

TDMS No. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 11/29/2005

Time Report Requested: 09:37:52

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | | |
|-------------------------------------|--|----------|
| | | 7 | 7 | |
| | | 3 | 3 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| <hr/> | | |
| FISCHER 344 RATS FEMALE
1000 PPM | | 0 | 0 | |
| | | 0 | 0 | |
| | | 7 | 7 | |
| | | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |
| | | 2 | 8 | 2 | 3 | 0 | 3 | 5 | 8 | 7 | 2 | 3 | 9 | 7 | 8 | 9 | 1 | 2 | 6 | 7 | 0 | 1 | 2 | 4 | 8 |
| | | * TOTALS | |

ALIMENTARY SYSTEM

| | |
|--|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Serosa, Fibrosarcoma, Metastatic, Skin |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Mesentery | | | | | + | | + | | | | | + | | + | + | | | | | | | | | 10 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. 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. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

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First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

| | DAY ON TEST | 7 | 7 |
|-------------------------|-------------|----------|
| | | 3 | 3 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | 0 | 0 |
| FISCHER 344 RATS FEMALE | ANIMAL ID | 0 | 0 |
| | | 0 | 0 |
| 1000 PPM | | 7 | 7 |
| | | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |
| | | 2 | 8 | 2 | 3 | 0 | 3 | 5 | 8 | 7 | 2 | 3 | 9 | 7 | 8 | 9 | 1 | 2 | 6 | 7 | 0 | 1 | 2 | 4 | 6 |
| | | * TOTALS | |

Stomach, Glandular

+ 50

CARDIOVASCULAR SYSTEM

Blood Vessel

1

Heart

+ 50

Epicardium, Squamous Cell Carcinoma,
Metastatic, Lung

1

ENDOCRINE SYSTEM

Adrenal Cortex

+ 50

Adenoma

X 2

Bilateral, Adenoma

X 1

Adrenal Medulla

+ 50

Pheochromocytoma Malignant

1

Islets, Pancreatic

+ 50

Parathyroid Gland

+ 50

Pituitary Gland

+ 50

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+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

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BLANK .. Not examined microscopically

| FISCHER 344 RATS FEMALE
1000 PPM | | DAY ON TEST | | * TOTALS |
|-------------------------------------|--|-----------------------|----------|
| | | 7
3
1 | 7
3
1 | 7
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2 | | |
| ANIMAL ID | | 0
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3 | 0
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0 | 0
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3 | 0
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5 | 0
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7
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8 | 0
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7 | 0
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2 | 0
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7
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3 | 0
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1
9 | 0
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7 | 0
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8 | 0
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9 | 0
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4
4 | 0
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7
4
6 | 0
0
7
4
8 | |
| | | | |
| | | | |
| | | | |
| Adenoma | | X | X | X | X | X | X | X | X | | X | X | X | | X | | X | X | X | X | X | X | | | | 29 | |
| Thyroid Gland | | + | | 50 | |
| C-cell, Adenoma | | | | | | | | | | | | | | | | | | | | | X | | | | | 4 | |

GENERAL BODY SYSTEM
NONE

GENITAL SYSTEM

| | |
|--------------------------------|----|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 |
| Fibrosarcoma, Metastatic, Skin |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Polyp Stromal | | | | | | X | | X | | | | | | X | | | | X | | | | X | | | | 10 |
| Vagina |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | + |  |  |  |  | 1 |

HEMATOPOIETIC SYSTEM

| | |
|-------------|----|
| Bone Marrow | + | 50 |
|-------------|----|

* .. 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

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TDMS No. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

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ALPHA-METHYLSTYRENE

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| | | |
|-------------------------|-------------|----------|
| | DAY ON TEST | 7 | 7 |
| | | 3 | 3 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| <hr/> | | |
| FISCHER 344 RATS FEMALE | ANIMAL ID | 0 | 0 |
| | | 0 | 0 |
| 1000 PPM | | 7 | 7 |
| | | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 |
| | | 2 | 8 | 2 | 3 | 0 | 3 | 5 | 8 | 7 | 2 | 3 | 9 | 7 | 8 | 9 | 1 | 2 | 6 | 7 | 0 | 1 | 2 |
| | | * TOTALS | |

| | | |
|-------------------------|----|----|
| Lymph Node | | 5 |
| Lymph Node, Bronchial | M | M | M | M | M | M | M | M | + | M | M | M | M | M | M | M | M | M | M | M | M | M | + | M | 3 | |
| Lymph Node, Mandibular | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | + | M | M | M | M | M | M | M | 1 | |
| Lymph Node, Mediastinal | M | M | M | + | + | + | + | + | + | + | M | + | + | + | M | M | M | + | M | M | + | M | M | M | + | 28 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |

INTEGUMENTARY SYSTEM

| | | |
|-----------------------------------|----|----|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Carcinoma | | | | | | | | | X | | | | | | | X | | | | | | | | | 2 | |
| Fibroadenoma | X | | | X | X | | | | X | X | X | X | X | | X | | | X | | X | | | X | X | X | 18 |
| Fibroadenoma, Multiple | | | X | | | | | | | | | | | | | | | | X | | | | | | 5 | |
| Skin | + | 50 | |
| Subcutaneous Tissue, Fibroma | | | | | X | | | | | | | | | | | | | | | | | | | | 1 | |
| Subcutaneous Tissue, Fibrosarcoma | | 1 | |

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+ .. Tissue examined microscopically

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I .. Insufficient tissue

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TDMS No. 88006 - 03

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ALPHA-METHYLSTYRENE

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Lab: BNW

| | | |
|--|--|----------|
| DAY ON TEST | | 7 | 7 | |
| | | 3 | 3 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| <div></div> | | |
| FISCHER 344 RATS FEMALE
ANIMAL ID
1000 PPM | | 0 | 0 | |
| | | 0 | 0 | |
| | | 7 | 7 | |
| | | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |
| | | 2 | 8 | 2 | 3 | 0 | 3 | 5 | 8 | 7 | 2 | 3 | 9 | 7 | 8 | 9 | 1 | 2 | 6 | 7 | 0 | 1 | 2 | 4 | 6 |
| | | * TOTALS | |

Subcutaneous Tissue,
Hemangiosarcoma

1

MUSCULOSKELETAL SYSTEM

Bone

+ +

50

NERVOUS SYSTEM

Brain

+ +

50

RESPIRATORY SYSTEM

Larynx

+ +

50

Lung

+ +

50

Alveolar/Bronchiolar Adenoma

X

1

Squamous Cell Carcinoma, Metastatic,
Lung

1

Mediastinum, Squamous Cell Carcinoma

1

Nose

+ +

50

Pleura

+ +

30

* .. 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

| | | |
|-------------------------------------|-------------|----------|
| FISCHER 344 RATS FEMALE
1000 PPM | DAY ON TEST | 7 | 7 |
| | | 3 | 3 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | ANIMAL ID | 0 | 0 |
| | | 0 | 0 |
| | | 7 | 7 |
| | | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |
| | | 2 | 8 | 2 | 3 | 0 | 3 | 5 | 8 | 7 | 2 | 3 | 9 | 7 | 8 | 9 | 1 | 2 | 6 | 7 | 0 | 1 | 2 | 4 | 6 |
| | | * TOTALS | |

| | |
|---|----|
| Squamous Cell Carcinoma, Metastatic, Lung | 1 |
| Trachea | 50 |

SPECIAL SENSES SYSTEM

| | |
|-----------------|----|
| Eye | 50 |
| Harderian Gland | 50 |

URINARY SYSTEM

| | |
|-----------------|----|
| Kidney | 50 |
| Urinary Bladder | 50 |

SYSTEMIC LESIONS

| | |
|----------------------|----|
| Multiple Organ | 50 |
| Leukemia Mononuclear | 22 |

*** END OF REPORT ***

* .. 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