

**TDMS No.** 20302 - 03

**Test Type:** 90-DAY

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**Species/Strain:** RATS/F 344

**P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)**

ALPHA-PINENE

**CAS Number:** 80-56-8

**Pathologist:** GRUMBEIN, S. - LIEUALLEN, W. - RENNE, R. (past)

F1\_R2

**Date Report Requested:** 11/17/2006

**Time Report Requested:** 07:28:13

**First Dose M/F:** 03/28/05 / 03/29/05

**Lab:** BNW

**C Number:** C20302

**Lock Date:** 12/07/2005

**Cage Range:** ALL

**Date Range:** ALL

**Reasons For Removal:** ALL

**Removal Date Range:** ALL

**Treatment Groups:** Include ALL

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Pathologist: GRUMBEIN, S. - LIEUALLEN, W. - RENNE, R. (past)

Lab: BNW

FISCHER 344 RATS MALE	CONTROL	25 ppm	50 ppm	100 ppm	200 ppm
<b>Disposition Summary</b>					
Animals Initially in Study	10	10	10	10	10
Early Deaths					
Survivors					
Terminal Sacrifice	10	10	10	10	10
Animals Examined Microscopically	10	10	10	10	10
<b>ALIMENTARY SYSTEM</b>					
Liver	(10)	(10)	(10)	(10)	(10)
Clear Cell Focus					
Hepatodiaphragmatic Nodule		1 (10%)			
Mesentery	(0)	(1)	(0)	(0)	(0)
Fat, Necrosis		1 (100%)			
Stomach, Glandular	(10)	(0)	(0)	(0)	(0)
Mineralization					
<b>CARDIOVASCULAR SYSTEM</b>					
Heart	(10)	(0)	(0)	(0)	(0)
Cardiomyopathy	6 (60%)				
<b>ENDOCRINE SYSTEM</b>					
None					
<b>GENERAL BODY SYSTEM</b>					
None					
<b>GENITAL SYSTEM</b>					
Epididymis	(10)	(0)	(0)	(0)	(0)
Granuloma Sperm					

a - Number of animals examined microscopically at site and number of animals with lesion

FISCHER 344 RATS MALE	CONTROL	25 ppm	50 ppm	100 ppm	200 ppm
<b>HEMATOPOIETIC SYSTEM</b>					
Lymph Node, Mediastinal Infiltration Cellular, Mast Cell	(7)	(0)	(0)	(0)	(0)
Lymph Node, Mesenteric Infiltration Cellular, Mast Cell	(10)	(0)	(0)	(0)	(0)
<b>INTEGUMENTARY SYSTEM</b>					
None					
<b>MUSCULOSKELETAL SYSTEM</b>					
None					
<b>NERVOUS SYSTEM</b>					
Brain Cerebellum, Mineralization	(10) 1 (10%)	(0)	(0)	(0)	(0)
<b>RESPIRATORY SYSTEM</b>					
Lung Hemorrhage Inflammation, Chronic Active	(10) 2 (20%)	(0)	(0)	(0)	(0)
Pleura Inflammation, Granulomatous	(0)	(0)	(0)	(0)	(0)
<b>SPECIAL SENSES SYSTEM</b>					
Harderian Gland Inflammation, Chronic	(10)	(0)	(0)	(0)	(0)
<b>URINARY SYSTEM</b>					
Kidney Accumulation, Hyaline Droplet Casts Granular	(10) 1 (10%)	(10) 10 (100%) 9 (90%)	(10) 10 (100%) 10 (100%)	(10) 10 (100%) 10 (100%)	(10) 10 (100%) 10 (100%)

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<b>FISCHER 344 RATS MALE</b>	<b>CONTROL</b>	<b>25 ppm</b>	<b>50 ppm</b>	<b>100 ppm</b>	<b>200 ppm</b>
Nephropathy	9 (90%)	10 (100%)	10 (100%)	10 (100%)	10 (100%)

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FISCHER 344 RATS MALE

400 ppm

### Disposition Summary

Animals Initially in Study	10
Early Deaths	
Survivors	
Terminal Sacrifice	10
Animals Examined Microscopically	10

### ALIMENTARY SYSTEM

Liver	(10)
Clear Cell Focus	1 (10%)
Hepatodiaphragmatic Nodule	1 (10%)
Mesentery	(0)
Fat, Necrosis	
Stomach, Glandular	(10)
Mineralization	1 (10%)

### CARDIOVASCULAR SYSTEM

Heart	(10)
Cardiomyopathy	8 (80%)

### ENDOCRINE SYSTEM

None

### GENERAL BODY SYSTEM

None

### GENITAL SYSTEM

Epididymis	(10)
Granuloma Sperm	1 (10%)

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FISCHER 344 RATS MALE

400 ppm

HEMATOPOIETIC SYSTEM

Lymph Node, Mediastinal	(4)
Infiltration Cellular, Mast Cell	1 (25%)
Lymph Node, Mesenteric	(10)
Infiltration Cellular, Mast Cell	1 (10%)

INTEGUMENTARY SYSTEM

None

MUSCULOSKELETAL SYSTEM

None

NERVOUS SYSTEM

Brain	(10)
Cerebellum, Mineralization	

RESPIRATORY SYSTEM

Lung	(10)
Hemorrhage	1 (10%)
Inflammation, Chronic Active	5 (50%)
Pleura	(1)
Inflammation, Granulomatous	1 (100%)

SPECIAL SENSES SYSTEM

Harderian Gland	(10)
Inflammation, Chronic	1 (10%)

URINARY SYSTEM

Kidney	(10)
Accumulation, Hyaline Droplet	10 (100%)
Casts Granular	10 (100%)

a - Number of animals examined microscopically at site and number of animals with lesion

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<b>FISCHER 344 RATS MALE</b>	<b>400 ppm</b>
Nephropathy	10 (100%)

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\*\*\* END OF MALE \*\*\*

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Lab: BNW

FISCHER 344 RATS FEMALE	CONTROL	25 ppm	50 ppm	100 ppm	200 ppm
<b>Disposition Summary</b>					
Animals Initially in Study	10	10	10	10	10
Early Deaths					
Natural Death					
Survivors					
Terminal Sacrifice	10	10	10	10	10
Animals Examined Microscopically	10	10	10	10	10
<b>ALIMENTARY SYSTEM</b>					
Mesentery	(1)	(1)	(3)	(0)	(0)
Fat, Necrosis	1 (100%)	1 (100%)	3 (100%)		
Tongue	(0)	(1)	(0)	(0)	(0)
Cyst		1 (100%)			
<b>CARDIOVASCULAR SYSTEM</b>					
Heart	(10)	(0)	(0)	(0)	(10)
Cardiomyopathy	3 (30%)				2 (20%)
<b>ENDOCRINE SYSTEM</b>					
None					
<b>GENERAL BODY SYSTEM</b>					
None					
<b>GENITAL SYSTEM</b>					
Vagina	(0)	(1)	(0)	(0)	(0)
Cyst		1 (100%)			
<b>HEMATOPOIETIC SYSTEM</b>					
Lymph Node, Bronchial	(1)	(0)	(0)	(0)	(0)

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Hemorrhage	1 (100%)				
INTEGUMENTARY SYSTEM					
None					
MUSCULOSKELETAL SYSTEM					
None					
NERVOUS SYSTEM					
None					
RESPIRATORY SYSTEM					
Lung	(10)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active	4 (40%)				2 (20%)
Alveolar Epithelium, Hyperplasia					1 (10%)
SPECIAL SENSES SYSTEM					
Eye	(10)	(0)	(0)	(0)	(9)
Cataract					1 (11%)
Retina, Atrophy					1 (11%)
URINARY SYSTEM					
Kidney	(10)	(10)	(10)	(10)	(10)
Nephropathy	1 (10%)				1 (10%)

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FISCHER 344 RATS FEMALE

400 ppm

### Disposition Summary

Animals Initially in Study	10
Early Deaths	
Natural Death	6
Survivors	
Terminal Sacrifice	4
Animals Examined Microscopically	10

### ALIMENTARY SYSTEM

Mesentery	(0)
Fat, Necrosis	
Tongue	(0)
Cyst	

### CARDIOVASCULAR SYSTEM

Heart	(10)
Cardiomyopathy	1 (10%)

### ENDOCRINE SYSTEM

None

### GENERAL BODY SYSTEM

None

### GENITAL SYSTEM

Vagina	(0)
Cyst	

### HEMATOPOIETIC SYSTEM

Lymph Node, Bronchial	(0)
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Lab: BNW

FISCHER 344 RATS FEMALE

400 ppm

Hemorrhage

INTEGUMENTARY SYSTEM

None

MUSCULOSKELETAL SYSTEM

None

NERVOUS SYSTEM

None

RESPIRATORY SYSTEM

Lung	(9)
Inflammation, Chronic Active	5 (56%)
Alveolar Epithelium, Hyperplasia	

SPECIAL SENSES SYSTEM

Eye	(10)
Cataract	
Retina, Atrophy	

URINARY SYSTEM

Kidney	(10)
Nephropathy	

\*\*\* END OF REPORT \*\*\*