

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

F 1 R2

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

C Number: C96011

Lock Date: 01/28/2004

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

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

males (cont...)

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Cecum	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Colon Diverticulum	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Rectum	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Duodenum	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Jejunum Inflammation, Chronic Active	+	A	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Thrombosis																								4
Ulcer																								4
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Basophilic Focus	X													X							X	X		
Clear Cell Focus						X						X		X			X				X	X		
Degeneration, Cystic			1							1														
Hepatodiaphragmatic Nodule														4										
Mixed Cell Focus																								
Necrosis																							4	4
Vacuolization Cytoplasmic																							2	

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 M .. Missing tissue
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 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

Bile Duct, Hyperplasia Hepatocyte, Regeneration	2											1														
Mesentery Necrosis Fat, Hemorrhage			+				+																		+	
			3																						2	
Pancreas Acinus, Atrophy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
			1																							
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Stomach, Forestomach Hemorrhage Necrosis Ulcer Epithelium, Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	2																									
	2																									
	2																									
	1																									3
Stomach, Glandular Erosion Mineralization Ulcer	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
												1														
																										3
Tongue Epithelium, Hyperplasia																										

CARDIOVASCULAR SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
 x .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
 I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

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

males (cont...)

Blood Vessel Mineralization

Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cardiomyopathy				1							1			1				1				2		
Atrium, Thrombosis																								4
Valve, Cardiomyopathy																								
Valve, Thrombosis																								

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia			2		1		4					2	2				2		1	1	1			
Vacuolization Cytoplasmic				2											1					1		3		
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia					3							2					3	1			4			
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia				3																				
Parathyroid Gland	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+
Hyperplasia																								
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hemorrhage								4																
Hyperplasia				4																4		4	3	
Pars Intermedia, Hyperplasia																								

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		6	7	7	7	6	7	6	2	7	7	6	6	7	5	7	7	7	7	7	5	6	6	6		
DAY ON TEST		3	1	3	2	2	3	9	9	1	2	4	2	2	7	2	3	0	3	3	2	3	9	0	7	1
		2	4	0	9	2	0	4	6	0	9	7	0	9	1	9	0	8	0	0	9	0	9	0	4	3
FISCHER 344 RATS MALE	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
	CONTROL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
Thyroid Gland C-cell, Hyperplasia		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
					1					1					1											
GENERAL BODY SYSTEM																									
Peritoneum																										
GENITAL SYSTEM																									
Epididymis		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Preputial Gland Cyst		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Prostate Inflammation, Suppurative		2	2	2	1		1	2	2	2	2	1		2	2	2	1		1	1	1	2	1	1	1	2
Seminal Vesicle		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Testes Germinal Epithelium, Atrophy Interstitial Cell, Hyperplasia		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
						3											3	3					4			
									2					1		2			2					2		
HEMATOPOIETIC SYSTEM																									
Bone Marrow		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

males
(cont...)

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

males (cont...)

Lymph Node

+ + + +

Lymph Node, Bronchial Ectasia Hyperplasia, Lymphoid

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

4

Lymph Node, Mandibular Ectasia Metaplasia, Osseous

M M

Lymph Node, Mediastinal Hyperplasia, Lymphoid Inflammation, Suppurative

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

Lymph Node, Mesenteric

+ +

Spleen Fibrosis Hemorrhage Necrosis

+ +

4 4 4 3

Thymus

+ +

INTEGUMENTARY SYSTEM

Mammary Gland Galactocele

+ +

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

males (cont...)

Epithelium, Hyperplasia

4

Skin
Cyst Epithelial Inclusion
Hyperkeratosis

+
3

MUSCULOSKELETAL SYSTEM

Bone

+ +

Skeletal Muscle

NERVOUS SYSTEM

Brain
Compression
Hemorrhage

+
4 4 4 3 4 3 3
4 4 4 4 4 3 2

RESPIRATORY SYSTEM

Larynx
Foreign Body
Inflammation, Suppurative
Inflammation, Chronic
Epiglottis, Hyperplasia
Epiglottis, Metaplasia, Squamous
Respiratory Epithelium, Hyperplasia

+
4 4 2 3 2 2

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

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Congestion | | | | | 3 | | | | | | | | | | | | | | | | | | |
| Hemorrhage | 2 | | | | | | | | | | | | | | | | | | | | | | 2 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar Epithelium, Hyperplasia | | 3 | | | | | | 3 | 2 | | | 2 | | | 1 | | 1 | | 2 | 2 | | | |
| Alveolus, Infiltration Cellular, Histiocyte | | | | | | | | 2 | | | | | | 1 | 1 | | | | 3 | | | | 1 |
| Artery, Mineralization | | | | | 1 | | | | | | | | | | | | | | | | | | |
| Artery, Thrombosis | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Foreign Body | | | | | | | | | | | | | | X | | X | | | | | | | X |
| Inflammation, Suppurative | | 2 | | | 2 | | | | | | | | | 1 | | 2 | 2 | | | | | | 2 |
| Inflammation, Chronic | | | 2 | | | | | | | 1 | | | | | | | | | | | | | |
| Glands, Olfactory Epithelium, Hyperplasia | | | | | 1 | | | | | | | | | | | | | | | | | | |
| Glands, Respiratory Epithelium, Dilatation | | | | | | | | | | | | | | | | | | | | | | | |
| Goblet Cell, Hyperplasia | | | 2 | | | | | | | | | | | | | | 2 | | 1 | | | | |
| Nasolacrimal Duct, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | 2 | | | | |
| Olfactory Epithelium, Degeneration, Hyaline | | | | | | 1 | 2 | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Metaplasia | | | | | 1 | | 2 | | | | | | | | 2 | 3 | | | | | | | |
| Respiratory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | | | | | | | | 1 | | | |
| Vomer nasal Organ, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | |
| Pleura | | | | | | | | + | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Mesothelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | |

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

males (cont...)

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

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Bilateral, Lens, Cataract | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cornea, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lens, Cataract | | | | | | | | | | | 4 | | | 3 | | | | | | | | | | | |
| Retina, Atrophy | | | | | | | | | | | 3 | | | 3 | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | |

Zymbal's Gland

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Nephropathy | 2 | | 2 | 4 | 2 | 2 | 1 | | 2 | 2 | 1 | 3 | 2 | 1 | 1 | 4 | 4 | 3 | 3 | 2 | 2 | 1 | 2 | 2 | 2 |
| Papilla, Mineralization | 1 | 1 | | | | | | | | | 1 | | | | | | | | | | | | | | |
| Pelvis, Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal Tubule, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 l .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

| | | 7 | 7 | 7 | 4 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 4 | 5 | 6 | 7 | 7 | 7 | 6 | 7 | | |
|------------------------------|--|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | | 2 | 2 | 3 | 6 | 5 | 2 | 0 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 1 | 0 | 9 | 6 | 2 | 2 | 2 | 1 | 8 | 2 |
| | | 9 | 9 | 0 | 7 | 8 | 9 | 2 | 0 | 9 | 0 | 0 | 9 | 0 | 9 | 0 | 2 | 7 | 5 | 2 | 8 | 9 | 9 | 9 | 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 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | 3 | | | | | | | | 3 | | 2 | | | 3 | | | | | 3 | | | | | | |
| Hepatocyte, Regeneration | | | | | | | | | | 4 | | | | | | | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Erosion | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |

CARDIOVASCULAR SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

| | 7 | 7 | 7 | 4 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 4 | 5 | 6 | 7 | 7 | 7 | 6 | 7 | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|----|
| DAY ON TEST | 2 | 2 | 3 | 6 | 5 | 2 | 0 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 1 | 0 | 9 | 6 | 2 | 2 | 2 | 1 | 8 | 2 |
| | 9 | 9 | 0 | 7 | 8 | 9 | 2 | 0 | 9 | 0 | 0 | 9 | 0 | 9 | 0 | 2 | 7 | 5 | 2 | 8 | 9 | 9 | 9 | 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 |
| 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 |
| 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 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| C-cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 7 1.9 | |

GENERAL BODY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------|
| Peritoneum | | | | | | | | | | | | | | | | | | | | | | | | 2 |
|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------|

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------|----|--------|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | | |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Suppurative | 2 | 2 | 1 | 2 | | 1 | 1 | 1 | | | | 3 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | | 2 | 4 | 3 | 1 | 42 1.6 |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Germinal Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | 6 3.5 | | |
| Interstitial Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 12 1.9 | | |

HEMATOPOIETIC SYSTEM

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

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| | 7 | 7 | 7 | 4 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 4 | 5 | 6 | 7 | 7 | 7 | 6 | 7 | |
| DAY ON TEST | 2 | 2 | 3 | 6 | 5 | 2 | 0 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 1 | 0 | 9 | 6 | 2 | 2 | 2 | 1 | 8 | 2 |
| | 9 | 9 | 0 | 7 | 8 | 9 | 2 | 0 | 9 | 0 | 0 | 9 | 0 | 9 | 0 | 2 | 7 | 5 | 2 | 8 | 9 | 9 | 9 | 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 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|----|
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | 7 | |
| Lymph Node, Bronchial Ectasia | M | + | M | + | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 7 |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Lymph Node, Mandibular Ectasia | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 1 |
| Metaplasia, Osseous | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Lymph Node, Mediastinal Hyperplasia, Lymphoid Inflammation, Suppurative | + | + | + | M | M | + | + | + | M | M | + | + | + | + | + | + | + | + | M | M | + | M | + | M | 34 |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Spleen Fibrosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | 2 3.5 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 4 4.0 | |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Thymus | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|----|
| Mammary Gland Galactocele | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | | | | | | | | | | | | | | | | | | | | | | 2 4.0 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Page 14

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| | 7 | 7 | 7 | 4 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 4 | 5 | 6 | 7 | 7 | 7 | 6 | 7 | |
| DAY ON TEST | 2 | 2 | 3 | 6 | 5 | 2 | 0 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 1 | 0 | 9 | 6 | 2 | 2 | 2 | 1 | 8 | 2 |
| | 9 | 9 | 0 | 7 | 8 | 9 | 2 | 0 | 9 | 0 | 0 | 9 | 0 | 9 | 0 | 2 | 7 | 5 | 2 | 8 | 9 | 9 | 9 | 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 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |

Epithelium, Hyperplasia 1 4.0

Skin + 50

Cyst Epithelial Inclusion 4 1 4.0

Hyperkeratosis 1 3.0

MUSCULOSKELETAL SYSTEM

Bone + 50

Skeletal Muscle + 1

NERVOUS SYSTEM

Brain + 50

Compression 4 7 3.6

Hemorrhage 4 3 5 3.6

RESPIRATORY SYSTEM

Larynx + 50

Foreign Body 4 6 4.0

Inflammation, Suppurative 3 4 1.8

Inflammation, Chronic 1 1 3.0

Epiglottis, Hyperplasia 1 1 1.0

Epiglottis, Metaplasia, Squamous 1 1 1.0

Respiratory Epithelium, Hyperplasia 1 3 1.7

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Page 15

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|-----|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | | |
| Hemorrhage | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | 3 | 2.0 | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | 1 | 1.0 | |
| Inflammation, Chronic | | | | 2 | | | 2 | | | 2 | | | | | | | | | | | | | | | | | 3 | 2.0 | |
| Alveolar Epithelium, Hyperplasia | | 1 | | | | | | | | 2 | | | 2 | | | | | | 1 | | 4 | | | | | | 13 | 2.0 | |
| Alveolus, Infiltration Cellular, Histocyte | | | 3 | | 2 | | | | 1 | | | | | | | | | 3 | | | | | | | | | 9 | 1.9 | |
| Artery, Mineralization | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | 2 | 2.5 | |
| Artery, Thrombosis | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | 1 | 3.0 | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Foreign Body | | | | | | | | | | | | | | X | | | | | | | | | | | X | | 5 | | |
| Inflammation, Suppurative | | | | | | | 1 | | | | | | | 1 | | | | | | | | | | | 1 | | 7 | 1.4 | |
| Inflammation, Chronic | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | 5 | 1.6 | |
| Glands, Olfactory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Glands, Respiratory Epithelium, Dilatation | | | | | | | | | | 4 | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1.7 | |
| Nasolacrimal Duct, Inflammation, Suppurative | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | 2 | 2.0 | |
| Olfactory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | 3 | 1.7 | |
| Olfactory Epithelium, Metaplasia | | | | | | 2 | | | | | 1 | | | | | | | | | | | | | | 1 | | 7 | 1.7 | |
| Respiratory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Vomeranasal Organ, Inflammation, Suppurative | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Pleura | | | | | | | | | | | + | | | | | | | | | | | | | | | | 5 | | |
| Inflammation, Chronic | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | 4 | 1.3 |
| Mesothelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 4.0 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

Trachea + 50

SPECIAL SENSES SYSTEM

| | | |
|-----------------------------------|---|----|
| Eye | + | 50 |
| Bilateral, Lens, Cataract | | 2 |
| Cornea, Inflammation, Suppurative | | 1 |
| Lens, Cataract | 1 1 | 3 |
| Retina, Atrophy | 2 | 2 |
| Harderian Gland | + | 50 |
| Inflammation, Chronic | | 1 |
| Zymbal's Gland | | + |
| | | 1 |

URINARY SYSTEM

| | | |
|--|---|--------|
| Kidney | + | 50 |
| Nephropathy | 1 3 1 4 4 2 2 2 2 2 3 2 1 3 4 1 1 2 1 3 4 3 3 2 | 47 2.3 |
| Papilla, Mineralization | | 1 |
| Pelvis, Transitional Epithelium, Hyperplasia | | 1 |
| Renal Tubule, Mineralization | 2 4 | 2 |
| Urinary Bladder | + | 50 |
| Transitional Epithelium, Hyperplasia | | 3 |
| | | 1 3.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
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 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 6 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 6 | 5 | 5 | 6 | 7 | 7 | 4 | 7 | 6 | 7 | 5 | 6 | |
| DAY ON TEST | 3 | 6 | 3 | 2 | 3 | 2 | 1 | 2 | 7 | 3 | 3 | 2 | 3 | 7 | 9 | 8 | 1 | 3 | 3 | 4 | 3 | 3 | 2 | 6 | 8 |
| | 0 | 9 | 0 | 9 | 0 | 9 | 9 | 9 | 0 | 0 | 0 | 9 | 0 | 4 | 6 | 9 | 8 | 0 | 0 | 5 | 0 | 2 | 9 | 5 | 3 |
| 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 |
| 250 PPM | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | 2 | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | X | | | | | | | | | | | | | | | X | | | | | | |
| Clear Cell Focus | | | | | | | | | | | | X | | | | | | | | X | | X | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | |
| Eosinophilic Focus | | | | | | X | | | | | | | | | | | | | | | | | | |
| Fatty Change, Diffuse | | | | | | | | | | | | | | | | | | 3 | | | | | | |
| Hepatodiaphragmatic Nodule | 4 | | | 4 | | | | | 4 | | | | | | | | | | | 4 | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | 2 | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | 3 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

| | 7 | 6 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 6 | 5 | 5 | 6 | 7 | 7 | 4 | 7 | 6 | 7 | 5 | 6 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| DAY ON TEST | 3 | 6 | 3 | 2 | 3 | 2 | 1 | 2 | 7 | 3 | 3 | 2 | 3 | 7 | 9 | 8 | 1 | 3 | 3 | 4 | 3 | 3 | 2 | 6 | 8 | |
| | 0 | 9 | 0 | 9 | 0 | 9 | 9 | 9 | 0 | 0 | 0 | 9 | 0 | 4 | 6 | 9 | 8 | 0 | 0 | 5 | 0 | 2 | 9 | 5 | 3 | |
| 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 | |
| 250 PPM | 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 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |
| Bile Duct, Hyperplasia | | | | | | | | | | | 3 | | | | | 2 | | | | | | | | | | |
| Mesentery Hemorrhage | | | | | | | | | | | + | | + | | + | | + | | | + | | | | | | |
| Necrosis | | | | | | | | | | | 3 | | 3 | | 2 | | 3 | | | 3 | | | | | | |
| Fat, Necrosis | | | | | | | | | | | 3 | | | | | | | | | | | | | | | |
| Pancreas | + | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic Acinus, Atrophy | | | | | | | | | | | | | | | | | | | | | 2 | | | | | |
| Salivary Glands | + | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | + | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | | | | |
| Epithelium, Hyperplasia | 4 | | | | 1 | | | | 4 | | | | 4 | | | | 3 | | 3 | | | | | | | |
| Stomach, Glandular Erosion | + | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tongue Epithelium, Hyperplasia | | | | | | | | | | | + | | + | | 3 | | | | | | | | | | | |
| Tooth Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | |

males
(cont...)

CARDIOVASCULAR SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

| DAY ON TEST | | 7 | 6 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 5 | 6 | 7 | 7 | 4 | 7 | 6 | 7 | 5 | 6 |
|------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 6 | 3 | 2 | 3 | 2 | 1 | 2 | 7 | 3 | 3 | 2 | 3 | 7 | 9 | 8 | 1 | 3 | 3 | 4 | 3 | 3 | 2 | 6 | 8 |
| | | 0 | 9 | 0 | 9 | 0 | 9 | 9 | 9 | 0 | 0 | 0 | 9 | 0 | 4 | 6 | 9 | 8 | 0 | 0 | 5 | 0 | 2 | 9 | 5 | 3 |
| FISCHER 344 RATS MALE | 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 |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 250 PPM | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Blood Vessel | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cardiomyopathy | | | | 1 | | | | | | | | | 2 | | | 3 | | | | | | | | | | | |
| Atrium, Thrombosis | 4 | | | 2 | | 1 | | | | | | | | | | | | | | | | | | | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | 3 | | 1 | | | | | 3 | | | | 2 | 3 | | | | | | 3 | | | | 2 | | |
| Vacuolization Cytoplasmic | | | | | | | | 3 | | 1 | | | | | | 3 | | | | | | | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | 3 | | | | | 2 | | | | 2 | | | | | | | | | | | 2 | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | 3 | | | 3 | | 2 | | | | 4 | | | | | | | | | | 3 | | | | | 3 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| C-cell, Hyperplasia | | | | | | | | | 1 | | 4 | | 1 | 1 | | | | | 1 | | | 1 | | 4 | 2 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 6 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 5 | 6 | 7 | 7 | 4 | 7 | 6 | 7 | 5 | 6 |
| DAY ON TEST | 3 | 6 | 3 | 2 | 3 | 2 | 1 | 2 | 7 | 3 | 3 | 2 | 3 | 7 | 9 | 8 | 1 | 3 | 3 | 4 | 3 | 3 | 2 | 6 | 8 |
| | 0 | 9 | 0 | 9 | 0 | 9 | 9 | 9 | 0 | 0 | 0 | 9 | 0 | 4 | 6 | 9 | 8 | 0 | 0 | 5 | 0 | 2 | 9 | 5 | 3 |
| 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 |
| 250 PPM | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

Follicular Cell, Cyst

2

GENERAL BODY SYSTEM

Peritoneum

GENITAL SYSTEM

Epididymis

+ +

Preputial Gland

+ +

Prostate

+ +

Hyperplasia

Inflammation, Suppurative

2 3 1 2 1 1 2 3 1 1 4 2 3 2 1 3 2 2

Seminal Vesicle

+ +

Dilatation

Hyperplasia

4 3

Testes

+ +

Artery, Inflammation, Chronic Active

Germinal Epithelium, Atrophy

Interstitial Cell, Hyperplasia

4 1 4 3 3 2 2 2 4 2 4 2 2

HEMATOPOIETIC SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

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A .. Autolysis precludes evaluation

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TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

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CUMENE

CAS Number: 98-82-8

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Date Report Requested: 01/12/2006

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First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 6 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 6 | 5 | 5 | 6 | 7 | 7 | 4 | 7 | 6 | 7 | 5 | 6 | |
|-----------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ANIMAL ID | | 3 | 6 | 3 | 2 | 3 | 2 | 1 | 2 | 7 | 3 | 3 | 2 | 3 | 7 | 9 | 8 | 1 | 3 | 3 | 4 | 3 | 3 | 2 | 6 | 8 |
| 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 |
| 250 PPM | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node
Deep Cervical, Ectasia | + | | | | | | | | | + | | | | | | | | | | | | | | | + |
| Lymph Node, Bronchial
Ectasia
Hyperplasia, Lymphoid | + | M | + | M | M | M | + | M | M | + | M | M | M | M | M | M | M | + | M | M | M | M | M | M | M |
| Lymph Node, Mandibular
Ectasia | 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
Hemorrhage | + | + | M | M | + | M | + | + | M | + | M | M | M | + | + | M | M | M | M | + | + | M | + | + | M |
| Lymph Node, Mesenteric
Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen
Fibrosis
Hemorrhage
Necrosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

INTEGUMENTARY SYSTEM

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

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| DAY ON TEST | | 7 | 6 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 6 | 5 | 5 | 6 | 7 | 7 | 4 | 7 | 6 | 7 | 5 | 6 | |
|------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 6 | 3 | 2 | 3 | 2 | 1 | 2 | 7 | 3 | 3 | 2 | 3 | 7 | 9 | 8 | 1 | 3 | 3 | 4 | 3 | 3 | 2 | 6 | 8 |
| | | 0 | 9 | 0 | 9 | 0 | 9 | 9 | 9 | 0 | 0 | 0 | 9 | 0 | 4 | 6 | 9 | 8 | 0 | 0 | 5 | 0 | 2 | 9 | 5 | 3 |
| FISCHER 344 RATS MALE | 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 |
| | 250 PPM | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst Epithelial Inclusion | | | | | | 4 | | | | | | | | | | | | | | | | | | | |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | | + |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Compression | | 3 | 3 | | | | | 3 | 2 | | | | | 4 | | | | | | | | 3 | 3 | 4 | |
| Hemorrhage | | | | | | | | | | | | | | 2 | | | 2 | | | | | | | 1 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Foreign Body | | | | | | | | | | 4 | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | 1 | | | 2 | | | | | | | | | | | | 2 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

| DAY ON TEST | 7 | 6 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 5 | 6 | 7 | 7 | 4 | 7 | 6 | 7 | 5 | 6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 6 | 3 | 2 | 3 | 2 | 1 | 2 | 7 | 3 | 3 | 2 | 3 | 7 | 9 | 8 | 1 | 3 | 3 | 4 | 3 | 3 | 2 | 6 | 8 | |
| | 0 | 9 | 0 | 9 | 0 | 9 | 9 | 9 | 0 | 0 | 0 | 9 | 0 | 4 | 6 | 9 | 8 | 0 | 0 | 5 | 0 | 2 | 9 | 5 | 3 | |
| 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 | |
| 250 PPM | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |
| Hemorrhage | 2 | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | 2 | | | | | | | | | | | | | | | | | | 1 |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar Epithelium, Hyperplasia | | 2 | | | | | | | | 1 | 1 | | | | | 3 | | | | 2 | | | | | 1 | |
| Alveolus, Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolus, Infiltration Cellular, Histiocyte | | | | | | | 2 | 1 | | | 1 | | | | | | | | | | 2 | | | | | |
| Bronchiole, Hyperplasia | | | | | | | 2 | | | | | | | | | | | | | | | | | | | |
| Bronchiole, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Interstitialium, Fibrosis | 2 | | | | | | | 2 | | | | | | | | | | | | | | | | | | 2 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | X | X | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | 2 | | | | | | | | | | 3 | | | | | 1 |
| Epithelium, Nasolacrimal Duct, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Glands, Respiratory Epithelium, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nasolacrimal Duct, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Hyperplasia, Basal Cell | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Metaplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | 2 | | | | | | | | | | | | | | | | | | | | | | | | | |

males (cont...)

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 l .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked
 Page 24

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 6 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 6 | 5 | 5 | 6 | 7 | 7 | 4 | 7 | 6 | 7 | 5 | 6 | |
|--|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 6 | 3 | 2 | 3 | 2 | 1 | 2 | 7 | 3 | 3 | 2 | 3 | 7 | 9 | 8 | 1 | 3 | 3 | 4 | 3 | 3 | 2 | 6 | 8 |
| | | 0 | 9 | 0 | 9 | 0 | 9 | 9 | 9 | 0 | 0 | 0 | 9 | 0 | 4 | 6 | 9 | 8 | 0 | 0 | 5 | 0 | 2 | 9 | 5 | 3 |
| FISCHER 344 RATS MALE
250 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 | 0 | 0 | 0 | |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |

males
(cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Pleura Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Eye Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye Bilateral, Lens, Cataract | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye Bilateral, Retina, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye Lens, Cataract | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Kidney Infarct | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney Infarct, Multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney Nephropathy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney Bilateral, Infarct | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney Glomerulus, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney Papilla, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

| | | 7 | 6 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 6 | 5 | 5 | 6 | 7 | 7 | 4 | 7 | 6 | 7 | 5 | 6 | | | | | | | | | | | | |
|--|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|---|--|--|--|---|--|--|--|
| DAY ON TEST | | 3 | 6 | 3 | 2 | 3 | 2 | 1 | 2 | 7 | 3 | 3 | 2 | 3 | 7 | 9 | 8 | 1 | 3 | 3 | 4 | 3 | 3 | 2 | 6 | 8 | | | | | | | | | | | |
| | | 0 | 9 | 0 | 9 | 0 | 9 | 9 | 9 | 0 | 0 | 0 | 9 | 0 | 4 | 6 | 9 | 8 | 0 | 0 | 5 | 0 | 2 | 9 | 5 | 3 | | | | | | | | | | | |
| FISCHER 344 RATS MALE | 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 | | | | | | | | | | | | |
| | 250 PPM | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | |
| Pelvis, Transitional Epithelium, Hyperplasia | | 2 | | | | | | | | X | | | | | | | | 2 | | | | 2 | | | | 2 | | | | | | | | | | | |
| Renal Tubule, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal Tubule, Hyperplasia | | | | | | | | | | | | | | | | | | 4 | | | | 2 | | | | 4 | | | | | | | | | | | |
| Ureter | | | | | | | | | | | | | | | | | | | | | | + | | | | | | | | | | | | | | | |
| Urinary Bladder Hemorrhage | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | |

males (cont...)

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 l .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | 7 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 6 | 5 | 6 | 7 | 6 | 6 | 5 | 4 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| | 3 | 2 | 2 | 7 | 3 | 2 | 2 | 1 | 4 | 3 | 1 | 3 | 6 | 8 | 4 | 8 | 0 | 2 | 2 | 6 | 1 | 7 | 3 | 2 | 2 |
| | 0 | 9 | 9 | 5 | 0 | 9 | 8 | 8 | 3 | 6 | 3 | 0 | 5 | 6 | 1 | 0 | 5 | 9 | 4 | 5 | 1 | 4 | 9 | 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 |
| 250 PPM | 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 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Foreign Body | | | | | | | | | | | | | | | | 4 | | | | | | | | | | 1 4.0 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Ileum | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | 47 |
| Intestine Small, Jejunum | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | 47 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Basophilic Focus | X | | | | | | | | | | | | | | | | | | | | | | X | | | 4 |
| Clear Cell Focus | X | | | | X | | | | | | | | | | | | | | | | | | X | | | 6 |
| Degeneration, Cystic | | | | | | 3 | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Fatty Change, Diffuse | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Hepatodiaphragmatic Nodule | | | | | | 4 | | 4 | | | | | 4 | | | | | | | | | | 4 | | | 8 4.0 |
| Inflammation, Suppurative | | | | | | | | | | 4 | | | | | | | | | | | | | | | | 1 4.0 |
| Necrosis | | | | | 4 | | | | | | | | | 2 | | | | | | | | | | | | 3 2.7 |
| Vacuolization Cytoplasmic | | | | | | | | | | 3 | | | | | | | | | | | | | | | | 2 3.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | 7 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 6 | 5 | 6 | 7 | 6 | 6 | 5 | 4 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 |
|---|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|
| DAY ON TEST | | 3 | 2 | 2 | 7 | 3 | 2 | 2 | 1 | 4 | 3 | 1 | 3 | 6 | 8 | 4 | 8 | 0 | 2 | 2 | 6 | 1 | 7 | 3 | 2 | 2 |
| | | 0 | 9 | 9 | 5 | 0 | 9 | 8 | 8 | 3 | 6 | 3 | 0 | 5 | 6 | 1 | 0 | 5 | 9 | 4 | 5 | 1 | 4 | 9 | 9 | 9 |
| FISCHER 344 RATS MALE | 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 |
| 250 PPM | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | | | 2 | | | | | | | | 2 | | | | | | | | | | | | 4 2.3 |
| Mesentery | | + | + | | | | | + | + | | | | | | | | | | | | | | | | | 13 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Necrosis | | 3 | 3 | | | | | 3 | 3 | | | | | | | | | | | | | | | | | 10 2.9 |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Pancreas | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Vacuolization Cytoplasmic Acinus, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| | | | | | 4 | | | | | | | | | | | | | | | | | | | | | 2 3.0 |
| Salivary Glands | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Ulcer | | | | | 4 | | | | | | | | | | | | | | | | | | | | | 7 3.9 |
| Epithelium, Hyperplasia | | | | | 1 | | | | | | | | | | | | | | | | | | | | | 11 3.0 |
| Stomach, Glandular | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Erosion | | | | | 3 | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 2 3.5 |
| Tooth | | | | | | | | | | | | | | | | | | | | | | | | | | + 1 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 4 1 4.0 |

CARDIOVASCULAR SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 6 | 5 | 6 | 7 | 6 | 6 | 5 | 4 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 |
|------------------------------|----------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 2 | 2 | 7 | 3 | 2 | 2 | 1 | 4 | 3 | 1 | 3 | 6 | 8 | 4 | 8 | 0 | 2 | 2 | 6 | 1 | 7 | 3 | 2 | 2 |
| | | 0 | 9 | 9 | 5 | 0 | 9 | 8 | 8 | 3 | 6 | 3 | 0 | 5 | 6 | 1 | 0 | 5 | 9 | 4 | 5 | 1 | 4 | 9 | 9 | 9 |
| FISCHER 344 RATS MALE | 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 |
| | 250 PPM | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |

Blood Vessel

1

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cardiomyopathy | | | | 3 | | | | | 4 | | | 3 | | | | | 2 | | | | | | | | | 7 2.6 |
| Atrium, Thrombosis | | | | 4 | | | | 4 | | | 3 | | | | | | | | | | | | | | | 6 3.0 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | 2 | 3 | 4 | | | 4 | | | | | | | 3 | | 1 | | | 4 | | 2 | 3 | | | | | 16 2.7 |
| Vacuolization Cytoplasmic | | | | | | | | | | 2 | | | | | | | | | | 2 | | | | | | 5 2.2 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | 1 | | | 2 | | 4 | | | 3 | | | 3 | 3 | | | | | | | 2 | 2 | | 4 | | | 13 2.5 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | | | | | | | | 3 | | | | | | | | | | | | | | | | | 1 3.0 |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | 49 |
| Hyperplasia | | | 4 | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | | | | | | | | 3 | | | | | | | | | | | | | | | | | 1 3.0 |
| Hemorrhage | | | | | | | | | | | | | | | | | | 4 | | | | | | | | 1 4.0 |
| Hyperplasia | | | | 1 | | | | | | | | | | | | | | | | | | | | | | 7 2.7 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| C-cell, Hyperplasia | | | 1 | | | 2 | | | | | | | | | | | | | | | | 2 | | | | 11 1.8 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | 7 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 6 | 5 | 6 | 7 | 6 | 6 | 5 | 4 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 | | |
| DAY ON TEST | 3 | 2 | 2 | 7 | 3 | 2 | 2 | 1 | 4 | 3 | 1 | 3 | 6 | 8 | 4 | 8 | 0 | 2 | 2 | 6 | 1 | 7 | 3 | 2 | 2 | | |
| | 0 | 9 | 9 | 5 | 0 | 9 | 8 | 8 | 3 | 6 | 3 | 0 | 5 | 6 | 1 | 0 | 5 | 9 | 4 | 5 | 1 | 4 | 9 | 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 | 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 | | |
| 250 PPM | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | | |
| | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | | |

Follicular Cell, Cyst

1 2.0

GENERAL BODY SYSTEM

Peritoneum

+

+

2

GENITAL SYSTEM

Epididymis

+ 50

Preputial Gland

+ 50

Prostate

+ 50

Hyperplasia

2

1 2.0

Inflammation, Suppurative

1 1 2 1 2 1 3 1 1 1 1 1 2 1 32 1.7

32 1.7

Seminal Vesicle

+ 50

Dilatation

1 4.0

Hyperplasia

1 3.0

1 3.0

Testes

+ 50

Artery, Inflammation, Chronic Active

3 1 3.0

Germinal Epithelium, Atrophy

4 5 3.8

5 3.8

Interstitial Cell, Hyperplasia

3 2 1 2 2 2 2 18 2.1

18 2.1

HEMATOPOIETIC SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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TDMS No. 96011 - 05

Test Type: CHRONIC

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Lab: BNW

| DAY ON TEST | | 7 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 6 | 5 | 6 | 7 | 6 | 6 | 5 | 4 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 | |
|---|----------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|----|
| | | 3 | 2 | 2 | 7 | 3 | 2 | 2 | 1 | 4 | 3 | 1 | 3 | 6 | 8 | 4 | 8 | 0 | 2 | 2 | 6 | 1 | 7 | 3 | 2 | 2 | |
| | | 0 | 9 | 9 | 5 | 0 | 9 | 8 | 8 | 3 | 6 | 3 | 0 | 5 | 6 | 1 | 0 | 5 | 9 | 4 | 5 | 1 | 4 | 9 | 9 | 9 | |
| FISCHER 344 RATS MALE | 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 | |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | 250 PPM | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone Marrow | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Lymph Node
Deep Cervical, Ectasia | | | + | | | | + | | + | | | | + | | + | | | | | | | + | + | | | 10 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| Lymph Node, Bronchial
Ectasia
Hyperplasia, Lymphoid | | M | M | M | M | M | + | + | M | M | M | + | M | M | M | M | M | M | M | M | M | + | + | + | + | 12 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| | | | | | | | | | | | | | | | | | | | | | | | | 2 | | 1 2.0 | |
| Lymph Node, Mandibular
Ectasia | | M | M | M | M | M | M | M | + | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | + | 3 |
| | | | | | | | | | 4 | | | | | | | | | | | | | | | | | 2 4.0 | |
| Lymph Node, Mediastinal
Hemorrhage | | M | + | + | M | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | M | + | + | 32 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Lymph Node, Mesenteric
Hemorrhage | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 2 3.5 | |
| Spleen
Fibrosis
Hemorrhage
Necrosis | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 2 3.0 | |
| | | | 4 | | | | | | | | | | | 4 | | | | | | | | | | 4 | | 4 4.0 | |
| | | | | | | | | | 4 | | | | | | | | | | | | | | | | | 3 3.7 | |
| Thymus | | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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TDMS No. 96011 - 05

Test Type: CHRONIC

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| DAY ON TEST | | 7 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 6 | 5 | 6 | 7 | 6 | 6 | 5 | 4 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 |
|--|-----------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 2 | 2 | 7 | 3 | 2 | 2 | 1 | 4 | 3 | 1 | 3 | 6 | 8 | 4 | 8 | 0 | 2 | 2 | 6 | 1 | 7 | 3 | 2 | 2 |
| | | 0 | 9 | 9 | 5 | 0 | 9 | 8 | 8 | 3 | 6 | 3 | 0 | 5 | 6 | 1 | 0 | 5 | 9 | 4 | 5 | 1 | 4 | 9 | 9 | 9 |
| FISCHER 344 RATS MALE
250 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 | 0 | 0 | 0 | 0 | 0 |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |

MUSCULOSKELETAL SYSTEM

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

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Compression | | 3 | | | | 1 | 4 | | | 4 | | | | 4 | | 2 | | | | 3 | 4 | | | | | | 16 3.1 |
| Hemorrhage | | | | | | | 4 | | | 3 | 1 | 3 | | | | | | | | | | | | | | | 7 2.3 |
| Necrosis | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | 1 2.0 |
| Thrombosis | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | 1 2.0 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Foreign Body | | 4 | | | | | 1 | | | | | | | | | | | | | | | | | | | | 3 3.0 |
| Inflammation, Suppurative | | 2 | | | | | 1 | | | 2 | 1 | | | | | | | | | | | | | | | | 7 1.6 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | 1 2.0 |
| Respiratory Epithelium, Hyperplasia | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | 2 1.5 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Page 32

| DAY ON TEST | 7 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 6 | 5 | 6 | 7 | 6 | 6 | 5 | 4 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|----|----------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | 3 | 2 | 2 | 7 | 3 | 2 | 2 | 1 | 4 | 3 | 1 | 3 | 6 | 8 | 4 | 8 | 0 | 2 | 2 | 6 | 1 | 7 | 3 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | 9 | 9 | 5 | 0 | 9 | 8 | 8 | 3 | 6 | 3 | 0 | 5 | 6 | 1 | 0 | 5 | 9 | 4 | 5 | 1 | 4 | 9 | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 250 PPM | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | 2 | | | | | 2 | | | | 3 | | | | | | 3 | | | 4 | | | 7 | 2.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | 4 | | | | | | | | | | | | | | | 1 | | | 1 | 4.0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | 1 | | | 1 | | | 1.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | 2 | | | | | | | | | | | | | | 3 | | | 3 | | | 1.7 | | | | | | | | | | | | | | | | | | | | | | |
| Thrombosis | | | | | | | | | | | | | | | 2 | | | | | | | | | | | 1 | | | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar Epithelium, Hyperplasia | | | 1 | | | | | | | | | | | 1 | | | 1 | 3 | | | 1 | | | 11 | | | 1.5 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolus, Foreign Body | | | | | | | | | | | | | | | | | | | | | | | 2 | | | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolus, Infiltration Cellular, Histiocyte | 1 | | | | | | | | | 2 | 1 | | | | | | | | | | | | | | 7 | | | 1.4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bronchiole, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bronchiole, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Interstitialium, Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Foreign Body | | | | | | | X | | | | | | X | | | | | | X | | | 5 | | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | 1 | 3 | | | | | | | | | | | 3 | | | 3 | 3 | | | 8 | | | 2.4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | 1 | | | 1.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Nasolacrimal Duct, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Glands, Respiratory Epithelium, Dilatation | | | 3 | | | | | | | | | | | | | | | | | | | 3 | | | 3 | | | 3.0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Goblet Cell, Hyperplasia | | | | | | | 3 | | | 2 | 3 | | | | | | | | | | | 3 | 1 | 2 | | | 11 | | | 2.3 | | | | | | | | | | | | | | | | | | | | | | | |
| Nasolacrimal Duct, Inflammation, Suppurative | | | | | | | | | | | | | | | 2 | | | | | | | | | | | 2 | | | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Degeneration, Hyaline | | | | | | 2 | | | | | | | | | | | | | | | | | 2 | | | 2 | | | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Hyperplasia, Basal Cell | 1 | 1 | 1 | 1 | 1 | | | | | | 1 | | | | | | | | | | | 1 | 1 | 1 | | | 19 | | | 1.1 | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Metaplasia | | | | | | | | | | | | | | | | | | | | | | | | | 4 | | | 1.3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Necrosis | | | | | | | | | | | | | | | | | 1 | | | | | | | 1 | | | 1.0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | 1.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | 3 | | | 2 | | | | | 2 | | | 2 | 2 | | | | | 2 | | | 2 | | | 15 | | | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| | 7 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 6 | 5 | 6 | 7 | 6 | 6 | 5 | 4 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 |
| DAY ON TEST | 3 | 2 | 2 | 7 | 3 | 2 | 2 | 1 | 4 | 3 | 1 | 3 | 6 | 8 | 4 | 8 | 0 | 2 | 2 | 6 | 1 | 7 | 3 | 2 | 2 |
| | 0 | 9 | 9 | 5 | 0 | 9 | 8 | 8 | 3 | 6 | 3 | 0 | 5 | 6 | 1 | 0 | 5 | 9 | 4 | 5 | 1 | 4 | 9 | 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 |
| 250 PPM | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |

Pleura Inflammation, Chronic 3 3 1.3

Trachea Glands, Cyst + 50 1 3.0

SPECIAL SENSES SYSTEM

Eye Degeneration + 50 1 4.0
 Inflammation, Chronic Active 1 4.0
 Bilateral, Lens, Cataract 4 1 4.0
 Bilateral, Retina, Atrophy 2 1 2.0
 Lens, Cataract 1 2.0

Harderian Gland Inflammation, Suppurative + 50 1 3.0
 Inflammation, Chronic 3 3 1 3.0

URINARY SYSTEM

Kidney Infarct + 50 1 4.0
 Infarct, Multiple 4 4 2 2 3 4 2 3 2 2 2 2 2 2 1 2 4 2 2 4 3 1 4.0
 Nephropathy 4 4 2 2 3 4 2 3 2 2 2 2 2 2 1 2 4 2 2 4 3 47 2.6
 Bilateral, Infarct 3 1 3.0
 Glomerulus, Inflammation, Suppurative 4 1 4.0
 Papilla, Mineralization 1 1 2 1 1 2 1 1 3 2 1 1 1 1 3 2 1 2 3 35 1.7

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
 x .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
 I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 6 | 5 | 6 | 7 | 6 | 6 | 5 | 4 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 |
|--|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | | 3 | 2 | 2 | 7 | 3 | 2 | 2 | 1 | 4 | 3 | 1 | 3 | 6 | 8 | 4 | 8 | 0 | 2 | 2 | 6 | 1 | 7 | 3 | 2 | 2 |
| | | 0 | 9 | 9 | 5 | 0 | 9 | 8 | 8 | 3 | 6 | 3 | 0 | 5 | 6 | 1 | 0 | 5 | 9 | 4 | 5 | 1 | 4 | 9 | 9 | 9 |
| FISCHER 344 RATS MALE | 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 |
| 250 PPM | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
| Pelvis, Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 5 1.8 |
| Renal Tubule, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Renal Tubule, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 3 3.3 |
| Ureter | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Urinary Bladder Hemorrhage | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

| DAY ON TEST | | 4 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 5 | |
|------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 9 | 2 | 3 | 2 | 2 | 7 | 2 | 3 | 3 | 2 | 4 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 7 | 2 | 3 | 2 | 6 |
| | | 5 | 5 | 4 | 9 | 9 | 0 | 9 | 0 | 0 | 9 | 6 | 9 | 0 | 0 | 0 | 9 | 0 | 9 | 5 | 4 | 9 | 0 | 9 | 9 |
| FISCHER 344 RATS MALE | 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 | |
| | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| | 500 PPM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Basophilic Focus | | | | X | X | | | | | X | X | | | X | X | X | | | | | | | X | |
| Clear Cell Focus | | | | X | | X | | | | X | | | X | | | | | | | | | X | | X |
| Degeneration, Cystic | | | | | | | | | | | 2 | | | | | | | | | | | | | |
| Eosinophilic Focus | | | | | | | | | | | | | X | | | | | | | | X | | | |
| Eosinophilic Focus, Multiple | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | | | | | | | | | | | | | | X | | | | | | | | | | |
| Necrosis | | | | 3 | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | 2 | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | 3 | | | | | 4 | 3 | | | | | | 2 | | | | | | 1 | | |
| Periportal, Inflammation, Chronic | | | | | | | | | | | | | | | | 3 | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 4 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 5 | |
|------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 9 | 2 | 3 | 2 | 2 | 7 | 2 | 3 | 3 | 2 | 4 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 7 | 2 | 3 | 2 | 6 |
| | | 5 | 5 | 4 | 9 | 9 | 0 | 9 | 0 | 0 | 9 | 6 | 9 | 0 | 0 | 0 | 9 | 0 | 9 | 5 | 4 | 9 | 0 | 9 | 9 |
| FISCHER 344 RATS MALE | 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 | |
| | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| | 500 PPM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Acinus, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Hyperplasia | | | 2 | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | 3 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Erosion | | | 3 | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | |

CARDIOVASCULAR SYSTEM

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

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

| DAY ON TEST | | 4 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 5 |
|------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 9 | 2 | 3 | 2 | 2 | 7 | 2 | 3 | 3 | 2 | 4 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 7 | 2 | 3 | 2 | 6 |
| | | 5 | 5 | 4 | 9 | 9 | 0 | 9 | 0 | 0 | 9 | 6 | 9 | 0 | 0 | 0 | 9 | 0 | 9 | 5 | 4 | 9 | 0 | 9 | 9 |
| FISCHER 344 RATS MALE | 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 |
| | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 500 PPM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|---|---|---|--|--|--|--|--|--|--|--|---|---|--|--|--|--|--|--|---|--|--|---|--|
| Cardiomyopathy | 2 | 2 | 1 | 1 | | | | | | | | | 1 | 2 | | | | | | | 2 | | | 4 | |
| Atrium, Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Valve, Hemorrhage | 2 | | | | | | | | | | | | | | | | | | | | | | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | 2 | | 3 | | | | | | | 2 | | | | | | 4 | | | | 3 |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | 3 | | 2 | | 2 | | 4 | 3 | | | | | | 2 | 3 | 1 | 2 | | 2 | 4 | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A |
| Cyst | | | | | | | | | | | | | | | | | | | | | | 3 | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | 4 | | 3 | | | | 3 | | 3 | | 3 | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| C-cell, Hyperplasia | 2 | | | | | | | | | | | | | | | 1 | | | | | | 1 | | 2 | |
| Follicular Cell, Hyperplasia | | | | | | 2 | | | | | | | | | | | | | | | | | | | |

GENERAL BODY SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

| DAY ON TEST | | 4 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 5 |
|------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 9 | 2 | 3 | 2 | 2 | 7 | 2 | 3 | 3 | 2 | 4 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 7 | 2 | 3 | 2 | 6 |
| | | 5 | 5 | 4 | 9 | 9 | 0 | 9 | 0 | 0 | 9 | 6 | 9 | 0 | 0 | 0 | 9 | 0 | 9 | 5 | 4 | 9 | 0 | 9 | 9 |
| FISCHER 344 RATS MALE | 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 |
| | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 500 PPM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

Peritoneum +

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | 1 | | 2 | | | 2 | | 1 | | | | 1 | 2 | | 3 | 1 | 2 | 2 | 2 | 3 | 3 | 1 | 3 |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | |
| Artery, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | |
| Germinal Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | |
| Interstitial Cell, Hyperplasia | 3 | 3 | | | | | | 2 | | | 2 | | 2 | 2 | | | | | 2 | 1 | | | | |

HEMATOPOIETIC SYSTEM

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

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
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 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 4 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 5 | |
| | 9 | 2 | 3 | 2 | 2 | 7 | 2 | 3 | 3 | 2 | 4 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 7 | 2 | 3 | 2 | 2 | 6 |
| | 5 | 5 | 4 | 9 | 9 | 0 | 9 | 0 | 0 | 9 | 6 | 9 | 0 | 0 | 0 | 9 | 0 | 9 | 5 | 4 | 9 | 0 | 9 | 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 |
| 500 PPM | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node
Deep Cervical, Hyperplasia, Lymphoid
Pancreatic, Ectasia
Pancreatic, Hyperplasia, Lymphoid
Pancreatic, Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | + | + | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Bronchial
Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | |
| | M | M | M | + | M | M | M | M | M | M | + | M | M | M | M | M | M | M | M | M | + | M | M | + | 4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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
Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | |
| | + | + | + | + | + | M | M | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | M | + |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen
Fibrosis
Hemorrhage
Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

males
(cont...)

INTEGUMENTARY SYSTEM

Mammary Gland
Galactocele
Epithelium, Hyperplasia

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

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 l .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked
 Page 40

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DAY ON TEST | 4 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 5 | | |
| | | 9 | 2 | 3 | 2 | 2 | 7 | 2 | 3 | 3 | 2 | 4 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 7 | 2 | 3 | 2 | 6 | |
| | | 5 | 5 | 4 | 9 | 9 | 0 | 9 | 0 | 0 | 9 | 6 | 9 | 0 | 0 | 0 | 9 | 0 | 9 | 5 | 4 | 9 | 0 | 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 | |
| | 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 | |
| 500 PPM | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin Hyperkeratosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Hyperostosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | | + |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain Compression Hemorrhage | + | + | + | + | + | 3 | + | + | + | + | + | + | + | + | + | + | + | + | 3 | + | + | 3 | + | + | + |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | | 4 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx Inflammation, Suppurative | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | 3 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
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TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

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First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | 4 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 5 | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9 | 2 | 3 | 2 | 2 | 7 | 2 | 3 | 3 | 2 | 4 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 7 | 2 | 3 | 2 | 6 | |
| | 5 | 5 | 4 | 9 | 9 | 0 | 9 | 0 | 0 | 9 | 6 | 9 | 0 | 0 | 0 | 9 | 0 | 9 | 5 | 4 | 9 | 0 | 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 | |
| 500 PPM | 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 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Epiglottis, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lung | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Inflammation | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | 1 | | 2 | | | | | | | | | | | | | 1 | | | | | 2 | | | |
| Alveolar Epithelium, Hyperplasia | | | | | | 1 | | | | | 2 | | | 3 | | 2 | 2 | 2 | | | 2 | 3 | | | |
| Alveolus, Infiltration Cellular, Histiocyte | | | | 3 | | | | | | | | 1 | | | | 1 | | | | | 2 | | | | |
| Bronchiole, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | |
| Interstitialium, Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | | | | | | | | | | | | | | | | | | | | | | | | | |
| Foreign Body | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | |
| Inflammation, Suppurative | | | 1 | | | | | | 1 | 3 | | | | | 1 | | | | | | | | | | |
| Epithelium, Nasolacrimal Duct, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Glands, Olfactory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Glands, Respiratory Epithelium, Dilatation | | | | | | | | | | | | | | | | | 3 | | | | | | | 3 | |
| Glands, Respiratory Epithelium, Hyperplasia | | | | | | 3 | | | | | | | | | | | | | | | | | | 1 | |
| Goblet Cell, Olfactory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Goblet Cell, Hyperplasia | | | | | | 2 | | | | 2 | | | | | | | 2 | | | | | | | | |
| Nasolacrimal Duct, Inflammation, Suppurative | | | | | | | | | 3 | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Hyperplasia, Basal Cell | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 | 1 | | |
| Olfactory Epithelium, Metaplasia | | | | | | | | 1 | | | | | | | 3 | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 4 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 5 | |
| | 9 | 2 | 3 | 2 | 2 | 7 | 2 | 3 | 3 | 2 | 4 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 7 | 2 | 3 | 2 | 6 | |
| | 5 | 5 | 4 | 9 | 9 | 0 | 9 | 0 | 0 | 9 | 6 | 9 | 0 | 0 | 0 | 9 | 0 | 9 | 5 | 4 | 9 | 0 | 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 | |
| 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 | |
| 500 PPM | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Olfactory Epithelium, Ulcer | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | | | 3 | | | 2 | 1 | | 3 | | | | | 2 | | 4 | | | 3 | 1 | | 4 | | |
| Respiratory Epithelium, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Epithelium, Hyperplasia | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Squamous Epithelium, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | |
| Pleura | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | + | + | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | | | | | | | | | | | | | | | | | | | | | | | | |
| | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A |
| Bilateral, Retina, Atrophy | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Ciliary Body, Iris, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | |
| Lens, Cataract | | | | | | | | | | 3 | | | | | | | | | | | | 1 | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Infarct | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy | 2 | 1 | 3 | 4 | | 4 | 4 | 4 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 1 | 3 | 3 | 4 | 4 | 2 |
| Bilateral, Renal Tubule, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 5 | |
| DAY ON TEST | 9 | 2 | 3 | 2 | 2 | 7 | 2 | 3 | 3 | 2 | 4 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 7 | 2 | 3 | 2 | 6 | |
| | 5 | 5 | 4 | 9 | 9 | 0 | 9 | 0 | 0 | 9 | 6 | 9 | 0 | 0 | 0 | 9 | 0 | 9 | 5 | 4 | 9 | 0 | 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 | |
| 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 | |
| 500 PPM | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capsule, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | |
| Papilla, Mineralization | | 1 | 3 | 2 | 1 | 2 | 1 | 3 | 3 | 2 | 1 | 1 | 3 | 3 | 1 | 3 | 4 | 3 | 2 | 2 | 3 | 3 | 2 | 1 | 3 |
| Pelvis, Transitional Epithelium, Hyperplasia | | | | 3 | | 1 | | | 3 | 2 | | | | 1 | | 3 | | | | 3 | | 2 | | | |
| Pelvis, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal Tubule, Accumulation, Hyaline Droplet | | | | | | | | | | | 4 | | | | | | | | | | | | | | |
| Renal Tubule, Cyst | | X | | | | | | | | | | | | | | | | | | | | | X | | |
| Renal Tubule, Hyperplasia | | | | | 2 | | | 2 | | | 3 | | | | | 4 | | | | | | 2 | | | |

Urethra
Transitional Epithelium, Hyperplasia

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A |
| Calculus Gross Observation | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | |
| Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
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TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

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Date Report Requested: 01/12/2006

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First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 6 | 6 | 5 | 7 | 6 | 6 | 7 | 6 | 7 | 6 | 4 | 6 | 5 | 7 | 2 | 6 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 7 |
|------------------------------|----------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 9 | 8 | 5 | 2 | 3 | 0 | 3 | 3 | 0 | 7 | 6 | 4 | 2 | 2 | 1 | 2 | 2 | 5 | 2 | 2 | 3 | 7 | 3 | 3 |
| | | 9 | 5 | 8 | 4 | 9 | 8 | 0 | 0 | 9 | 2 | 0 | 0 | 8 | 3 | 9 | 3 | 6 | 9 | 4 | 9 | 9 | 0 | 9 | 0 | 0 |
| FISCHER 344 RATS MALE | 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 |
| | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 500 PPM | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 |
| Clear Cell Focus | X | | | | X | | | | | | | | | X | | | | | X | | | X | | | | | 11 |
| Degeneration, Cystic | | | 3 | | | | | | | | | | | | | | | 3 | 2 | | | | | | | | 4 2.5 |
| Eosinophilic Focus | | | | | | | | | | | | | | X | | | | | | | | | | | | | 3 |
| Eosinophilic Focus, Multiple | | | | | | | | | | | | | | | | | | | | | | | | X | | | 1 |
| Hepatodiaphragmatic Nodule | | | | | | | | | | 4 | | | | | | | | 4 | | | | | | | | | 2 4.0 |
| Mixed Cell Focus | | | | | X | | | | | | | | | | | | | | | | | X | | | | | 3 |
| Necrosis | | 4 | | | | | | | | | | | | | | | 2 | | | | | | | | | | 3 3.0 |
| Vacuolization Cytoplasmic | | | | | 3 | | | | | | 2 | | | | | | | | | | | | | | | | 3 2.3 |
| Bile Duct, Hyperplasia | | 4 | 3 | | | | | | | 4 | 4 | 3 | | 4 | | | | | | | | | | 3 | | | 12 3.2 |
| Periportal, Inflammation, Chronic | | | | | | | | | | | | | 4 | | | | | | | | | | | | | | 2 3.5 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 7 | 6 | 6 | 5 | 7 | 6 | 6 | 7 | 6 | 7 | 6 | 4 | 6 | 5 | 7 | 2 | 6 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 7 | |
| | 2 | 9 | 8 | 5 | 2 | 3 | 0 | 3 | 3 | 0 | 7 | 6 | 4 | 2 | 2 | 1 | 2 | 2 | 5 | 2 | 2 | 3 | 7 | 3 | 3 | |
| | 9 | 5 | 8 | 4 | 9 | 8 | 0 | 0 | 9 | 2 | 0 | 0 | 8 | 3 | 9 | 3 | 6 | 9 | 4 | 9 | 9 | 0 | 9 | 0 | 0 | |
| 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 | |
| 500 PPM | 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 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | * TOTALS |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 10 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 10 3.0 |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 2 3.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 7 3.4 |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Erosion | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |

CARDIOVASCULAR SYSTEM

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

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
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 Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 6 | 6 | 5 | 7 | 6 | 6 | 7 | 6 | 7 | 6 | 4 | 6 | 5 | 7 | 2 | 6 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 7 |
| DAY ON TEST | 2 | 9 | 8 | 5 | 2 | 3 | 0 | 3 | 3 | 0 | 7 | 6 | 4 | 2 | 2 | 1 | 2 | 2 | 5 | 2 | 2 | 3 | 7 | 3 | 3 |
| | 9 | 5 | 8 | 4 | 9 | 8 | 0 | 0 | 9 | 2 | 0 | 0 | 8 | 3 | 9 | 3 | 6 | 9 | 4 | 9 | 9 | 0 | 9 | 0 | 0 |
| 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 |
| 500 PPM | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|--|--|--|--|---|---|--|--|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|---|---------------|
| Cardiomyopathy | | | | | | 2 | | | | | | | 2 | | | | | | | | | | | | 1 | 12 2.0 |
| Atrium, Thrombosis | 4 | | | | | | 1 | | | | | 2 | | | | | | | | | | | | | | 4 2.8 |
| Valve, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---------------|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | 2 | | | | | | | | | 2 | | | | | | | | | | 3 | 10 2.4 |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Vacuolization Cytoplasmic | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | 7 2.3 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 18 2.8 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 3.5 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 13 3.2 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| C-cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 1.8 |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |

GENERAL BODY SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Page 47

| DAY ON TEST | | 7 | 6 | 6 | 5 | 7 | 6 | 6 | 7 | 6 | 7 | 6 | 4 | 6 | 5 | 7 | 2 | 6 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 7 |
|------------------------------|----------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 9 | 8 | 5 | 2 | 3 | 0 | 3 | 3 | 0 | 7 | 6 | 4 | 2 | 2 | 1 | 2 | 2 | 5 | 2 | 2 | 3 | 7 | 3 | 3 |
| | | 9 | 5 | 8 | 4 | 9 | 8 | 0 | 0 | 9 | 2 | 0 | 0 | 8 | 3 | 9 | 3 | 6 | 9 | 4 | 9 | 9 | 0 | 9 | 0 | 0 |
| FISCHER 344 RATS MALE | 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 |
| | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 500 PPM | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |

Peritoneum + 4

GENITAL SYSTEM

| | | |
|--------------------------------------|---|-----------|
| Epididymis | + | 50 |
| Preputial Gland | + | 50 |
| Cyst | 2 | 2 2.5 |
| Inflammation, Suppurative | | 1 4.0 |
| Prostate | + | 50 |
| Hyperplasia | | 1 2.0 |
| Inflammation, Suppurative | 4 1 1 2 3 3 3 2 2 2 1 2 | 27 2.0 |
| Seminal Vesicle | + | 50 |
| Testes | + | 50 |
| Necrosis | | 4 1 4.0 |
| Artery, Inflammation, Chronic Active | | 3 3 2 3.0 |
| Germinal Epithelium, Atrophy | | 3 2 3 2.7 |
| Interstitial Cell, Hyperplasia | 2 2 2 3 2 2 4 2 2 1 2 | 19 2.2 |

HEMATOPOIETIC SYSTEM

Bone Marrow + 50

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
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 2) Mild 4) Marked

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CUMENE

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First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | 7 | 6 | 6 | 5 | 7 | 6 | 6 | 7 | 6 | 7 | 6 | 4 | 6 | 5 | 7 | 2 | 6 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 7 |
|------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| DAY ON TEST | | 2 | 9 | 8 | 5 | 2 | 3 | 0 | 3 | 3 | 0 | 7 | 6 | 4 | 2 | 2 | 1 | 2 | 2 | 5 | 2 | 2 | 3 | 7 | 3 | 3 |
| | | 9 | 5 | 8 | 4 | 9 | 8 | 0 | 0 | 9 | 2 | 0 | 0 | 8 | 3 | 9 | 3 | 6 | 9 | 4 | 9 | 9 | 0 | 9 | 0 | 0 |
| FISCHER 344 RATS MALE | 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 |
| | 500 PPM | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |

Lymph Node
 Deep Cervical, Hyperplasia, Lymphoid + + + + + 8
 Pancreatic, Ectasia 2 1 2.0
 Pancreatic, Hyperplasia, Lymphoid 1 1.0
 Pancreatic, Inflammation, Granulomatous 1 2.0

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 M 11
 Hyperplasia, Lymphoid 1 4.0

Lymph Node, Mandibular M 0

Lymph Node, Mediastinal M M M + + + M + + + M + M + M + + + + + M M M M M M 34
 Hyperplasia, Lymphoid 2 3.5

Lymph Node, Mesenteric + 50

Spleen + 50
 Fibrosis 4 4 7 3.6
 Hemorrhage 4 4 2 4.0
 Necrosis 4 1 4.0

Thymus + 50

INTEGUMENTARY SYSTEM

Mammary Gland + 50
 Galactocele 4 2 4.0
 Epithelium, Hyperplasia 4 1 4.0

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 6 | 6 | 5 | 7 | 6 | 6 | 7 | 6 | 7 | 6 | 4 | 6 | 5 | 7 | 2 | 6 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 7 |
|--|-----------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 9 | 8 | 5 | 2 | 3 | 0 | 3 | 3 | 0 | 7 | 6 | 4 | 2 | 2 | 1 | 2 | 2 | 5 | 2 | 2 | 3 | 7 | 3 | 3 |
| | | 9 | 5 | 8 | 4 | 9 | 8 | 0 | 0 | 9 | 2 | 0 | 0 | 8 | 3 | 9 | 3 | 6 | 9 | 4 | 9 | 9 | 0 | 9 | 0 | 0 |
| FISCHER 344 RATS MALE
500 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 | 0 | 0 | 0 | 0 | 0 |
| | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--------------|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperostosis | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--------------|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Compression | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 2.0 |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--------------|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| | 7 | 6 | 6 | 5 | 7 | 6 | 6 | 7 | 6 | 7 | 6 | 4 | 6 | 5 | 7 | 2 | 6 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 7 |
| DAY ON TEST | 2 | 9 | 8 | 5 | 2 | 3 | 0 | 3 | 3 | 0 | 7 | 6 | 4 | 2 | 2 | 1 | 2 | 2 | 5 | 2 | 2 | 3 | 7 | 3 | 3 |
| | 9 | 5 | 8 | 4 | 9 | 8 | 0 | 0 | 9 | 2 | 0 | 0 | 8 | 3 | 9 | 3 | 6 | 9 | 4 | 9 | 9 | 0 | 9 | 0 | 0 |
| 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 |
| 500 PPM | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|-------|-------|-------|--|--|--|--------|
| Olfactory Epithelium, Ulcer | | | | | | | | | | | | | | | | | | | | | | | | 4 | 4 | 2 4.0 | | | | |
| Respiratory Epithelium, Hyperplasia | 3 | | | | | | | | | | | | 4 | 1 | 4 | 3 | 4 | 4 | | | | | | | | | | | | 16 2.9 |
| Respiratory Epithelium, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | 2 | | | | 1 2.0 | | | | | |
| Squamous Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 1.0 | | | | | | |
| Squamous Epithelium, Inflammation | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 1.0 | | | | | | |
| Pleura | | | | | | | | | | | | | | | | + | + | | | | | | 5 | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | 1 | 1 | | | | | | 4 1.0 | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|---|---|---|---|---|---|---|-----|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Bilateral, Retina, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Ciliary Body, Iris, Inflammation, Suppurative | | | | | | | | | | | | | 3 | | | | 1 3.0 | | | | | | | | |
| Lens, Cataract | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|---|---|---|--------|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Infarct | | | | | | | | | | | | | | | | | | 2 | 4 | 2 3.0 | | | | | |
| Nephropathy | 4 | 3 | 4 | 1 | 3 | 2 | 3 | 4 | 4 | 3 | 2 | 4 | 3 | 4 | 2 | 3 | 2 | 4 | 2 | 4 | 1 | 3 | 2 | 47 2.9 | |
| Bilateral, Renal Tubule, Cyst | | | | | | | | | | | | | | | | | | | | | | X | 1 | 1 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue

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

1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 6 | 6 | 5 | 7 | 6 | 6 | 7 | 6 | 7 | 6 | 4 | 6 | 5 | 7 | 2 | 6 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 7 | |
|--|----------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|--------------|
| | | 2 | 9 | 8 | 5 | 2 | 3 | 0 | 3 | 3 | 0 | 7 | 6 | 4 | 2 | 2 | 1 | 2 | 2 | 5 | 2 | 2 | 3 | 7 | 3 | 3 | |
| | | 9 | 5 | 8 | 4 | 9 | 8 | 0 | 0 | 9 | 2 | 0 | 0 | 8 | 3 | 9 | 3 | 6 | 9 | 4 | 9 | 9 | 0 | 9 | 0 | 0 | |
| FISCHER 344 RATS MALE | 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 | |
| | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | 500 PPM | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capsule, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Papilla, Mineralization | | 1 | 3 | 1 | 2 | 1 | 2 | 1 | 3 | 3 | | 2 | 1 | | | 3 | | 2 | 3 | 2 | 3 | | 3 | 3 | 1 | 1 | |
| Pelvis, Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 14 | 2.4 |
| Pelvis, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Renal Tubule, Accumulation, Hyaline Droplet | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Renal Tubule, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Renal Tubule, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | 2.6 |
| Urethra | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 3.0 |
| Urinary Bladder | | | | | | | | | | | | | | | | | | | | | | | | | | 49 | |
| Calculus Gross Observation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 2.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 7 | 7 | 7 | 6 | 6 | 5 | 7 | 7 | 7 | 7 | 6 | 6 | |
| DAY ON TEST | 2 | 2 | 3 | 4 | 2 | 7 | 3 | 2 | 3 | 2 | 3 | 5 | 0 | 3 | 1 | 6 | 3 | 8 | 2 | 3 | 2 | 2 | 3 | 5 | 2 |
| | 9 | 9 | 0 | 1 | 9 | 7 | 0 | 9 | 0 | 6 | 5 | 4 | 5 | 0 | 1 | 0 | 5 | 4 | 9 | 0 | 9 | 9 | 0 | 0 | 8 |
| 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 |
| 1000 PPM | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Basophilic Focus | | | | | X | | | | | | | | | | | | | | | | | X | | |
| Clear Cell Focus | X | X | | | | X | X | X | | | | | | | | | | | X | | X | X | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | 3 | | 4 | | | | | | 3 |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | | | X | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | 3 | | | | | | | | |
| Vacuolization Cytoplasmic | 2 | | | 2 | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | | | | | | 3 | 4 | | | | | 2 | 2 | | | | | | | | |
| Oval Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

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Lab: BNW

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

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Mesentery Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pancreas Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Acinus, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach Ulcer | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stomach, Glandular Erosion | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Tongue Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Heart Cardiomyopathy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrium, Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ventricle, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 7 | 7 | 7 | 6 | 6 | 5 | 7 | 7 | 7 | 7 | 6 | 6 | |
| DAY ON TEST | 2 | 2 | 3 | 4 | 2 | 7 | 3 | 2 | 3 | 2 | 3 | 5 | 0 | 3 | 1 | 6 | 3 | 8 | 2 | 3 | 2 | 2 | 3 | 5 | 2 |
| | 9 | 9 | 0 | 1 | 9 | 7 | 0 | 9 | 0 | 6 | 5 | 4 | 5 | 0 | 1 | 0 | 5 | 4 | 9 | 0 | 9 | 9 | 0 | 0 | 8 |
| 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 |
| 1000 PPM | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | 2 | | | | | | | | | 2 | 1 | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | 2 | | | | | | | | | 1 | 2 | | | | | 4 | | | |
| Bilateral, Hyperplasia | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | | | | | | | | | | | | | | | | 4 | | | | | | | | |
| Hyperplasia | | | | | | | | | | 3 | | | | | 2 | | | | | | 2 | | | 4 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| C-cell, Hyperplasia | | | | | | | | | | | | 1 | | | 3 | | | | | | | | 3 | 2 |

GENERAL BODY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Peritoneum | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

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

males (cont...)

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Preputial Gland Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Prostate Hyperplasia Inflammation, Suppurative | 2 | 1 | 1 | | 2 | | 2 | 2 | 1 | | 2 | | | 3 | 2 | 2 | 2 | 2 | 1 | | 1 | | 1 | | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Testes Bilateral, Interstitial Cell, Hyperplasia Germinal Epithelium, Atrophy Interstitial Cell, Hyperplasia | 3 | | | | | | | | | | 3 | | 3 | 4 | | | 4 | | | 3 | 3 | | | 3 | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node Deep Cervical, Ectasia Deep Cervical, Hemorrhage Deep Cervical, Hyperplasia, Lymphoid Pancreatic, Ectasia | 4 | | + | | | | | | | + | + | | | + | | | | | | + | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | 4 | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 7 | 7 | 7 | 6 | 6 | 5 | 7 | 7 | 7 | 7 | 6 | 6 | |
| DAY ON TEST | 2 | 2 | 3 | 4 | 2 | 7 | 3 | 2 | 3 | 2 | 3 | 5 | 0 | 3 | 1 | 6 | 3 | 8 | 2 | 3 | 2 | 2 | 3 | 5 | 2 |
| | 9 | 9 | 0 | 1 | 9 | 7 | 0 | 9 | 0 | 6 | 5 | 4 | 5 | 0 | 1 | 0 | 5 | 4 | 9 | 0 | 9 | 9 | 0 | 0 | 8 |
| 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 |
| 1000 PPM | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 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 | M | M |
| Lymph Node, Mediastinal
Angiectasis | + | + | + | M | + | M | M | M | + | + | M | + | + | + | + | + | + | + | + | + | M | M | + | + | + | | |
| Lymph Node, Mesenteric
Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Accessory Spleen | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Galactocele | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 7 | 7 | 7 | 6 | 6 | 5 | 7 | 7 | 7 | 7 | 6 | 6 | |
| DAY ON TEST | 2 | 2 | 3 | 4 | 2 | 7 | 3 | 2 | 3 | 2 | 3 | 5 | 0 | 3 | 1 | 6 | 3 | 8 | 2 | 3 | 2 | 2 | 3 | 5 | 2 |
| | 9 | 9 | 0 | 1 | 9 | 7 | 0 | 9 | 0 | 6 | 5 | 4 | 5 | 0 | 1 | 0 | 5 | 4 | 9 | 0 | 9 | 9 | 0 | 0 | 8 |
| 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 |
| 1000 PPM | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

Ulcer 4

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | | |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Compression | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 4 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epiglottis, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

| DAY ON TEST | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 7 | 7 | 7 | 6 | 6 | 5 | 7 | 7 | 7 | 7 | 6 | 6 | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 2 | 3 | 4 | 2 | 7 | 3 | 2 | 3 | 2 | 3 | 5 | 0 | 3 | 1 | 6 | 3 | 8 | 2 | 3 | 2 | 2 | 3 | 5 | 2 |
| | 9 | 9 | 0 | 1 | 9 | 7 | 0 | 9 | 0 | 6 | 5 | 4 | 5 | 0 | 1 | 0 | 5 | 4 | 9 | 0 | 9 | 9 | 0 | 0 | 8 |
| 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 |
| 1000 PPM | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|---|--|---|---|--|--|---|--|--|--|--|--|--|---|---|--|--|--|--|---|--|---|--|
| Alveolar Epithelium, Metaplasia, Mucous | | | | | | 3 | | | | | | | | | | | | | | | | | | | | |
| Alveolus, Emphysema | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolus, Infiltration Cellular, Histiocyte | | | | 2 | | 3 | 2 | | | 3 | | | | | | | 1 | 2 | | | | | 1 | | 1 | |
| Alveolus, Proteinosis | | | | | | 3 | | | | | | | | | | | | | | | | | | | | |
| Interstitialium, Fibrosis | | | | | | 3 | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Foreign Body | | X | | | | | | | | | | | | | | X | | | | | | | | | | |
| Hyperplasia, Basal Cell | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | 2 | | | | | | | | | | 1 | | | 3 | 3 | | | | | | |
| Glands, Olfactory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Glands, Respiratory Epithelium, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Glands, Respiratory Epithelium, Hyperplasia | | | | | | 2 | | | | 1 | | | | | | | | | | | | | | | | |
| Goblet Cell, Hyperplasia | | | | | | | | | | | 1 | 2 | | | | | | | | | 3 | | | | | |
| Olfactory Epithelium, Hyperplasia, Basal Cell | | | | 1 | | 1 | 1 | 1 | 1 | | | | 1 | | | | 1 | | 1 | | 1 | 1 | 1 | 1 | 1 | |
| Olfactory Epithelium, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Olfactory Epithelium, Metaplasia | | | | | | | | | | | | | | | | | | | | | 2 | | 2 | | 3 | |
| Olfactory Epithelium, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | | | | | | 4 | | 3 | | 2 | 4 | 1 | | 1 | 2 | | | 2 | 2 | 3 | | 1 | | 3 | 2 | 2 |
| Respiratory Epithelium, Inflammation, Chronic | | | | | | | 2 | | 1 | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Necrosis | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| Pleura | | | | | | + | | | | | | | | | | | | | | | | | | | + |
| Inflammation, Chronic | | | | | | 3 | | | | | | | | | | | | | | | | | | | 1 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 7 | 7 | 7 | 6 | 6 | 5 | 7 | 7 | 7 | 7 | 6 | 6 | |
| DAY ON TEST | 2 | 2 | 3 | 4 | 2 | 7 | 3 | 2 | 3 | 2 | 3 | 5 | 0 | 3 | 1 | 6 | 3 | 8 | 2 | 3 | 2 | 2 | 3 | 5 | 2 |
| | 9 | 9 | 0 | 1 | 9 | 7 | 0 | 9 | 0 | 6 | 5 | 4 | 5 | 0 | 1 | 0 | 5 | 4 | 9 | 0 | 9 | 9 | 0 | 0 | 8 |
| 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 |
| 1000 PPM | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Bilateral, Lens, Cataract | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| Cornea, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | |
| Lens, Cataract | 2 | 2 | | | | | | | | | | | | | | | | | | | 2 | | | |
| Retina, Atrophy | | | | | | | | | | | | | | | | | | | | | | 3 | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | + |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | | | | | | | | | | 4 | | | | | | | | | | | | | |
| Infarct | | | | 2 | | | | | | | | | | | | | | | | | | | | |
| Nephropathy | 4 | 4 | 3 | 2 | 2 | 2 | 4 | 3 | 4 | 2 | 2 | 1 | 2 | 4 | 2 | 3 | 2 | 1 | 2 | 3 | 3 | 2 | 3 | 4 |
| Papilla, Mineralization | 2 | 3 | 1 | | 2 | 1 | | | 2 | 1 | 3 | 2 | | 3 | 3 | 4 | 2 | 1 | 3 | 2 | 4 | 1 | 1 | 2 |
| Pelvis, Transitional Epithelium, Hyperplasia | 2 | 1 | | | | | | | | | | | | 3 | 2 | 2 | | | | | 3 | | | 2 |
| Pelvis, Dilatation | | | | | | | | | | | 4 | | | | | | | | | | | | | |
| Renal Tubule, Accumulation, Hyaline Droplet | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal Tubule, Cyst | | | | | | | | | | | | | X | | | | | | | | | X | | |
| Renal Tubule, Hyperplasia | | | | | | | | | | | | | | 2 | | | 2 | | | 2 | | | | |
| Renal Tubule, Hypertrophy | 3 | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 7 | 7 | 7 | 6 | 6 | 5 | 7 | 7 | 7 | 7 | 6 | 6 | |
| DAY ON TEST | 2 | 2 | 3 | 4 | 2 | 7 | 3 | 2 | 3 | 2 | 3 | 5 | 0 | 3 | 1 | 6 | 3 | 8 | 2 | 3 | 2 | 2 | 3 | 5 | 2 |
| | 9 | 9 | 0 | 1 | 9 | 7 | 0 | 9 | 0 | 6 | 5 | 4 | 5 | 0 | 1 | 0 | 5 | 4 | 9 | 0 | 9 | 9 | 0 | 0 | 8 |
| 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 |
| 1000 PPM | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |
| Ureter | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urethra | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Transitional Epithelium, Hyperplasia | | | | | | | | | | 2 | | | | | | | | | | | | | | | |

males (cont...)

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Page 62

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | 49 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | 49 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | 49 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | 49 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Basophilic Focus | | | | | X | | | X | | | X | | | X | | | | | | | | | | | 6 |
| Clear Cell Focus | | | | | | | | | | | X | | | | | | | | X | | X | | | | 11 |
| Degeneration, Cystic | | | | | | | | | | | 2 | | | | | | 4 | | | | | 2 | | | 6 3.0 |
| Hepatodiaphragmatic Nodule | | | 4 | 4 | | | | | | | | | | | | | | | | 4 | | | | | 3 4.0 |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Necrosis | | | | | | | 1 | 3 | | | | | | | | | | | | | | | | | 3 2.3 |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Bile Duct, Hyperplasia | | | | | | 2 | | | | | | | | | | | | 3 | | | | | 3 | | 7 2.7 |
| Oval Cell, Hyperplasia | | | | | | | | | | | 4 | | | | | | | | | | | | | | 1 4.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Page 63

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | | | | | 4 | 4 | | | 1 | | 4 | | 4 | | | | 3 | | | | 2 | | | 10 2.7 |
| Vacuolization Cytoplasmic | | | | | 2 | | | | 2 | | | | | | | | | | | | | 4 | | | 4 2.5 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | 3 | | | | | 2 | | | 2 | | | | | | | 3 | | | 4 | 1 | | 2 | | 4 | 12 2.5 |
| Bilateral, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | M | 48 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | 4 | | | | 4 | | 3 4.0 |
| Hyperplasia | | | | | | | 3 | | | 4 | | | | | | | | | | | | | | | 6 3.0 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| C-cell, Hyperplasia | | | | | | 2 | 1 | | | | | | | | | | | | | | 3 | | | | 8 2.0 |

GENERAL BODY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|
| Peritoneum | | | | | | | | | | | | | | | | | | | | | | | | | + | 2 |
|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|---------------|--------------|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | | |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 | | |
| Inflammation, Suppurative | | | | 2 | 2 | | | 1 | 1 | | | 2 | | | 2 | 1 | 2 | | | 2 | 1 | 2 | | | 28 1.7 | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Bilateral, Interstitial Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | | |
| Germinal Epithelium, Atrophy | | | 3 | | | 3 | | | | | | | 3 | | | | | | | | | | | | | 6 3.2 |
| Interstitial Cell, Hyperplasia | | | | 3 | | | | | | | 2 | 2 | 4 | | | | | | | | | | | | | 9 3.0 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|---|----|-----------|--------------|--|--|--------------|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | | |
| Lymph Node | | | + | + | | | + | + | + | | | | | + | | | + | + | | | | | | | | | 14 | | | | |
| Deep Cervical, Ectasia | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | | | | | | | |
| Deep Cervical, Hemorrhage | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | | | |
| Deep Cervical, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | 2 3.5 | | | | | | | |
| Pancreatic, Ectasia | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Lymph Node, Bronchial | + | 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 | M | M | M | M | M | M | M | M | M | M | + | M | M | M | M | M | M | M | M | M | M | 1 |
| Lymph Node, Mediastinal
Angiectasis | + | M | M | M | + | + | M | + | M | M | + | + | + | + | M | + | + | + | + | + | M | + | + | M | + | 34 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Lymph Node, Mesenteric
Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Accessory Spleen | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Fibrosis | | | | | | | 4 | | | | | | | | | | | | | | | | | | | 2 3.5 |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Hemorrhage | 4 | | | | | | | | | | | 4 | | | | | | 4 | | | | | | | | 4 4.0 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Galactocele | | | | | | | | | | | 2 | | | | | | | | | | | | | | | 1 2.0 |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | | | | | | | 2 4.0 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 CUMENE
 CAS Number: 98-82-8
 Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006
 Time Report Requested: 09:48:09
 First Dose M/F: 06/04/01 / 06/04/01
 Lab: BNW

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

Ulcer 1 4.0

MUSCULOSKELETAL SYSTEM

Bone + 50
 Skeletal Muscle 1

NERVOUS SYSTEM

Brain + 50
 Compression 3 3 3 2 4 6 3.2
 Hemorrhage 1 1.0

RESPIRATORY SYSTEM

Larynx + 50
 Foreign Body 4 3 4.0
 Inflammation, Suppurative 2 1 1 3 1.3
 Epiglottis, Metaplasia, Squamous 2 2 2.0
 Respiratory Epithelium, Hyperplasia 1 1.0
 Lung + 50
 Inflammation, Chronic 1 5 2.4
 Alveolar Epithelium, Hyperplasia 2 4 2 1 2 10 2.3
 Alveolar Epithelium, Metaplasia, Squamous 1 4.0

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------|
| Alveolar Epithelium, Metaplasia, Mucous | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Alveolus, Emphysema | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Alveolus, Infiltration Cellular, Histiocyte | | | | | | | | | | | | 1 | 1 | | | 1 | 2 | | | 2 | | | | | | 14 1.8 |
| Alveolus, Proteinosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Interstitialium, Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Foreign Body | | | X | | | | | | | | | | X | | | | | | | | | | | | | 4 |
| Hyperplasia, Basal Cell | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 1.0 |
| Inflammation, Suppurative | | | | 3 | | | | | | | | | | | | | | | | | | | 1 | | | 6 2.2 |
| Glands, Olfactory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Glands, Respiratory Epithelium, Dilatation | | | | | | | | | | 2 | | | | | | | | | | | | 4 | | | | 2 3.0 |
| Glands, Respiratory Epithelium, Hyperplasia | | | | | 1 | | | | | | 4 | | | | | | | | | | | | | | | 4 2.0 |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | | | | | | | 2 | | | | | | | | 5 2.0 |
| Olfactory Epithelium, Hyperplasia, Basal Cell | | | | | 1 | 1 | 1 | | | | 1 | | 1 | 1 | | | | 1 | | 1 | | | 1 | 1 | 1 | 26 1.0 |
| Olfactory Epithelium, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Olfactory Epithelium, Metaplasia | | | | | | | | | | | | | | | | | | 2 | | | | | 2 | | | 5 2.2 |
| Olfactory Epithelium, Necrosis | | | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Respiratory Epithelium, Hyperplasia | | | | | | | | 4 | 3 | | | 3 | 4 | 4 | | | 2 | | 3 | | | 2 | | | 4 | 23 2.7 |
| Respiratory Epithelium, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Respiratory Epithelium, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Pleura | + | | | | | | | | | | | | | | | | | | | | | | | | | 6 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | 6 1.5 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|---|----|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Bilateral, Lens, Cataract | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Cornea, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Lens, Cataract | | | | | | | | | | | | | | | | | | | | | | | | 4 2.5 | | |
| Retina, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | 2 3.0 | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | 2 | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------|---------------|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | | |
| Infarct | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | | |
| Nephropathy | 3 | 4 | 3 | 2 | 4 | 4 | 3 | 4 | 2 | 4 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 4 | 1 | 4 | 2 | 3 | 4 | 50 2.7 | |
| Papilla, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | 41 2.1 | | |
| Pelvis, Transitional Epithelium, Hyperplasia | 2 | 1 | | 1 | | 2 | 3 | 2 | | | | 1 | 1 | 1 | | 2 | 3 | 1 | 1 | 3 | 3 | 2 | 4 | 1 | 2 | 3 |
| Pelvis, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | 15 2.0 | | |
| Renal Tubule, Accumulation, Hyaline Droplet | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | | |
| Renal Tubule, Cyst | | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Renal Tubule, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 6 2.2 | | |
| Renal Tubule, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 7 | 6 | 6 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 4 | 7 | 6 | 6 | 5 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 |
|--------------------------------------|-----------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|-----------|--------------|---|---|----------|
| | | 3 | 1 | 7 | 1 | 4 | 2 | 7 | 2 | 1 | 2 | 2 | 8 | 5 | 2 | 0 | 7 | 1 | 2 | 3 | 3 | 2 | 2 | 6 | 2 | 3 |
| | | 0 | 7 | 4 | 8 | 2 | 9 | 7 | 0 | 8 | 9 | 9 | 8 | 3 | 9 | 0 | 7 | 5 | 9 | 0 | 0 | 4 | 9 | 7 | 9 | 0 |
| 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 |
| 1000 PPM | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |
| Ureter | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Urethra | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Urinary Bladder | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | 1 | 50 | 2 1.5 | | | |

*** END OF MALE DATA ***

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

females (cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Large, Cecum | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | A | + | + |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | A | + | + |
| Intestine Small, Ileum | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | A | + | + |
| Intestine Small, Jejunum | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | A | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | X | | | | | | X | X | | | | X | X | X | | X | | X | | | | | X | |
| Clear Cell Focus | | | | | | | | X | X | | | | X | X | X | | X | | | | | | | | |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | 4 | | | 4 | | | 4 | | | | | | | | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | 2 | | | | | | |
| Vacuolization Cytoplasmic | | | | | | 4 | 3 | | | | 2 | | | | | 4 | | | | | 3 | 3 | | 3 | 3 |
| Periportal, Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | + | | | + | + | | | | | + | + | + | + | | | + | | | + | + | | + | | |
| | | 4 | | | 3 | 3 | | | | | 3 | 3 | 3 | 3 | | | 3 | | | 3 | 3 | | 3 | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ulcer | | | | | | 4 | | | | | | | | | | | 2 | | | 4 | | 2 | | |
| Epithelium, Hyperplasia | | | 1 | | 1 | 2 | | | | | | | | | 2 | | 2 | | | | | | | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Erosion | | | | 2 | | | | | | | | | | | | | | | | | | | | |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | |

CARDIOVASCULAR SYSTEM

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

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | 1 | 4 | | | | | | | | | | | | | | 2 | | 2 | | | | 4 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Vacuolization Cytoplasmic | | | | 4 | 2 | | 2 | | | | 1 | 1 | | | | | | 2 | | | | | | 3 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | 4 | | | 4 | 4 | | | | | | | | | | | | | | | | |
| Hemorrhage | | | 4 | | | | | | | | | | | | | | | 4 | | | | | | |
| Hyperplasia | | | | 3 | | | | | | 4 | | | | | 2 | | | | | | | 2 | 4 | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ultimobranchial Cyst | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| C-cell, Hyperplasia | | | | | | | | | | | 1 | | 1 | 2 | 2 | 1 | | | | | | | | 2 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | 3 | | 4 | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | 4 | | | | | | | | | | | 2 | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

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Lab: BNW

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

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | |
| Endometrium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Vagina | | | | | | | | | | | | | | | | | | | | | | | | + |
| Epithelium, Hyperplasia, Adenomatous | | | | | | | | | | | | | | | | | | | | | | | | |

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 | M | |
| Ectasia | | | | | | | | | | 4 | | | 2 | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Lymph Node, Mandibular | + | 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 | + | + | + | M | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | |
| Hemorrhage | | 3 | | | | | | | | 3 | | | | | | | | | | | | | | | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Capsule, Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
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1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
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TDMS No. 96011 - 05

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CUMENE

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

females (cont...)

Thymus +

INTEGUMENTARY SYSTEM

Mammary Gland +

Galactocoele 4

Hyperplasia 2

Skin +

Hyperkeratosis 2

MUSCULOSKELETAL SYSTEM

Bone +

Skeletal Muscle +

NERVOUS SYSTEM

Brain +

Compression 3

Hemorrhage 4

Necrosis 4

Medulla, Meninges, Inflammation, Suppurative 2

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

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

females (cont...)

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Foreign Body | | | | | | 4 | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | 2 | | | | | | |
| Inflammation, Chronic | | | | | | | | | | 2 | | | | | | | | | | | | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Inflammation, Suppurative | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | 1 | 3 | | | 2 | | | | 2 |
| Alveolar Epithelium, Hyperplasia | | | | | 2 | | 4 | | | | | | | | | | | | | | | | | |
| Alveolus, Infiltration Cellular, Histocyte | | | | | | 1 | 2 | | 1 | | 1 | | | 1 | 1 | | | | 1 | 1 | | | | 1 |
| Bronchiole, Inflammation, Chronic | | | | | 4 | | | | | | | | | | | | | | | | | | | |
| Interstitialium, Fibrosis | | | | | | | | | | | | | | | | | | 2 | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | |
| Glands, Respiratory Epithelium, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | |
| Nasolacrimal Duct, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | |
| Nasolacrimal Duct, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
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CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

females (cont...)

Pleura +
Inflammation, Chronic 1 1 1 1 1 2

Trachea +

SPECIAL SENSES SYSTEM

Eye +
Bilateral, Lens, Cataract 4
Bilateral, Retina, Atrophy 3
Cornea, Inflammation, Suppurative 4
Lens, Cataract 3 1 1
Retina, Atrophy 2 1

Harderian Gland +
Inflammation, Chronic

Lacrimal Gland

Zymbal's Gland +

URINARY SYSTEM

Kidney +
Nephropathy 1 1 1 1 1 1 2 2 1 2 3 2 1 1 1 1 1 1
Papilla, Mineralization 1 1
Pelvis, Transitional Epithelium, Hyperplasia 1
Pelvis, Transitional Epithelium, 2 1 1 2 2 2 1 1 1 1

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pelvis, Dilatation | | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| Renal Tubule, Accumulation, Hyaline Droplet | | | | | | | | 4 | | | | | | | | | | | | | | | | | |
| Renal Tubule, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal Tubule, Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | | | | | | | | | | | | | | | | | | | | | | | | | |
| Transitional Epithelium, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 CUMENE
 CAS Number: 98-82-8
 Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006
 Time Report Reqsted: 09:48:09
 First Dose M/F: 06/04/01 / 06/04/01
 Lab: BNW

| | 7 | 5 | 7 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | |
|--------------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 3 | 1 | 3 | 3 | 3 | 3 | 9 | 1 | 1 | 3 | 0 | 3 | 0 | 3 | 6 | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 2 | 1 | 6 |
| | 1 | 9 | 1 | 2 | 1 | 2 | 2 | 6 | 3 | 1 | 2 | 1 | 1 | 1 | 3 | 2 | 8 | 2 | 2 | 2 | 6 | 2 | 2 | 8 | 8 |
| 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 | 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 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Large, Cecum | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 | |
| Intestine Large, Colon | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Intestine Large, Rectum | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Intestine Small, Duodenum | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 | |
| Intestine Small, Ileum | + | A | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | 44 | |
| Intestine Small, Jejunum | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | 45 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 3.0 | |
| Basophilic Focus | X | X | X | X | X | X | | | | X | X | | | X | X | X | X | X | X | X | X | | X | | | 27 | |
| Clear Cell Focus | | | | | X | | X | | X | | | | X | X | X | X | | | | | | | X | | | 15 | |
| Hepatodiaphragmatic Nodule | | | | 4 | | | | | | | | | 4 | | | | | | | | | 4 | | | | 6 4.0 | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 2.0 | |
| Vacuolization Cytoplasmic | | | | | | | 2 | | | | | | | | | | | | | | | | | | 4 | 11 3.1 | |
| Periportal, Vacuolization Cytoplasmic | | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Mesentery | | | | | + | | | | + | | | | | | | | | | | + | + | | | | | 18 | |
| Necrosis | | | | | 3 | | | | 3 | | | | | | | | | | | 3 | 3 | | | | | 18 3.1 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 l .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | 7 | 5 | 7 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| | 3 | 1 | 3 | 3 | 3 | 3 | 9 | 1 | 1 | 3 | 0 | 3 | 0 | 3 | 6 | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 2 | 1 | 6 |
| | 1 | 9 | 1 | 2 | 1 | 2 | 2 | 6 | 3 | 1 | 2 | 1 | 1 | 1 | 3 | 2 | 8 | 2 | 2 | 2 | 6 | 2 | 2 | 8 | 8 |
| 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 | 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 |
| ANIMAL ID | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|--------|
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 5 3.0 |
| Epithelium, Hyperplasia | | | | | | 1 | 1 | | 3 | | | | | | | | 1 | | | | | | | | 3 2 | 11 1.7 |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Erosion | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cardiomyopathy | | | | | | | | 2 | | | | | | | | | | | | | | | | | | 1 2.0 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 3.0 |
| Hyperplasia | | | | | | 4 | | | | | | 4 | | | 2 | | | | | | | | | | | 2 | 9 2.8 |
| Necrosis | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | 2 2.5 |
| Vacuolization Cytoplasmic | | | | | | | | | | | | 4 | 1 | | | | | | | | | | | | 1 | | 2 2.1 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Page 81

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | 7 | 5 | 7 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | | |
|--------------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 1 | 3 | 3 | 3 | 3 | 9 | 1 | 1 | 3 | 0 | 3 | 0 | 3 | 6 | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 2 | 1 | 6 |
| | 1 | 9 | 1 | 2 | 1 | 2 | 2 | 6 | 3 | 1 | 2 | 1 | 1 | 1 | 3 | 2 | 8 | 2 | 2 | 2 | 6 | 2 | 2 | 8 | 8 |
| 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 | 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 |
| ANIMAL ID | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Parathyroid Gland | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | 1 | | 3 | | | | | | | | | | 3 | | | | | | 4 | | | | | | 7 3.3 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 2 4.0 |
| Hyperplasia | | | | | | | 3 | | | | | | | 3 | | | 2 | 4 | | | 3 | | | | | 10 3.0 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Ultimobranchial Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| C-cell, Hyperplasia | 1 | | | | 1 | | | 2 | | | 4 | | | | 1 | 1 | | 1 | | | | | | | | 13 1.5 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 3.5 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | 3 3.3 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

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| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| | 7 | 5 | 7 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | |
| DAY ON TEST | 3 | 1 | 3 | 3 | 3 | 3 | 9 | 1 | 1 | 3 | 0 | 3 | 0 | 3 | 6 | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 2 | 1 | 6 |
| | 1 | 9 | 1 | 2 | 1 | 2 | 2 | 6 | 3 | 1 | 2 | 1 | 1 | 1 | 3 | 2 | 8 | 2 | 2 | 2 | 6 | 2 | 2 | 8 | 8 |
| 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 | 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 |
| ANIMAL ID | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Hemorrhage | | | | | | | | | | | | | 4 | | | | | | | | | | | | | 1 | 4.0 | |
| Endometrium, Hyperplasia | | | | | | | | | | | | | 2 | 2 | | | | | | 1 | | | | | | 4 | 1.5 | |
| Vagina | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Epithelium, Hyperplasia, Adenomatous | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |

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 | + | M | 7 | | |
| Ectasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 3.0 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| 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 | M | 4 | |
| Lymph Node, Mediastinal | + | M | M | + | M | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | M | M | + | M | + | 30 | | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 3.0 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Capsule, Fibrosis | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | 1 | 2.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Page 83

TDMS No. 96011 - 05
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
CUMENE
CAS Number: 98-82-8
Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006
Time Report Requested: 09:48:09
First Dose M/F: 06/04/01 / 06/04/01
Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | DAY ON TEST | 7 | 5 | 7 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 |
| | | 3 | 1 | 3 | 3 | 3 | 3 | 9 | 1 | 1 | 3 | 0 | 3 | 0 | 3 | 6 | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 2 | 1 | 6 |
| | | 1 | 9 | 1 | 2 | 1 | 2 | 2 | 6 | 3 | 1 | 2 | 1 | 1 | 1 | 3 | 2 | 8 | 2 | 2 | 2 | 6 | 2 | 2 | 8 | 8 |
| 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 | 0 |
| 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 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |

Thymus + + + + + + + + + + + + + + + M + + + + + + + + + + + + + + + M + **48**

INTEGUMENTARY SYSTEM

| | | | |
|----------------|---|-----------|--------------|
| Mammary Gland | + | 50 | |
| Galactoceles | | | 3 3.0 |
| Hyperplasia | | 4 | 1 2.0 |
| Skin | + | 50 | |
| Hyperkeratosis | | | 1 2.0 |

MUSCULOSKELETAL SYSTEM

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

NERVOUS SYSTEM

| | | | |
|--|---|-----------|---------------|
| Brain | + | 50 | |
| Compression | | 3 | 12 3.7 |
| Hemorrhage | | 4 | 1 4.0 |
| Necrosis | | 4 | 1 4.0 |
| Medulla, Meninges, Inflammation, Suppurative | | 4 | 1 2.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 l .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Page 84

| DAY ON TEST | 7 | 5 | 7 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| | 3 | 1 | 3 | 3 | 3 | 3 | 9 | 1 | 1 | 3 | 0 | 3 | 0 | 3 | 6 | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 2 | 1 | 6 |
| | 1 | 9 | 1 | 2 | 1 | 2 | 2 | 6 | 3 | 1 | 2 | 1 | 1 | 1 | 3 | 2 | 8 | 2 | 2 | 2 | 6 | 2 | 2 | 8 | 8 |
| 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 | 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 |
| ANIMAL ID | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 4.0 | |
| Inflammation, Suppurative | 2 | | | | | | | | 2 | | | | | | | | | | | | | | | | 3 | 2.0 | |
| Inflammation, Chronic | | | | | | 1 | | | | | | | | | | | | | | | | | | | 2 | 1.5 | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Hemorrhage | | | | | | | | | | | | | 1 | | | | | | | | | | | | 2 | 2.0 | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Inflammation, Chronic | 1 | | 1 | 2 | 1 | | | | | | | | | 2 | | | | | | | | | | 2 | 1 | 11 | 1.6 |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | 2 | | | | | | | | | | | | | 3 | 2.7 | |
| Alveolus, Infiltration Cellular, Histiocyte | | | 1 | | | | | | | 1 | 1 | 2 | | 1 | | | | | 1 | 1 | | | | | 16 | 1.1 | |
| Bronchiole, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Interstitialium, Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Inflammation, Chronic | | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Glands, Respiratory Epithelium, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Goblet Cell, Hyperplasia | | | | | | | | | | | 1 | 1 | 1 | | | | | | | 1 | | | | | 4 | 1.0 | |
| Nasolacrimal Duct, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | 2 | 4 | 2.3 | |
| Nasolacrimal Duct, Inflammation, Chronic | | | | | | | | | | | | | | 3 | | | | | | | | | | | 1 | 3.0 | |
| Olfactory Epithelium, Degeneration, Hyaline | | | | | | | | | | 1 | | | | | | | | | | | | | 2 | | 2 | 1.5 | |
| Respiratory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 | 1.0 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--------------------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|----------|
| | 7 | 5 | 7 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | | |
| | 3 | 1 | 3 | 3 | 3 | 3 | 9 | 1 | 1 | 3 | 0 | 3 | 0 | 3 | 6 | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 2 | 1 | 6 | | |
| | 1 | 9 | 1 | 2 | 1 | 2 | 2 | 6 | 3 | 1 | 2 | 1 | 1 | 1 | 3 | 2 | 8 | 2 | 2 | 2 | 6 | 2 | 2 | 8 | 8 | | |
| 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 | 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 | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | | |

Pleura Inflammation, Chronic + 1 2 2 1 1 2 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 **15 15 1.4**

Trachea + **50**

SPECIAL SENSES SYSTEM

Eye + **50**
 Bilateral, Lens, Cataract **1 4.0**
 Bilateral, Retina, Atrophy **1 3.0**
 Cornea, Inflammation, Suppurative **1 4.0**
 Lens, Cataract 3 3 **5 2.2**
 Retina, Atrophy 3 **3 2.0**

Harderian Gland Inflammation, Chronic + **50**
1 1.0

Lacrimal Gland + **1**

Zymbal's Gland **1**

URINARY SYSTEM

Kidney + **50**
 Nephropathy 2 2 2 2 1 1 1 1 1 2 1 1 2 2 1 2 1 2 1 2 2 1 **38 1.4**
 Papilla, Mineralization 1 1 **6 1.0**
 Pelvis, Transitional Epithelium, Hyperplasia 1 1 **1 1.0**
 Pelvis, Transitional Epithelium, 3 1 2 1 1 1 2 1 1 1 1 1 **23 1.3**

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
 x .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
 I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked
 Page 86

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| | 7 | 5 | 7 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | |
| DAY ON TEST | 3 | 1 | 3 | 3 | 3 | 3 | 9 | 1 | 1 | 3 | 0 | 3 | 0 | 3 | 6 | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 2 | 1 | 6 |
| | 1 | 9 | 1 | 2 | 1 | 2 | 2 | 6 | 3 | 1 | 2 | 1 | 1 | 1 | 3 | 2 | 8 | 2 | 2 | 2 | 6 | 2 | 2 | 8 | 8 |
| 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 | 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 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|----|
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Pelvis, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| Renal Tubule, Accumulation, Hyaline Droplet | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Renal Tubule, Cyst | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| Renal Tubule, Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Page 87

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | |
|--------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 9 | 3 | 3 | 3 | 0 | 8 | 6 | 7 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 7 | 1 | 3 | 6 | 3 | |
| | | 1 | 7 | 2 | 1 | 2 | 2 | 8 | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 0 | 2 | 1 | 7 | 2 | 0 | 2 |
| 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 | |
| 250 PPM | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females (cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Basophilic Focus | X | X | X | | X | X | | | X | X | X | | X | X | X | | X | | | X | X | | X | X | |
| Clear Cell Focus | | | | X | X | | X | | | | X | | | | | X | | | | | X | | | | |
| Hepatodiaphragmatic Nodule | | | 4 | | | | | | | | | | | | | | | | | | | 4 | | | |
| Necrosis | | | 2 | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | 1 | | | | | | 3 | | | | | | | | | | | 4 | | | | |
| Centrilobular, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mesentery | + | | | | | | | | | | | | | | | | | | | | + | + | + | + | |
| Necrosis | 3 | | | | | | | | | | | | | | | | | | | | 3 | 3 | 3 | 3 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | |
|--------------------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | | 3 | 9 | 3 | 3 | 3 | 0 | 8 | 6 | 7 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 7 | 1 | 3 | 6 | 3 | |
| | | 1 | 7 | 2 | 1 | 2 | 2 | 8 | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 0 | 2 | 1 | 7 | 2 | 0 | 2 |
| 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 | |
| 250 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 | |
| | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pancreas | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Salivary Glands | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | 4 | | 4 | | | | | | | | | | 4 | | | | | | |
| Epithelium, Erosion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | 1 | | | 3 | | 3 | | | | | | | | | | 2 | | | | | | 3 |
| Stomach, Glandular | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | 2 | | | | | | | | | | | | | | | | | | 4 |
| Tooth | | | | | | | | | | | | | | | | | | | | | | | | | |
| Peridontal Tissue, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | 4 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Heart | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cardiomyopathy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrium, Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

ENDOCRINE SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | |
|--|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | | 3 | 9 | 3 | 3 | 3 | 0 | 8 | 6 | 7 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 7 | 1 | 3 | 6 | 3 | |
| | | 1 | 7 | 2 | 1 | 2 | 2 | 8 | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 0 | 2 | 1 | 7 | 2 | 0 | 2 |
| FISCHER 344 RATS FEMALE
250 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 | 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 | 3 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | 2 | 3 | 3 | | | 2 | | | | | | | | | 3 | | | | | | | 2 |
| Vacuolization Cytoplasmic | 4 | 3 | | 3 | | | | 2 | | 2 | | | 1 | | | 1 | | | | | | 1 | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | | | | | | | 3 | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Hyperplasia | 4 | | | 3 | 4 | | 4 | | | | 2 | 3 | | | 4 | | | | | 3 | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| C-cell, Hyperplasia | 2 | | | | | 1 | | | | | 1 | 1 | | | | | 3 | | | 2 | | 4 | | 1 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | 3 | | | | | | | | | | | | | | | | | | | 3 | |
| Hyperplasia | | | | | | | | | | | | | | | | | 3 | | | | | | 3 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

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First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | |
| DAY ON TEST | 3 | 9 | 3 | 3 | 3 | 0 | 8 | 6 | 7 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 7 | 1 | 3 | 6 | 3 | |
| | 1 | 7 | 2 | 1 | 2 | 2 | 8 | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 0 | 2 | 1 | 7 | 2 | 0 | 2 |
| 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 | 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 |
| 250 PPM | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ovary Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | | | 4 | | | | 3 | | | | | | | | | | | | | 4 | | | |
| Uterus Hemorrhage Endometrium, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | 2 | 4 | | 3 | | | | | 2 | | 1 | | | | | | | | | 3 | | | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Lymph Node | | | | | | | | | + | | | | | | | | | | | | | | | | + | |
| Lymph Node, Bronchial Hyperplasia, Lymphoid | 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 | M | M | |
| Lymph Node, Mediastinal | + | M | + | + | + | M | + | M | M | + | + | + | M | M | + | M | M | M | + | + | M | + | + | + | + | |
| Lymph Node, Mesenteric Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 2 | + | + | + | + |
| | | | | | | | | | | | | | | | | | | | | | | | | | 4 | |
| Spleen Hematopoietic Cell Proliferation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | 4 | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Page 91

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | |
|--|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 9 | 3 | 3 | 3 | 0 | 8 | 6 | 7 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 7 | 1 | 3 | 6 | 3 | |
| | | 1 | 7 | 2 | 1 | 2 | 2 | 8 | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 0 | 2 | 1 | 7 | 2 | 0 | 2 |
| FISCHER 344 RATS FEMALE
250 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 | 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 | 3 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |

females (cont...)

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

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland Inflammation, Suppurative | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Skin Cyst Epithelial Inclusion | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Ulcer | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sebaceous Gland, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Subcutaneous Tissue, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |

MUSCULOSKELETAL SYSTEM

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

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain Compression | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hemorrhage | | 3 | | | | 4 | | | | 3 | | | | | | | | | | | | | | | | | 2 |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

| DAY ON TEST | | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | |
|--------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 9 | 3 | 3 | 3 | 0 | 8 | 6 | 7 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 7 | 1 | 3 | 6 | 3 | |
| | | 1 | 7 | 2 | 1 | 2 | 2 | 8 | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 0 | 2 | 1 | 7 | 2 | 0 | 2 |
| FISCHER 344 RATS FEMALE | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 250 PPM | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |

females (cont...)

Peripheral Nerve

Spinal Cord

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Foreign Body | | | | 4 | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | 2 | | | | | 3 | | | | | | 1 | | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Inflammation, Chronic | | | 2 | | | | | | | 1 | | | 1 | | | | | | 2 | | | | | 3 |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| Alveolus, Infiltration Cellular, Histocyte | 1 | | 1 | | | | | | | 1 | | | | | | | | | | 3 | | | | |
| Bronchiole, Hyperplasia | | | | | | | | | | | | | | | | | | 2 | | 2 | | | | 3 |
| Bronchiole, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + |
| Foreign Body | | | | | | | | | | | | X | X | | | | | | | | | X | | |
| Inflammation, Suppurative | 4 | | | | | | | | | | | 3 | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | 2 | | | | | | | | | | | 4 | |
| Nasolacrimal Duct, Inflammation, Suppurative | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| Olfactory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

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CAS Number: 98-82-8

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First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | |
|--------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 9 | 3 | 3 | 3 | 0 | 8 | 6 | 7 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 7 | 1 | 3 | 6 | 3 | |
| | | 1 | 7 | 2 | 1 | 2 | 2 | 8 | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 0 | 2 | 1 | 7 | 2 | 0 | 2 |
| FISCHER 344 RATS FEMALE | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 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 | 3 | |
| | 250 PPM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Olfactory Epithelium, Hyperplasia, Basal Cell | | | 1 | | 1 | | | | | | | | | 1 | 1 | | | 1 | | 1 | | | | 1 | 1 |
| Olfactory Epithelium, Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Metaplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pleura | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | + | | | | | | | | | + | | + | | + | + | | + | | | | | + |
| Mesothelium, Hyperplasia | | | | 1 | | | | | | | | | 2 | | 1 | | 1 | 1 | | 1 | | | | | 2 |
| Trachea | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bilateral, Retina, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lens, Cataract | | | | | | | | | | | | | | | | | | | | | | | | 4 | 2 |
| Retina, Atrophy | | | | | | | | | | | | | | 2 | | | | | | | | | 3 | | |
| Harderian Gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Papilla, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | | | 1 | 2 | 2 | 2 | 2 | | | | 2 | 1 | 1 | | 3 | 1 | 1 | 1 | | 2 | | | 2 | 1 | 1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | | |
| DAY ON TEST | 3 | 9 | 3 | 3 | 3 | 0 | 8 | 6 | 7 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 7 | 1 | 3 | 6 | 3 | | |
| | 1 | 7 | 2 | 1 | 2 | 2 | 8 | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 0 | 2 | 1 | 7 | 2 | 0 | 2 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | 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 | |
| 250 PPM | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Pelvis, Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pelvis, Transitional Epithelium, Mineralization | | | | | | | | 1 | 1 | | 1 | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Transitional Epithelium, Hyperplasia | | 1 | | | | | 3 | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Page 95

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 7 | 6 | 7 | 7 | 5 | 7 | 5 | 0 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 6 | 6 | 7 | 7 | 5 | 7 | 7 | 7 |
|--------------------------------|----------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 1 | 3 | 0 | 3 | 3 | 9 | 4 | 6 | 1 | 5 | 2 | 3 | 3 | 9 | 3 | 0 | 3 |
| | | 1 | 2 | 5 | 0 | 1 | 4 | 1 | 6 | 6 | 1 | 4 | 1 | 2 | 6 | 7 | 3 | 6 | 5 | 8 | 2 | 2 | 8 | 1 | 9 | 2 |
| FISCHER 344 RATS FEMALE | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 3 | 3 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 250 PPM | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |

Pancreas + + + + + + + + + + + + + + + + A + + + + + + + + 49
 Fibrosis 1 4.0
 Hemorrhage 4 1 4.0

Salivary Glands + + + + + + + + + + + + + + + + A + + + + + + + + 49

Stomach, Forestomach + 50
 Inflammation, Chronic 2 1 2.0
 Ulcer 4 4.0
 Epithelium, Erosion 3 1 3.0
 Epithelium, Hyperplasia 1 1 4 3 2 1 1 3 13 2.2

Stomach, Glandular + + + + + + + + + + + + + + + + A + + + + + + + + 49

Tongue 2
 Epithelium, Hyperplasia 2 3.0

Tooth 2
 Peridontal Tissue, Inflammation 2 3.5

CARDIOVASCULAR SYSTEM

Heart + 50
 Cardiomyopathy 2 1.5
 Atrium, Thrombosis 4 2 3.0

ENDOCRINE SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked
 Page 97

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 7 | 6 | 7 | 7 | 5 | 7 | 5 | 0 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 6 | 6 | 7 | 7 | 5 | 7 | 7 | 7 |
|--------------------------------|----------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 1 | 3 | 0 | 3 | 3 | 9 | 4 | 6 | 1 | 5 | 2 | 3 | 3 | 9 | 3 | 0 | 3 |
| | | 1 | 2 | 5 | 0 | 1 | 4 | 1 | 6 | 6 | 1 | 4 | 1 | 2 | 6 | 7 | 3 | 6 | 5 | 8 | 2 | 2 | 8 | 1 | 9 | 2 |
| FISCHER 344 RATS FEMALE | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 3 | 3 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 250 PPM | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|-------|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | 49 |
| Hyperplasia | | | | 4 | | | | | | 2 | 4 | | | | | | | | | | | | | | | | 9 2.8 |
| Vacuolization Cytoplasmic | 4 | | | 4 | 2 | 2 | | | | 2 | | | | | 4 | 2 | | | 3 | | | 2 | | 4 | | 18 2.6 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | 49 |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | 49 |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | A | + | + | M | + | + | + | + | + | + | 45 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | | | | | | | | | 4 | | | | | | | | | | | | | | | | | 2 3.5 |
| Hemorrhage | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | 2 4.0 |
| Hyperplasia | | | | 4 | | 2 | | | | | | | | | 2 | | | | 4 | | | 4 | | 3 | | | 13 3.2 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | 49 |
| C-cell, Hyperplasia | | | | 2 | | | | | | | | | | | | | 1 | | | 2 | 1 | | 1 | | | | 13 1.7 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | 49 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 3.0 |
| Hyperplasia | | | | | | | | | | | | | | | 4 | | | | | 4 | 4 | | | | | | 5 3.6 |
| Inflammation, Chronic | | | | | | | | | | | | | | | 4 | | | | | | | | | | | | 1 4.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 7 | 6 | 7 | 7 | 5 | 7 | 5 | 0 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 6 | 6 | 7 | 7 | 5 | 7 | 7 | 7 |
|--------------------------------|----------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 1 | 3 | 0 | 3 | 3 | 9 | 4 | 6 | 1 | 5 | 2 | 3 | 3 | 9 | 3 | 0 | 3 |
| | | 1 | 2 | 5 | 0 | 1 | 4 | 1 | 6 | 6 | 1 | 4 | 1 | 2 | 6 | 7 | 3 | 6 | 5 | 8 | 2 | 2 | 8 | 1 | 9 | 2 |
| FISCHER 344 RATS FEMALE | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 3 | 3 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 250 PPM | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | 49 |
| Cyst | 4 | | 4 | | | | | | | | | | | | | | 4 | | | | 4 | | | | | | | 7 3.9 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | 49 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | 4 | | | | | | | 1 4.0 |
| Endometrium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | 7 2.4 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|-------|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | 49 | |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Lymph Node, Bronchial | M | M | M | M | M | M | M | M | M | M | M | M | M | + | M | + | M | A | M | M | M | + | M | M | M | M | M | 9 | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Lymph Node, Mandibular | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | A | + | M | M | M | M | M | M | M | M | 1 | |
| Lymph Node, Mediastinal | M | + | + | M | + | + | + | + | + | + | + | + | M | + | M | + | M | A | M | M | + | M | M | M | + | M | 28 | | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | 49 | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

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First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 7 | 7 | 6 | 7 | 7 | 5 | 7 | 5 | 0 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 6 | 6 | 7 | 7 | 5 | 7 | 7 | 7 |
|--|-----------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 1 | 3 | 0 | 3 | 3 | 9 | 4 | 6 | 1 | 5 | 2 | 3 | 3 | 9 | 3 | 0 | 3 |
| | | 1 | 2 | 5 | 0 | 1 | 4 | 1 | 6 | 6 | 1 | 4 | 1 | 2 | 6 | 7 | 3 | 6 | 5 | 8 | 2 | 2 | 8 | 1 | 9 | 2 |
| FISCHER 344 RATS FEMALE
250 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 | 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 | 3 | 3 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |

Thymus

+ + + + + + M + + + + M + + + + A + + + + + + + + 46

INTEGUMENTARY SYSTEM

Mammary Gland
Inflammation, Suppurative

+ 50
1 4.0

Skin
Cyst Epithelial Inclusion
Hyperkeratosis
Ulcer
Sebaceous Gland, Hemorrhage
Subcutaneous Tissue, Inflammation,
Suppurative

+ 50
4
4
4
4
4
4

MUSCULOSKELETAL SYSTEM

Bone
Hyperostosis

+ 50
4
1 4.0

NERVOUS SYSTEM

Brain
Compression
Hemorrhage
Thrombosis

+ + + + + + + + + + + + + + + A + + + + + + + 49
4
3
3
4
4
4
4

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE
 CAS Number: 98-82-8
 Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006
 Time Report Reqsted: 09:48:09
 First Dose M/F: 06/04/01 / 06/04/01
 Lab: BNW

| DAY ON TEST | | 7 | 7 | 6 | 7 | 7 | 5 | 7 | 5 | 0 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 6 | 6 | 7 | 7 | 5 | 7 | 7 | 7 |
|------------------------------------|-----------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 1 | 3 | 0 | 3 | 3 | 9 | 4 | 6 | 1 | 5 | 2 | 3 | 3 | 9 | 3 | 0 | 3 |
| | | 1 | 2 | 5 | 0 | 1 | 4 | 1 | 6 | 6 | 1 | 4 | 1 | 2 | 6 | 7 | 3 | 6 | 5 | 8 | 2 | 2 | 8 | 1 | 9 | 2 |
| FISCHER 344 RATS FEMALE
250 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 | 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 | 3 | 3 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|---|
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | | | + | | 1 |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | | | + | | 1 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|---|---|---------------|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | | 49 |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 2.0 | | | |
| Respiratory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | | |
| Inflammation, Chronic | 2 | | 1 | | 1 | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | 10 1.5 |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | | |
| Alveolus, Infiltration Cellular, Histiocyte | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | 6 1.3 |
| Bronchiole, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 2.3 | | | |
| Bronchiole, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | 48 |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 3.3 | | | |
| Inflammation, Chronic | | | 3 | | | | | | | | | | 1 | | 2 | | | | | | | | | | | | | | | | 3 2.0 |
| Goblet Cell, Hyperplasia | | | 1 | | | | | | | | | | 1 | | 2 | | | 3 | | | 3 | | | | | | 1 | | | | 6 2.3 |
| Nasolacrimal Duct, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | 3 | | | | | | | | | 2 | | | | 3 2.0 |
| Olfactory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | 1 2.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006
Time Report Reqsted: 09:48:09
First Dose M/F: 06/04/01 / 06/04/01
Lab: BNW

| DAY ON TEST | 7 7 6 7 7 5 7 5 0 7 7 7 7 6 5 6 7 6 6 7 7 5 7 7 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|----------|---------------|---------------|---------------|
| | 3 3 3 3 3 1 3 3 1 3 0 3 3 9 4 6 1 5 2 3 3 9 3 0 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 2 5 0 1 4 1 6 6 1 4 1 2 6 7 3 6 5 8 2 2 8 1 9 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS FEMALE | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 250 PPM | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ANIMAL ID | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | |
| Olfactory Epithelium, Hyperplasia, Basal Cell | | | | | | 1 | | | | | | | | | | | | | | | | | | 1 | 1 | | 14 1.0 | | |
| Olfactory Epithelium, Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 3.0 | |
| Olfactory Epithelium, Metaplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 3.0 | |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 | |
| Pleura | | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 15 1.2 | |
| Mesothelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 | |
| Trachea | | | | | | | | | | | | | | | | | | | | | | | | | | | | 49 | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Bilateral, Retina, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 |
| Lens, Cataract | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 3.0 |
| Retina, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 5 2.2 |
| Harderian Gland | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Nephropathy | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 37 1.5 |
| Papilla, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3 1.3 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Page 102

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | 7 | 7 | 6 | 7 | 7 | 5 | 7 | 5 | 0 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 6 | 6 | 7 | 7 | 5 | 7 | 7 | 7 |
|--|-----------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| DAY ON TEST | | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 1 | 3 | 0 | 3 | 3 | 9 | 4 | 6 | 1 | 5 | 2 | 3 | 3 | 9 | 3 | 0 | 3 |
| | | 1 | 2 | 5 | 0 | 1 | 4 | 1 | 6 | 6 | 1 | 4 | 1 | 2 | 6 | 7 | 3 | 6 | 5 | 8 | 2 | 2 | 8 | 1 | 9 | 2 |
| FISCHER 344 RATS FEMALE
250 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 | 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 | 3 | 3 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | |
| Pelvis, Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Pelvis, Transitional Epithelium, Mineralization | | 1 | | | 1 | | 1 | | | | 1 | | 1 | 1 | 1 | | 1 | 2 | 1 | 1 | 2 | | 1 | 1 | 2 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | 27 1.1 | |
| Urinary Bladder Transitional Epithelium, Hyperplasia | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | | | 49 2 2.0 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 5 | 7 | 7 | 5 | 6 | 7 | 6 | 7 | 6 | 5 | 7 | 7 | 6 | 7 | 7 | 7 |
|--------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 1 | 0 | 3 | 3 | 1 | 3 | 3 | 6 | 1 | 3 | 3 | 3 | 2 | 3 | 1 | 3 | 4 | 3 | 3 | 3 | 8 | 3 | 3 | 3 |
| | | 3 | 5 | 4 | 2 | 2 | 2 | 2 | 2 | 0 | 6 | 2 | 0 | 0 | 5 | 2 | 1 | 0 | 5 | 0 | 1 | 1 | 9 | 1 | 1 | 1 |
| FISCHER 344 RATS FEMALE | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 |
| | 500 PPM | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |

females (cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Basophilic Focus | X | X | | X | X | | X | X | | X | X | | X | X | X | | | | X | X | | X | X | X | X |
| Clear Cell Focus | | | | | | | | | X | | | | | | | | | | | | | X | | | |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | 4 | | 4 | | | | |
| Mixed Cell Focus | | | | | | | | | X | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | 3 | | | | | | | | | | 3 | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mesentery | | | | | | | | | | + | | + | | + | | + | | + | | + | | + | | + | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 5 | 7 | 7 | 5 | 6 | 7 | 6 | 7 | 6 | 5 | 7 | 7 | 6 | 7 | 7 | 7 |
|--------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 1 | 0 | 3 | 3 | 1 | 3 | 3 | 6 | 1 | 3 | 3 | 3 | 2 | 3 | 1 | 3 | 4 | 3 | 3 | 3 | 8 | 3 | 3 | 3 |
| | | 3 | 5 | 4 | 2 | 2 | 2 | 2 | 2 | 0 | 6 | 2 | 0 | 0 | 5 | 2 | 1 | 0 | 5 | 0 | 1 | 1 | 9 | 1 | 1 | 1 |
| FISCHER 344 RATS FEMALE | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 |
| | 500 PPM | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|--|--|--|--|--|--|--|--|--|---|---|---|---|--|--|--|--|--|--|---|---|--|--|--|--|---|---|--|
| Necrosis | | | | | | | | | | 3 | 3 | 3 | 3 | | | | | | | 3 | 3 | | | | | 3 | 3 | |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Erosion | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Submucosa, Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Heart | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cardiomyopathy | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrium, Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| DAY ON TEST | | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 5 | 7 | 7 | 5 | 6 | 7 | 6 | 7 | 6 | 5 | 7 | 7 | 6 | 7 | 7 | 7 |
|--|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 1 | 0 | 3 | 3 | 1 | 3 | 3 | 6 | 1 | 3 | 3 | 3 | 2 | 3 | 1 | 3 | 4 | 3 | 3 | 3 | 8 | 3 | 3 | 3 |
| | | 3 | 5 | 4 | 2 | 2 | 2 | 2 | 2 | 0 | 6 | 2 | 0 | 0 | 5 | 2 | 1 | 0 | 5 | 0 | 1 | 1 | 9 | 1 | 1 | 1 |
| FISCHER 344 RATS FEMALE
500 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 | 0 | 0 | 0 | 0 | 0 |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |

females (cont...)

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | 4 | 4 | 3 | | 2 | | | |
| Vacuolization Cytoplasmic | | | | | | 1 | | 4 | | | | 4 | 1 | | | | 3 | 3 | | | | 4 | 1 | 4 | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | | | | 2 | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | 3 | | | | | | | | | | | | | | |
| Hyperplasia | 2 | | | | | | | | | | | | | | | | | | | | 2 | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| C-cell, Hyperplasia | 2 | | | | | | 3 | | | | | 1 | | | | 2 | | 1 | | | | | 1 | | 2 |
| Follicular Cell, Hyperplasia | | | | | | | | | 4 | | | | | | | | | | | | | | | | |

GENERAL BODY SYSTEM

Peritoneum

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

| DAY ON TEST | | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 5 | 7 | 7 | 5 | 6 | 7 | 6 | 7 | 6 | 5 | 7 | 7 | 6 | 7 | 7 | 7 |
|--------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 1 | 0 | 3 | 3 | 1 | 3 | 3 | 6 | 1 | 3 | 3 | 3 | 2 | 3 | 1 | 3 | 4 | 3 | 3 | 3 | 8 | 3 | 3 | 3 |
| | | 3 | 5 | 4 | 2 | 2 | 2 | 2 | 2 | 0 | 6 | 2 | 0 | 0 | 5 | 2 | 1 | 0 | 5 | 0 | 1 | 1 | 9 | 1 | 1 | 1 |
| FISCHER 344 RATS FEMALE | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 500 PPM | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | 4 | | | | | | | | | | | | | | 3 | | | | | | | | | |
| Hyperplasia | | | | | | 4 | | | | 2 | | | | | | | | 4 | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | 4 | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | 4 | 4 | | | | | 4 | | | | | | 4 | | | | | | 1 | | | | | 4 |
| Cyst, Multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | | | | | | | | | 4 | | | | | | | | | | | | | | | | |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endometrium, Hyperplasia | | | | | 2 | | | | | | | 2 | | | | | | | | | | | | | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node | | | | | | | | | | + | | | | | | | | + | | | | | | | + |
| Pancreatic, Infiltration Cellular, Histiocyte | | | | | | | | | | 4 | | | | | | | | | | | | | | | |
| Pancreatic, Pigmentation | | | | | | | | | | 3 | | | | | | | | | | | | | | | |
| Lymph Node, Bronchial | 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 | + |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | 500 PPM | FISCHER 344 RATS FEMALE | ANIMAL ID | females
(cont...) | | | | | | | | | | | | | | | | | | | | |
|-------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------|--------------------------------|------------------|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 5 | 7 | 7 | 5 | 6 | 7 | 6 | 7 | 6 | 5 | 7 | 7 | 6 | 7 | 7 | 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | 1 | 0 | 3 | 3 | 1 | 3 | 3 | 6 | 1 | 3 | 3 | 3 | 2 | 3 | 1 | 3 | 4 | 3 | 3 | 3 | 8 | 3 | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 5 | 4 | 2 | 2 | 2 | 2 | 2 | 0 | 6 | 2 | 0 | 0 | 5 | 2 | 1 | 0 | 5 | 0 | 1 | 1 | 9 | 1 | 1 | 1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| Angiectasis | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Histiocytic | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | | |
| Ectasia | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Fibrosis | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Hyperplasia, Tubular | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Epithelium, Hyperplasia | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Maxilla, Fracture | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 l .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked
 Page 108

| DAY ON TEST | | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 5 | 7 | 7 | 5 | 6 | 7 | 6 | 7 | 6 | 5 | 7 | 7 | 6 | 7 | 7 | 7 |
|--------------------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 1 | 0 | 3 | 3 | 1 | 3 | 3 | 6 | 1 | 3 | 3 | 3 | 2 | 3 | 1 | 3 | 4 | 3 | 3 | 3 | 8 | 3 | 3 | 3 |
| | | 3 | 5 | 4 | 2 | 2 | 2 | 2 | 2 | 0 | 6 | 2 | 0 | 0 | 5 | 2 | 1 | 0 | 5 | 0 | 1 | 1 | 9 | 1 | 1 | 1 |
| 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 | 0 |
| 500 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 |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females (cont...)

Skeletal Muscle

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Compression | | | 4 | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | 4 | | | | | | | | | | | | | 3 | | | | | | | | | | | |
| Thrombosis | 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| Peripheral Nerve | | | | | | | | | | | | | | + | | | | | | | | | | | |
| Spinal Cord | | | | | | | | | | | | | | + | | | | | | | | | | | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Foreign Body | | | 4 | | | | | | | | | | | 4 | | | | | | | | | | | |
| Inflammation, Suppurative | | | 2 | | | | | | | | | | | 2 | | | | | | | | | 1 | 1 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | | | | | 1 | | | | | | | 3 | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | 2 | | | | | | 1 | | | | | 1 | | 1 | |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar Epithelium, Hyperplasia | | | | | 2 | | | | | | | | | | | | | | | | | | | | |
| Alveolus, Infiltration Cellular, Histiocyte | | | | 1 | | | | | 2 | | | | | | | | | | | | | 1 | | 1 | 1 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 5 | 7 | 7 | 5 | 6 | 7 | 6 | 7 | 6 | 5 | 7 | 7 | 6 | 7 | 7 | |
| | 7 | 1 | 0 | 3 | 3 | 1 | 3 | 3 | 6 | 1 | 3 | 3 | 3 | 2 | 3 | 1 | 3 | 4 | 3 | 3 | 3 | 8 | 3 | 3 | 3 |
| | 3 | 5 | 4 | 2 | 2 | 2 | 2 | 2 | 0 | 6 | 2 | 0 | 0 | 5 | 2 | 1 | 0 | 5 | 0 | 1 | 1 | 9 | 1 | 1 | 1 |
| 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 | 0 |
| 500 PPM | 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 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females
(cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Foreign Body | | | | | | | | | | X | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | 2 | | | | | 1 | | | | | 1 | 1 | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | 4 | | | | | | | | | | | | | |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | | | 4 | | | | | | | | | | | | | |
| Nasolacrimal Duct, Inflammation, Suppurative | 2 | | | | 3 | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| Olfactory Epithelium, Hyperplasia, Basal Cell | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| Olfactory Epithelium, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Degeneration, Hyaline | | | | | 1 | | | | | | | | | | | | | | | 1 | | | | | | | |
| Respiratory Epithelium, Hyperplasia | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| Turbinates, Necrosis | | | | | | | | | | | | | | 4 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pleura | | | | | | | | | | + | + | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | 2 | 1 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | 1 | 2 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Glands, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Bilateral, Retina, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lens, Cataract | | | | | | | | | | | | 4 | | | | | | | | | | | | | | |
| Retina, Atrophy | 2 | | | | | | | | | | 3 | | | | | | | | | | | | | | | 2 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

| DAY ON TEST | | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 5 | 7 | 7 | 5 | 6 | 7 | 6 | 7 | 6 | 5 | 7 | 7 | 6 | 7 | 7 | 7 |
|--------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 1 | 0 | 3 | 3 | 1 | 3 | 3 | 6 | 1 | 3 | 3 | 3 | 2 | 3 | 1 | 3 | 4 | 3 | 3 | 3 | 8 | 3 | 3 | 3 |
| | | 3 | 5 | 4 | 2 | 2 | 2 | 2 | 2 | 0 | 6 | 2 | 0 | 0 | 5 | 2 | 1 | 0 | 5 | 0 | 1 | 1 | 9 | 1 | 1 | 1 |
| FISCHER 344 RATS FEMALE | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 |
| | 500 PPM | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Harderian Gland Inflammation, Chronic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Zymbal's Gland | | | | | | | + | | | | | | | | | | | | | | | | | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Infarct, Multiple | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy | | 1 | | 3 | | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 1 | | 3 | 1 | 3 | | 1 | 2 | 2 | 1 | 2 | 3 | 3 |
| Papilla, Mineralization | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | 1 |
| Pelvis, Transitional Epithelium, Hyperplasia | | | | | | | | | | | 1 | | | | | | | | | | | | | | 2 |
| Pelvis, Transitional Epithelium, Mineralization | 1 | | 1 | | 1 | | | 1 | 1 | | | 1 | | | 1 | 1 | 1 | | | 1 | | 1 | | | 1 |
| Renal Tubule, Accumulation, Hyaline Droplet | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal Tubule, Cyst | | | | | | | X | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Transitional Epithelium, Hyperplasia | | | | | | 1 | | | | | | | | | | | | | 3 | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 l .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | | 6 | 7 | 7 | 7 | 6 | 3 | 7 | 5 | 6 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 2 | 3 | 3 | 3 | 7 | 3 | 3 | 7 | 6 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 4 | 0 | 1 | 2 | 6 | 9 | 2 | 9 | 1 | 1 | 1 | 1 | 2 | 1 | 8 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 2 |
| FISCHER 344 RATS FEMALE
500 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 | 0 | 0 | 0 |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Jejunum | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis | | | | | | | | | | | 4 | | | | | | | | | | | | | | | 2 |
| Basophilic Focus | | X | X | | | | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | X | 36 |
| Clear Cell Focus | | | | | | | | | | X | X | | X | | | | | | | | | | | X | | 6 |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | 4 | | | 4 | | | | | | | | | | 4 |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | X | | | 2 |
| Necrosis | | | | | | | | | | | | | | | 3 | | | | | | | | | | | 1 |
| Vacuolization Cytoplasmic | | | | | | | 3 | 2 | | | | | | | | | | | | | | | | | | 4 |
| Bile Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 3 | | 1 |
| Mesentery | + | | | | | | | | + | + | + | + | | | + | + | | | | + | + | | | | | 17 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 CUMENE
 CAS Number: 98-82-8
 Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006
 Time Report Reqsted: 09:48:09
 First Dose M/F: 06/04/01 / 06/04/01
 Lab: BNW

| DAY ON TEST | 6 | 7 | 7 | 7 | 6 | 3 | 7 | 5 | 6 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | * TOTALS |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----------|
| FISCHER 344 RATS FEMALE | 2 | 3 | 3 | 3 | 7 | 3 | 3 | 7 | 6 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| ANIMAL ID | 4 | 0 | 1 | 2 | 6 | 9 | 2 | 9 | 1 | 1 | 1 | 1 | 2 | 1 | 8 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | |
| 500 PPM | 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 | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |
| Necrosis | | | 2 | | | | | | 3 | | 3 | 3 | 3 | | 3 | | 3 | | | 3 | | 3 | | | | 17 2.9 |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Erosion | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Ulcer | | | | | | | | | | 1 | | | | | 2 | | | | | | | | | | 3 | 2.3 |
| Epithelium, Cyst | | | | | | | | | | | | | 4 | | | | | | | | | | | | 1 | 4.0 |
| Epithelium, Hyperplasia | | | | 3 | | | | | 4 | 1 | | | 2 | | | | | 2 | | | | | | | 12 | 1.9 |
| Submucosa, Fibrosis | | | | | | | | | 3 | | | | | | | | | | | | | | | | 1 | 3.0 |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 3 | | 2 | 2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
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CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cardiomyopathy | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 |
| Atrium, Thrombosis | | | | | | | | | | 4 | | | | | | | | | | | | | | | | | 4.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 l .. Insufficient tissue

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

1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

| DAY ON TEST | | 6 | 7 | 7 | 7 | 6 | 3 | 7 | 5 | 6 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|-------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|---|---|
| FISCHER 344 RATS FEMALE | | 2 | 3 | 3 | 3 | 7 | 3 | 3 | 7 | 6 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 500 PPM | | 4 | 0 | 1 | 2 | 6 | 9 | 2 | 9 | 1 | 1 | 1 | 1 | 2 | 1 | 8 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 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 |
| 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 |
| ANIMAL ID | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| ANIMAL ID | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| ANIMAL ID | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|-----------|------------|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Hyperplasia | | | | | | | | 2 | | 2 | 4 | | 4 | 4 | | 1 | | | | 2 | | 2 | | | | 2 | | 13 | 2.8 |
| Vacuolization Cytoplasmic | | | 1 | | 1 | | | 2 | | | | 2 | 4 | | | | | | | 2 | | 2 | | | | | | 16 | 2.4 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | 2 | 2.0 |
| Hemorrhage | | | | | | | | | 4 | | | | | | | | | | | | | | | | | | | 2 | 3.5 |
| Hyperplasia | | | | | | | | | | | | | | | 2 | | | | | | | | 4 | | 3 | 3 | | 6 | 2.7 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| C-cell, Hyperplasia | | | 1 | | 1 | | | | 3 | | | | | | 3 | | 3 | | 2 | | | | 1 | | 1 | | | 15 | 1.8 |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |

GENERAL BODY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Peritoneum | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue

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

1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

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Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | 2 3.5 |
| Hyperplasia | | | | 4 | | | | | 4 | | | | | | | | | | | | 2 | | | | 7 3.3 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 4.0 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | | | | | | | | | | | 2 | | | | | | | | | | | | | 7 3.3 |
| Cyst, Multiple | | | | | | | | | | | | | | | | | | | | | | 4 | | | 1 4.0 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemorrhage | | 3 | | | | | | 4 | | | | | | | 4 | | | | | | | | | | 4 3.8 |
| Pigmentation | | 3 | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Endometrium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|----|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Lymph Node | + | | | | | | | | | | | | | | | | | | | | | | | + | 5 | | |
| Pancreatic, Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | | |
| Pancreatic, Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | | |
| 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 | M | 8 |
| 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 | M | 1 |
| Lymph Node, Mediastinal | + | M | M | M | + | + | M | M | + | + | M | M | M | M | M | M | M | + | M | M | M | M | + | + | M | 26 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
x .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
l .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

Page 115

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Hyperplasia, Histiocytic | | | | | | | | | | 4 | | | | | | | | | | | | | | | | | 1 4.0 |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Lymph Node, Mesenteric | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Ectasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Spleen | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Fibrosis | | | | | | | | | | | | | | | | | | | | | | | 3 | | | | 3 3.3 |
| Hematopoietic Cell Proliferation | | | | | | | | | 4 | | | | | | 4 | | | | | | | | | | | | 2 4.0 |
| Thymus | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia, Tubular | | | | | | | | | | | | | | | | | | | | | | 4 | | | | | 1 4.0 |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Mammary Gland | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | 4 | | | | | | | | | | | | 1 4.0 |
| Skin | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Bone | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Maxilla, Fracture | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

| DAY ON TEST | | 6 | 7 | 7 | 7 | 6 | 3 | 7 | 5 | 6 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|--------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | | 2 | 3 | 3 | 3 | 7 | 3 | 3 | 7 | 6 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 4 | 0 | 1 | 2 | 6 | 9 | 2 | 9 | 1 | 1 | 1 | 1 | 2 | 1 | 8 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 2 |
| 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 |
| 500 PPM | | 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 | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |

Skeletal Muscle + 1

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Compression | | 4 | | | | | | | | | | 4 | | | | 4 | | | | | | | | | 4 4.0 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 2 3.5 |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | 2 4.0 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | 4 1.5 |
| Inflammation, Chronic | | | | 2 | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Inflammation, Chronic | | | | 2 | | | 3 | | | 2 | 2 | | | | | | | | | | | | | | 8 1.8 |
| Thrombosis | | | | | | | 4 | | | | | | | | | | | | | | | | | | 1 4.0 |
| Alveolar Epithelium, Hyperplasia | 3 | | | | | 3 | | | | | | 1 | | | | | | | | | | | 3 | | 5 2.4 |
| Alveolus, Infiltration Cellular, Histiocyte | 3 | | 2 | | | | | | | 1 | 1 | | | | | | | | 1 | | | 4 | | | 11 1.6 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|--|--|
| DAY ON TEST | 6 | 7 | 7 | 7 | 6 | 3 | 7 | 5 | 6 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | | |
| | 2 | 3 | 3 | 3 | 7 | 3 | 3 | 7 | 6 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | |
| | 4 | 0 | 1 | 2 | 6 | 9 | 2 | 9 | 1 | 1 | 1 | 1 | 2 | 1 | 8 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | | | |
| 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 | | | |
| 500 PPM | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | | | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | * TOTALS | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|--|---|---|--|---|---|--|--|--|---|---|---|--|--|--|--|--|---|---|---|---|---|--|--|---------------|---------------|
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | | | X | 2 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 1.3 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Nasolacrimal Duct, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.5 |
| Olfactory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Olfactory Epithelium, Hyperplasia, Basal Cell | | 1 | | | 1 | | 1 | 1 | | | | 1 | 1 | 2 | | | | | | 1 | 1 | | 1 | 1 | | | 25 1.0 | |
| Olfactory Epithelium, Necrosis | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Respiratory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | 3 1.0 |
| Respiratory Epithelium, Hyperplasia | | | | 4 | | | | | | | | | | 3 | | | | | | | | 4 | | | | | | 4 3.0 |
| Turbiniate, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Pleura | | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 14 1.4 |
| Trachea | | | | | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Glands, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|--|--|--|--|--|--|--|--|---|--|--|---|---|--|---|--|--|--|--|--|---|---|--|---|--|--|--|--------------|
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Bilateral, Retina, Atrophy | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Lens, Cataract | | | | | | | | | 4 | | | | | | 3 | | | | | | 1 | | | | | | | 5 3.0 |
| Retina, Atrophy | | | | | | | | | | | | 2 | 2 | | 2 | | | | | | | 2 | | 2 | | | | 8 2.1 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|--|
| | 6
2
4 | 7
3
0 | 7
3
1 | 7
3
2 | 6
7
6 | 3
3
9 | 7
3
2 | 5
7
9 | 6
6
1 | 7
3
1 | 7
3
1 | 7
3
1 | 7
2
2 | 7
3
1 | 5
2
8 | 7
3
2 | 7
3
1 | 7
3
2 | 7
3
1 | 7
3
1 | 7
3
1 | 7
3
2 | 7
3
2 | | |
| 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 | |
| 500 PPM | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | * TOTALS | |

Harderian Gland Inflammation, Chronic + 50 1 2.0

Zymbal's Gland 1

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Infarct, Multiple | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Nephropathy | 2 | 3 | 1 | 3 | 1 | | 2 | | | 1 | 2 | 2 | 2 | 1 | | 2 | 2 | 3 | 1 | 3 | 3 | 1 | 2 | 41 | 1.9 |
| Papilla, Mineralization | | | | | | | | | | | | | | | | | | 1 | | | | | | 4 | 1.0 |
| Pelvis, Transitional Epithelium, Hyperplasia | | | | 1 | 1 | | | | | | | | 1 | | | | | | | | | 2 | | 6 | 1.3 |
| Pelvis, Transitional Epithelium, Mineralization | 1 | 1 | 1 | 1 | | | 2 | | 1 | | | 1 | | 2 | | 1 | 1 | | 1 | 1 | | | 2 | 27 | 1.1 |
| Renal Tubule, Accumulation, Hyaline Droplet | | | | | | | 4 | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Renal Tubule, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

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

females (cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Large, Cecum
Necrosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Large, Colon
Artery, Inflammation, Chronic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Basophilic Focus | X | X | X | | | X | X | X | X | X | X | X | X | | X | X | X | X | | | X | | X | X | X |
| Clear Cell Focus | X | | | | | | | X | | | | X | | | | | | | | | | | | X | |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatodiaphragmatic Nodule | | | | 4 | | | | 4 | 4 | | | 4 | | | | | | | | | | | | | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | 3 | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 CUMENE
 CAS Number: 98-82-8
 Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006
 Time Report Requested: 09:48:09
 First Dose M/F: 06/04/01 / 06/04/01
 Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 2 | 7 | 7 | 7 |
| | DAY ON TEST | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 8 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 2 | 3 | 6 | 3 | 3 | 3 |
| | | 1 | 2 | 2 | 8 | 1 | 2 | 1 | 3 | 0 | 7 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 4 | 1 | 8 | 0 | 7 | 1 | 2 | 1 |
| 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 | 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 |
| 1000 PPM | | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Mesentery Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas Thrombosis Artery, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach Inflammation, Suppurative Ulcer Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tongue Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Blood Vessel | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Page 121

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 2 | 7 | 7 | 7 | |
| DAY ON TEST | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 8 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 2 | 3 | 6 | 3 | 3 | 3 | |
| | 1 | 2 | 2 | 8 | 1 | 2 | 1 | 3 | 0 | 7 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 4 | 1 | 8 | 0 | 7 | 1 | 2 | 1 |
| 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 | |
| 1000 PPM | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females (cont...)

Atrium, Thrombosis

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | 2 | | | 2 | | | | 1 | | | | | 1 | | | | 2 | | | 1 | | | | 2 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | 4 | | | | | | 3 | | | | | | | 2 | | | | | 3 | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | M | + | + | + |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | 2 | | | 3 | 3 | 3 | | | | 3 | 4 | | | | | 2 | | | 2 | | | | 3 | 2 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| C-cell, Hyperplasia | 4 | 4 | | | | | 1 | | | | | | 4 | 3 | 2 | 1 | | | | | | | | 1 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

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

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | 4 | | | | | | | | | | | 4 |
| Inflammation, Chronic | | | | | | | | | | | | | 4 | | | | | | | | | | | 4 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | 2 | 2 | | | | 2 | | | | | | | | | | | 3 | | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | | | | 4 | | | | | | | | | | | | | | | | | | | | |
| Endometrium, Hyperplasia | | | | | | 2 | | | 1 | | | | | | | | | | | | | | | |

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 | M | M | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | | | | | | | 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 | |
| Ectasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | | | | | | | | | 4 | | | | | | | | | | | | | | | |
| Lymph Node, Mediastinal | M | + | + | M | + | M | M | M | M | + | M | + | + | + | + | + | + | + | + | M | + | M | M | M | + |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|--|--|--|--|--|--|--|--|--|--|--|-----|--|--|--|--|--|--|--|--|--|--|--|--|
| Hyperplasia, Lymphoid Inflammation, Suppurative | 4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric Necrosis | + | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen Atrophy Hematopoietic Cell Proliferation Necrosis | + | | | | | | | | | | | | | 4 4 | | | | | | | | | | | | |
| Thymus | + | | | | | | | | | | | | | | | | | | | | | | | | | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Mammary Gland Galactocele Epithelium, Hyperplasia | + | | | | | | | | | | | | | | | | | | | | | | | | | |
| Skin Hyperkeratosis Inflammation, Chronic Ulcer Subcutaneous Tissue, Fibrosis | + | | | | | | | | | | | | | | | | | | | | | | | | | |

MUSCULOSKELETAL SYSTEM

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

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

| DAY ON TEST | | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 2 | 7 | 7 | 7 | |
|--------------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 8 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 2 | 3 | 6 | 3 | 3 | 3 | |
| | | 1 | 2 | 2 | 8 | 1 | 2 | 1 | 3 | 0 | 7 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 4 | 1 | 8 | 0 | 7 | 1 | 2 | 1 |
| 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 | |
| | | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 1000 PPM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females (cont...)

Maxilla, Inflammation, Chronic Active

Skeletal Muscle

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Compression | | | | | | | | | 3 | | | | | | | | | | | | | | | 4 |
| Demyelination | | | | | | | | | | | | | | | | | | | | | | | | |
| Gliosis | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | |
| Medulla, Neuron, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | |
| Neuron, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | |
| Gliosis | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst, Squamous | | | | | | | | | | | | | | | | | | | | | | | | X |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

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TDMS No. 96011 - 05

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| DAY ON TEST | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 2 | 7 | 7 | 7 | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 8 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 2 | 3 | 6 | 3 | 3 | 3 | |
| | 1 | 2 | 2 | 8 | 1 | 2 | 1 | 3 | 0 | 7 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 4 | 1 | 8 | 0 | 7 | 1 | 2 | 1 |
| 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 | |
| 1000 PPM | 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 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Inflammation, Chronic | | | | 2 | | | | 1 | | | | | | | | 2 | 2 | 2 | | | | | | | 2 |
| Alveolar Epithelium, Hyperplasia | | | | | | | | 3 | | | | | | | | | 2 | | | | | | | | |
| Alveolar Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolus, Infiltration Cellular, Histocyte | 1 | | | 2 | 1 | | | | | | | | | | | 2 | | | | | | | | | 3 |
| Alveolus, Proteinosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bronchiole, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bronchiole, Inflammation, Chronic | | | | 2 | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Basal Cell | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | |
| Goblet Cell, Hyperplasia | | | | 2 | | | | | | | | | | | | | | | | | | | | | |
| Nasolacrimal Duct, Inflammation, Suppurative | | | | 2 | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Hyperplasia, Basal Cell | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Metaplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | | | | 2 | | | | | | | | | | | | | | | | | | | | | |
| Pleura | + | + | + | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | 1 | | | 1 | 2 | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

SPECIAL SENSES SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
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|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 8 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 2 | 3 | 6 | 3 | 3 | 3 | |
| | 1 | 2 | 2 | 8 | 1 | 2 | 1 | 3 | 0 | 7 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 4 | 1 | 8 | 0 | 7 | 1 | 2 | 1 |
| 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 | |
| 1000 PPM | 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 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cornea, Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | |
| Cornea, Inflammation | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| Lens, Cataract | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| Retina, Atrophy | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | |
| Zymbal's Gland | | | | | | | | | | + | | | | | | | | | | | | | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Nephropathy | 2 | 1 | 1 | | 2 | 2 | 2 | 4 | 3 | | 2 | 2 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | | 3 | | 2 | 2 | 3 |
| Artery, Inflammation, Chronic Active | | | | | | | | | | | | | 2 | | | | | | | | | | | | |
| Papilla, Mineralization | | | | | | | | 1 | | | | 1 | | | | | | | | | | | | | |
| Pelvis, Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pelvis, Transitional Epithelium, Mineralization | | | | | 1 | 1 | | | 1 | | | 1 | 3 | 2 | 2 | 2 | | | | | | | 1 | 1 | |
| Renal Tubule, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 2 | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

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

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|-------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum
Necrosis | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Intestine Large, Colon
Artery, Inflammation, Chronic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Duodenum | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Small, Ileum | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Small, Jejunum | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Basophilic Focus | X | | X | X | X | X | | | X | X | X | | | X | X | | | | X | | | | X | X | 32 |
| Clear Cell Focus | | | | | | | | | | | | | | | | | | | | X | | | | | 5 |
| Eosinophilic Focus | | | | | | X | | | | | | | | | | | | | | | | | | | 1 |
| Hepatodiaphragmatic Nodule | | | | 4 | | | | | | | | | | | | | | | | | | 4 | | | 6 4.0 |
| Mixed Cell Focus | | | | | | | | | | | X | | | | | | | | | | | | | | 1 |
| Necrosis | | | | | | | | | | | 4 | | | | | | 4 | 3 | | | | | | | 3 3.7 |
| Vacuolization Cytoplasmic | | | | | | | | | 3 | | | | | | | | | | | | | | | | 2 3.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

Atrium, Thrombosis

4

1 4.0

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|--------|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | 2 | 1 | | | | | | | 4 | | | | | | | | | | | | | 2 | | 4 | 12 2.0 |
| Necrosis | | | | | | | | | | | | | | | | | 3 | | | | | | | | | 1 3.0 |
| Vacuolization Cytoplasmic | | | | 1 | | | | | | 4 | | 2 | | | | | | | | | | | | | | 7 2.7 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Parathyroid Gland | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Pituitary Gland | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Cyst | | | | | | | | | | | | | | | | | 4 | | | | | | | | 4 | 2 4.0 |
| Hyperplasia | 3 | | | 4 | | | | | | | | | 2 | | | 3 | | | | | 2 | | | 4 | 16 2.8 | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| C-cell, Hyperplasia | | | 1 | | | 1 | | | | 3 | 1 | | | | | | | | | | 2 | | | 1 | 4 | 15 2.2 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006

Time Report Reqsted: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Endometrium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| 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 | M | 5 | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| 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 | 4 | |
| Ectasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Lymph Node, Mediastinal | + | M | M | M | + | M | M | + | + | + | M | + | M | + | + | + | + | + | + | + | + | + | + | + | + | 31 | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
l .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 96011 - 05
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 CUMENE
 CAS Number: 98-82-8
 Pathologist: PIERCE, J. - RENNE, R.

Date Report Reqsted: 01/12/2006
 Time Report Reqsted: 09:48:09
 First Dose M/F: 06/04/01 / 06/04/01
 Lab: BNW

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

Hyperplasia, Lymphoid Inflammation, Suppurative 3
2 **2 3.5**
1 2.0

Lymph Node, Mesenteric Necrosis + 50 3
1 3.0

Spleen Atrophy Hematopoietic Cell Proliferation Necrosis + 50 4
4
1 4.0
2 4.0
2 4.0

Thymus + 50

INTEGUMENTARY SYSTEM

Mammary Gland Galactocele Epithelium, Hyperplasia + 50 4
4
2 2.5
1 4.0

Skin Hyperkeratosis Inflammation, Chronic Ulcer Subcutaneous Tissue, Fibrosis + 50 3
3
4
2
1 2.0
1 3.0
2 3.5
1 2.0

MUSCULOSKELETAL SYSTEM

Bone + 50

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

Maxilla, Inflammation, Chronic Active 3 1 3.0

Skeletal Muscle + 1

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Compression | | | | | 4 | | | | | 3 | | | | | | 4 | | | | | | | | | 5 3.6 |
| Demyelination | | | | | | | | | | | | | | | | | | | | | 3 | | | | 1 3.0 |
| Gliosis | | | | | | | | | | | | | | | | | | | | | 3 | | | | 1 3.0 |
| Hemorrhage | | | | | | | | | | | | | | | | 4 | | | | | 1 | | | | 3 3.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | 3 | | | | 1 3.0 |
| Medulla, Neuron, Necrosis | | | | | 3 | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Neuron, Degeneration | | | | | | | | | | | | | | | | | | | | | | 3 | | | 1 3.0 |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | + | | | 1 |
| Gliosis | | | | | | | | | | | | | | | | | | | | | | 3 | | | 1 3.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | 3 | | | 1 3.0 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|-------|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | 1 | | | | | | | | 2 | 2 1.5 | |
| Respiratory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

| DAY ON TEST | 7 | 7 | 6 | 7 | 5 | 7 | 6 | 7 | 7 | 6 | 7 | 6 | 4 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 4 | 6 | 6 | 7 | |
|---|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------|---|
| | 3 | 3 | 1 | 3 | 4 | 3 | 9 | 3 | 3 | 8 | 0 | 9 | 1 | 3 | 3 | 5 | 9 | 3 | 3 | 3 | 3 | 0 | 2 | 3 | 3 | |
| | 2 | 1 | 9 | 1 | 2 | 1 | 5 | 1 | 1 | 8 | 4 | 6 | 1 | 1 | 1 | 9 | 6 | 0 | 1 | 1 | 1 | 1 | 0 | 5 | 8 | 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 | 0 | |
| 1000 PPM | 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 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |
| | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | 2 | 2 | | | | | | | | 2 | 1 | | 2 | | | | | 2 | 2 | 2 | | | 3 | | 16 1.9 | |
| Alveolar Epithelium, Hyperplasia | | | | | | | 1 | 1 | | | | | | | | | | 4 | 2 | | | | 2 | | 7 2.1 | |
| Alveolar Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| Alveolus, Infiltration Cellular, Histocyte | 2 | 2 | | 1 | 1 | | | | | | | 1 | | | | | | | | | 1 | | | | 14 1.6 | |
| Alveolus, Proteinosis | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.5 | |
| Bronchiole, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Bronchiole, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | 1 | | | 3 | | 3 2.0 | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Foreign Body | | X | | | | X | | | | | | | | | | | | | | | | | | | 3 | |
| Hyperplasia, Basal Cell | | | | 1 | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Inflammation, Suppurative | | | | | | 1 | | | | | | | | | | | | | | | | | | | 2 1.5 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 5 2.0 | |
| Nasolacrimal Duct, Inflammation, Suppurative | | | | | 3 | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Olfactory Epithelium, Hyperplasia, Basal Cell | 1 | | 1 | | 2 | | 1 | 1 | | 1 | 1 | | 1 | 1 | | | 1 | | 1 | 1 | 1 | | 1 | 1 | 2 | |
| Olfactory Epithelium, Metaplasia | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 | |
| Respiratory Epithelium, Hyperplasia | | | | 4 | | | | | | | | | | 3 | | 2 | | | | | | | | | 6 2.3 | |
| Pleura | | | | | | | | | | | | | | | | | | | | | | | | | 20 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | 20 1.8 | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |

SPECIAL SENSES SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 x .. Lesion present
 l .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 96011 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

CUMENE

CAS Number: 98-82-8

Pathologist: PIERCE, J. - RENNE, R.

Date Report Requested: 01/12/2006

Time Report Requested: 09:48:09

First Dose M/F: 06/04/01 / 06/04/01

Lab: BNW

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cornea, Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Cornea, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Lens, Cataract | 4 | | | | | | | | | | | | | | | 1 | | | | | | | | | | 3 2.0 |
| Retina, Atrophy | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Inflammation, Chronic | | | | | | 1 | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Nephropathy | 3 | 2 | 3 | 2 | 1 | 3 | | 2 | 2 | 3 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | | 1 | 2 | 2 | 44 1.9 |
| Artery, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Papilla, Mineralization | 1 | | 1 | | | | | | | 1 | | | | | | | | 1 | | | | | | | | 6 1.0 |
| Pelvis, Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 1 | | | 1 1.0 |
| Pelvis, Transitional Epithelium, Mineralization | | | | | 1 | | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | | 2 | | 1 | | 1 | | 1 | | 1 | 22 1.3 |
| Renal Tubule, Cyst | | | | | | | | | | X | | | | | | | | | | | | | | | | 1 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |

*** END OF REPORT ***

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked