

TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

C Number: C56224C

Lock Date: 01/26/1995

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

Study Gender: Both

TDMSE Version: 2.1.0

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FISCHER 344 RATS MALE CONTROL	ANIMAL ID	6	7	5	5	5	6	5	5	3	6	3	6	7	5	6	3	6	7	6	6	4	6	6	5	6
		8	3	0	7	9	4	3	7	8	0	5	6	1	6	7	3	6	1	2	9	6	1	9	2	9
		4	5	7	4	9	8	2	8	2	6	1	5	7	1	9	3	4	5	4	6	9	7	6	5	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	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	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 Inflammation, Suppurative	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Cecum Parasite Metazoan	+	+	A	+	+	+	+	+	+	+	+	A	+	+	+	A	+	+	+	+	+	+	+	+	+
Intestine Large, Colon Parasite Metazoan	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Rectum Parasite Metazoan	+	+	A	+	+	+	+	+	+	+	+	A	+	+	+	I	+	+	+	+	+	+	+	+	+
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+
Intestine Small, Jejunum	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Angiectasis																									
Basophilic Focus															X							X			
Clear Cell Focus																									
Degeneration, Cystic	2											2	3	2					X					1	
Degeneration, Fatty				4					1															1	
Eosinophilic Focus																									

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 2) Mild 4) Marked

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DAY ON TEST	0 0																								
	6 7 5 5 5 6 5 5 3 6 3 6 7 5 6 3 6 7 6 6 4 6 6 5 6																								
FISCHER 344 RATS MALE CONTROL	8 3 0 7 9 4 3 7 8 0 5 6 1 6 7 3 6 1 2 9 6 1 9 2 9																								
	4 5 7 4 9 8 2 8 2 6 1 5 7 1 9 3 4 5 4 6 9 7 6 5 0																								
ANIMAL ID	0 0																								
	0 0																								
CONTROL	0 0																								
	0 0																								
1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5																									
Regeneration																									
3																									
Vacuolization Cytoplasmic, Focal																									
2																									
Bile Duct, Hyperplasia																									
3 1 1 2 2 2 1 3 1 4 2 1 2 3																									
Centrilobular, Necrosis																									
2 1 1 1 1 3 1 1 3 1 2 2																									
Mesentery																									
+																									
Fat, Necrosis																									
3 2 2 2 2 2 2																									
Oral Mucosa																									
Gingival, Inflammation, Chronic Active																									
Pancreas																									
+																									
Atrophy																									
2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2																									
Basophilic Focus																									
Hyperplasia																									
X																									
Salivary Glands																									
+																									
Atrophy																									
+																									
Stomach, Forestomach																									
+																									
Inflammation, Acute																									
Mineralization																									
Necrosis																									
4 4 3 3 3																									
Stomach, Glandular																									
+																									
Mineralization																									
Necrosis																									
2 2 2 3 2 2																									

males
(cont...)

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

CARDIOVASCULAR SYSTEM

Blood Vessel
Aorta, Mineralization

Heart
Cardiomyopathy
Artery, Mineralization
Atrium, Thrombosis

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

ENDOCRINE SYSTEM

Adrenal Cortex
Hyperplasia
Hypertrophy
Vacuolization Cytoplasmic

Adrenal Medulla
Hyperplasia

Islets, Pancreatic

Parathyroid Gland
Hyperplasia

Pituitary Gland
Mineralization

		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
											2					2		2					1			2		
					2																							
		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		2		3	3		2	2		1	2		3		2	3				2				1	2			
		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
													2	2											1			
		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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

males (cont...)

Pars Distalis, Hemorrhage																									
Pars Distalis, Hyperplasia	1																								
Thyroid Gland	+ + + + + + + + + + + + A + + + + + + + + + + + + + +																								
C-cell, Hyperplasia	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2																								
Follicular Cell, Hyperplasia	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2																								

GENERAL BODY SYSTEM

Peritoneum	+																								
------------	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

GENITAL SYSTEM

Epididymis	+ +																								
Preputial Gland	+ + + + + + + + + + + + + + + + M + + + + + + + + + +																								
Hyperplasia	3																								
Inflammation, Chronic Active	3																								
Prostate	+ +																								
Hyperplasia	2 2																								
Inflammation, Chronic Active	4 3 3 2 4																								
Seminal Vesicle	+ +																								
Inflammation, Suppurative	A																								
Testes	+ +																								

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

males (cont...)

Atrophy
Artery, Inflammation, Chronic Active
Interstitial Cell, Hyperplasia

1 1 1

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymph Node Renal, Hemorrhage					+		+	+		+											+				+
Lymph Node, Bronchial	+	+	+	M	+	+	+	M	M	+	M	M	+	+	M	+	M	+	+	+	+	+	+	+	M
Lymph Node, Mandibular Infiltration Cellular, Plasma Cell	+	+	+	+	+	M	+	+	+	+	+	M	+	M	M	+	+	+	+	+	+	+	M	+	+
Lymph Node, Mediastinal	+	+	+	+	+	+	+	+	+	+	M	M	+	M	+	+	+	+	+	+	+	+	+	+	+
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Accessory Spleen																									X
Fibrosis	2													2							2		2		
Hematopoietic Cell Proliferation																									
Hyperplasia, Focal																									
Necrosis							4																		

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DAY ON TEST	0																								
	6																								
FISCHER 344 RATS MALE CONTROL	8																								
	4																								
ANIMAL ID	0																								
	0																								
CONTROL	0																								
	0																								
	1																								
	2																								
																									males (cont...)

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

INTEGUMENTARY SYSTEM

Mammary Gland Degeneration Galactocele	+	+	+	+	M	+	M	M	M	+	M	M	+	M	M	M	+	+	+	+	M	M	M	+	M
	2																								

Skin Inflammation, Chronic Active Tail, Hyperkeratosis Tail, Inflammation, Chronic Active	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	3																										

MUSCULOSKELETAL SYSTEM

Bone Fibrous Osteodystrophy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1																									

NERVOUS SYSTEM

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

RESPIRATORY SYSTEM

Larynx	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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		6	7	5	5	5	6	5	5	3	6	3	6	7	5	6	3	6	7	6	6	4	6	6	5	6
		8	3	0	7	9	4	3	7	8	0	5	6	1	6	7	3	6	1	2	9	6	1	9	2	9
		4	5	7	4	9	8	2	8	2	6	1	5	7	1	9	3	4	5	4	6	9	7	6	5	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
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	0	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	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...)

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Metaplasia, Osseous Mineralization																1									
Alveolar Epithelium, Hyperplasia																									
Artery, Mediastinum, Mineralization																									
Mediastinum, Inflammation, Suppurative																									
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inflammation, Suppurative																									
Thrombosis																									
Lateral Wall, Hyperplasia																									
Lateral Wall, Metaplasia, Squamous																									
Lateral Wall, Necrosis																									
Olfactory Epithelium, Atrophy																									
Olfactory Epithelium, Degeneration, Hyaline																									
Olfactory Epithelium, Metaplasia																									
Respiratory Epithelium, Degeneration, Hyaline																									
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+

SPECIAL SENSES SYSTEM

Zymbal's Gland

URINARY SYSTEM

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	0	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	7	5	5	5	6	5	5	3	6	3	6	7	5	6	3	6	7	6	4	6	6	5	6		
	8	3	0	7	9	4	3	7	8	0	5	6	1	6	7	3	6	1	2	9	6	1	9	2	9	
.....																										
FISCHER 344 RATS MALE CONTROL	ANIMAL ID																									
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	2	
.....																										

Kidney
 Cyst
 Infarct
 Mineralization
 Nephropathy
 Papilla, Necrosis
 Renal Tubule, Hyperplasia
 Urinary Bladder
 Inflammation, Chronic Active
 Necrosis

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

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DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		4	6	7	7	7	6	7	7	7	5	6	7	3	5	6	7	5	6	7	6	5	5	5	6
		9	8	3	3	0	9	2	3	3	8	8	3	0	9	8	3	2	5	3	8	3	9	7	9
		0	5	5	5	2	3	7	5	5	1	5	5	2	5	6	5	2	7	5	1	6	1	2	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
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
		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 Inflammation, Suppurative	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	1	4.0
Intestine Large, Cecum Parasite Metazoan	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	46	2	
Intestine Large, Colon Parasite Metazoan	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	3	
Intestine Large, Rectum Parasite Metazoan	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	47	1	
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Intestine Small, Ileum	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	47		
Intestine Small, Jejunum	+	+	+	+	A	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	46		
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Angiectasis		1	2			1						1				1				1					6	1.2	
Basophilic Focus				X				X	X	X	X							X	X						9		
Clear Cell Focus							X											X					X		5		
Degeneration, Cystic		2		3		1						2		2	1					2					12	1.9	
Degeneration, Fatty	4					1																			5	2.2	
Eosinophilic Focus			X		X								X	X											4		

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M .. Missing tissue

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BLANK .. Not examined microscopically

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TDMS No. 05201 - 05
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol
 CAS Number: 98-00-0

Date Report Requested: 01/12/2009
 Time Report Requested: 09:25:45
 First Dose M/F: 11/26/91 / 11/26/91
 Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	* TOTALS
	4	6	7	7	7	6	7	7	7	5	6	7	3	5	6	7	5	6	7	6	5	5	5	5	6	
	9	8	3	3	0	9	2	3	3	8	8	3	0	9	8	3	2	5	3	8	3	9	7	9	0	
	0	5	5	5	2	3	7	5	5	1	5	5	2	5	6	5	2	7	5	1	6	1	2	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	
Regeneration																										1 3.0
Vacuolization Cytoplasmic, Focal																										1 2.0
Bile Duct, Hyperplasia	2	2	3	1	1	2	2			2	2					3		2	2	1	3	1			28 2.0	
Centrilobular, Necrosis		1														1	2	1							12 1.4	
Mesentery																										11
Fat, Necrosis																										10 2.1
Oral Mucosa																										1
Gingival, Inflammation, Chronic Active																										1 4.0
Pancreas																										50
Atrophy																										22 1.6
Basophilic Focus																										3
Hyperplasia																										5 2.0
Salivary Glands																										47
Atrophy																										1 2.0
Stomach, Forestomach																										50
Inflammation, Acute																										1 2.0
Mineralization																										1 2.0
Necrosis																										9 2.8
Stomach, Glandular																										50
Mineralization																										2 3.0
Necrosis																										7 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
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 BLANK .. Not examined microscopically
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 Page 11

TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

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Lab: BNW

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

CARDIOVASCULAR SYSTEM

Blood Vessel																								2
Aorta, Mineralization											+											+	2 2.5	
Heart																								50
Cardiomyopathy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	38 2.1
Artery, Mineralization											2											2	2 3.0	
Atrium, Thrombosis											4											2	3 3.3	

ENDOCRINE SYSTEM

Adrenal Cortex																								50										
Hyperplasia			1			2				1			2			2			2			2			2			2	15 1.9					
Hypertrophy											2											3	3 2.0											
Vacuolization Cytoplasmic						2						2						2	4 2.0															
Adrenal Medulla																								50										
Hyperplasia			3			2			2			3			2			3			3			2			2			4			2	30 2.3
Islets, Pancreatic																								50										
Parathyroid Gland																								49										
Hyperplasia						3						2						2			2			9 2.1										
Pituitary Gland																								50										
Mineralization											2											1 2.0												

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+ .. Tissue examined microscopically

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I .. Insufficient tissue

M .. Missing tissue

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

Pars Distalis, Hemorrhage																								4	1 4.0																						
Pars Distalis, Hyperplasia	3																		3	4	2	4 2.3																									
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49																					
C-cell, Hyperplasia					1	2															3	1	1	2	1	1	1	1	1	1	1	1	1	27 1.3													
Follicular Cell, Hyperplasia	3																																														1 3.0

GENERAL BODY SYSTEM

Peritoneum																								1
------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----------

GENITAL SYSTEM

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Hyperplasia																					2	1 2.0					
Inflammation, Chronic Active																						1 3.0					
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Hyperplasia	2																	3	2			7 2.0					
Inflammation, Chronic Active					2	3	3															3	2	1	9 3.0		
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49		
Inflammation, Suppurative							3																				1 3.0
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		

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TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

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Furfuryl alcohol

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Lab: BNW

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

Thymus + M + + + + M + + + + + M + + + + + + + + + + 43

INTEGUMENTARY SYSTEM

Mammary Gland	+	+	+	+	M	+	M	+	M	+	+	+	+	M	+	+	M	+	+	+	+	+	M	M	+	30		
Degeneration																											1 3.0	
Galactoceles										2	2					3				3							6 2.3	
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Inflammation, Chronic Active																												1 3.0
Tail, Hyperkeratosis																												1 3.0
Tail, Inflammation, Chronic Active								2																				1 2.0

MUSCULOSKELETAL SYSTEM

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Fibrous Osteodystrophy							3																						2 2.0

NERVOUS SYSTEM

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

RESPIRATORY SYSTEM

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

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	6	7	7	7	6	7	7	7	5	6	7	3	5	6	7	5	6	7	6	5	5	5	5	6	6
	9	8	3	3	0	9	2	3	3	8	8	3	0	9	8	3	2	5	3	8	3	9	7	9	0	0
	0	5	5	5	2	3	7	5	5	1	5	5	2	5	6	5	2	7	5	1	6	1	2	9	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	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
	2	2	2	2	3	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
Metaplasia, Osseous																										1 1.0
Mineralization							4																			1 4.0
Alveolar Epithelium, Hyperplasia	1		2							1		1						3	3							12 1.7
Artery, Mediastinum, Mineralization								3													1					1 3.0
Mediastinum, Inflammation, Suppurative	4																									1 4.0
Nose	+ +																									50
Inflammation, Suppurative											1															3 1.0
Thrombosis														2										1	1	10 1.8
Lateral Wall, Hyperplasia								1																		1 1.0
Lateral Wall, Metaplasia, Squamous																										1 1.0
Lateral Wall, Necrosis							2																			1 2.0
Olfactory Epithelium, Atrophy										1																1 1.0
Olfactory Epithelium, Degeneration, Hyaline	1	2	1	1	1	1	1	2	2	2	1	2	1	2		2	2		2	2	1	1	1	1	1	42 1.3
Olfactory Epithelium, Metaplasia										1																1 1.0
Respiratory Epithelium, Degeneration, Hyaline					1		1						1			1					1		1			12 1.0
Trachea	+ +																									49

SPECIAL SENSES SYSTEM

Zymbal's Gland																										+ 1
----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	------------

URINARY SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

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Lab: BNW

	DAY ON TEST																									* TOTALS
	0	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	6	7	7	7	6	7	7	7	5	6	7	3	5	6	7	5	6	7	6	5	5	5	5	6	
	9	8	3	3	0	9	2	3	3	8	8	3	0	9	8	3	2	5	3	8	3	9	7	9	0	
	0	5	5	5	2	3	7	5	5	1	5	5	2	5	6	5	2	7	5	1	6	1	2	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	
	0	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	
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Cyst																									1 2.0	
Infarct																									1 2.0	
Mineralization								3																	2 3.0	
Nephropathy	4	3	2	4	3	4	4	4	4	3	3	4	2	2	3	3	3	2	4	4	2	3	3	2	2	50 2.9
Papilla, Necrosis																										1 3.0
Renal Tubule, Hyperplasia					3		4	4																		5 2.8
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Inflammation, Chronic Active																										1 4.0
Necrosis																										1 4.0

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+ .. Tissue examined microscopically

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1-4 .. Lesion qualified as:

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2) Mild 4) Marked

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		6	7	6	6	6	4	5	7	7	5	7	4	6	4	6	4	6	6	6	7	6	4	7	7	4
		2	1	8	0	9	6	5	2	2	7	3	7	0	9	2	9	8	0	5	0	3	9	3	3	9
		7	6	6	6	3	2	5	6	8	1	5	7	9	0	2	0	9	4	2	5	7	0	5	5	1
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
2.0 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	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	M	+	+	+	+	+	+	+
Intestine Large, Cecum Parasite Metazoan	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+
Intestine Large, Colon Parasite Metazoan	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	X	X	+	+	+	+	+
Intestine Large, Rectum Parasite Metazoan	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	X	+
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum Parasite Metazoan	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Angiectasis																									
Basophilic Focus	X							X			X									X		X	X	X	
Clear Cell Focus																									
Degeneration, Cystic			3		2	2				2		2		2					2				1		
Degeneration, Fatty									2		2				1				1						3
Eosinophilic Focus								X		X															

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 1) Minimal 3) Moderate
 2) Mild 4) Marked

TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

DAY ON TEST	0 0																								
	6 7 6 6 6 4 5 7 7 5 7 4 6 4 6 4 6 6 7 6 4 7 7 4																								
FISCHER 344 RATS MALE 2.0 PPM ANIMAL ID	2 1 8 0 9 6 5 2 2 7 3 7 0 9 2 9 8 0 5 0 3 9 3 3 9																								
	7 6 6 6 3 2 5 6 8 1 5 7 9 0 2 0 9 4 2 5 7 0 5 5 1																								
2.0 PPM ANIMAL ID	0 0																								
	0 0																								
	2 2																								
	0 0																								
	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5																								

males (cont...)

Hepatodiaphragmatic Nodule	X																								
Mixed Cell Focus	X																								
Necrosis	2																								
Regeneration	4																								
Bile Duct, Hyperplasia	3 2 2 2 3 1 1 2 3 2 2 1 3 3 2																								
Centrilobular, Necrosis	2 1 2 1 2 1 2 1 1 1																								
Mesentery	+																								
Artery, Mineralization	4																								
Fat, Hemorrhage	+																								
Fat, Necrosis	3 2 2																								
Oral Mucosa																									
Pancreas	+ +																								
Atrophy	4 3 3 1 1 1 2 1 1 2 3 2 2 1																								
Basophilic Focus																									
Hyperplasia																									
Artery, Inflammation																									
Salivary Glands	+ +																								
Atrophy	2																								
Inflammation, Chronic Active	2																								
Stomach, Forestomach	+ +																								
Hyperplasia, Squamous																									
Inflammation, Acute																									
Mineralization	3																								
Necrosis	4 3 4																								

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DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
DAY ON TEST		6	7	6	6	6	4	5	7	7	5	7	4	6	4	6	4	6	6	7	6	4	7	7	4	
DAY ON TEST		2	1	8	0	9	6	5	2	2	7	3	7	0	9	2	9	8	0	5	0	3	9	3	3	9
DAY ON TEST		7	6	6	6	3	2	5	6	8	1	5	7	9	0	2	0	9	4	2	5	7	0	5	5	1
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
2.0 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
ANIMAL ID		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...)

Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Mineralization								4																	
Necrosis								2																	
Tongue																									

CARDIOVASCULAR SYSTEM

Blood Vessel																										
Aorta, Mineralization								4																		
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Cardiomyopathy	1	2	1	1	2			3	3	1	1			2				1	2				1	1	2	1
Artery, Mineralization								3																		
Atrium, Thrombosis			1	3				3							2						2					

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia			2			2					2			2					2					2	
Hypertrophy																									
Vacuolization Cytoplasmic									2											2					
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia						2								1		2				3			3		

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Page 20

TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DAY ON TEST		6	7	6	6	6	4	5	7	7	5	7	4	6	4	6	6	6	7	6	4	7	7	4	4	
DAY ON TEST		2	1	8	0	9	6	5	2	2	7	3	7	0	9	2	9	8	0	5	0	3	9	3	9	
DAY ON TEST		7	6	6	6	3	2	5	6	8	1	5	7	9	0	2	0	9	4	2	5	7	0	5	1	
FISCHER 344 RATS MALE 2.0 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	
	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	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	ANIMAL ID	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2
	ANIMAL ID	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

Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Parathyroid Gland Hyperplasia	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			4						4	2		3													
Pituitary Gland Pars Distalis, Hyperplasia Pars Intermedia, Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	3	2														3		3		3				3	
Thyroid Gland C-cell, Hyperplasia Follicular Cell, Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
			1	1		1	1	1	1	1		1	1	1	1	1		1	1	1		1	1	2	1

GENERAL BODY SYSTEM

Peritoneum																										+
------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

GENITAL SYSTEM

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Penis			+																						
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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TDMS No. 05201 - 05

Test Type: CHRONIC

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Furfuryl alcohol

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Lab: BNW

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		6	7	6	6	6	4	5	7	7	5	7	4	6	4	6	4	6	6	7	6	4	7	7	4	
		2	1	8	0	9	6	5	2	2	7	3	7	0	9	2	9	8	0	5	0	3	9	3	3	9
		7	6	6	6	3	2	5	6	8	1	5	7	9	0	2	0	9	4	2	5	7	0	5	5	1
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	
2.0 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	
		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...)

Hyperplasia																										
Inflammation, Chronic Active								4		3		2				4										
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Atrophy																										
Artery, Inflammation, Chronic Active									2																	
Interstitial Cell, Hyperplasia							1							2							2					

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Necrosis												3													
Lymph Node	+																				+	+			+
Lymph Node, Bronchial	+	M	+	+	M	M	M	+	M	+	+	+	M	+	+	+	+	M	+	+	M	+	M	M	M
Lymph Node, Mandibular	+	M	+	+	+	M	+	+	+	M	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+
Infiltration Cellular, Plasma Cell												3													
Lymph Node, Mediastinal	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	M	+	+
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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

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		
2.0 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	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	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	5	
																								males		
																								(cont...)		

Fibrosis	2	2		2		1		3											2	2				
Hematopoietic Cell Proliferation																								
Necrosis																								
Thymus	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	M	M	M	+	+	M	M	+	+
Cyst											3													

INTEGUMENTARY SYSTEM

Mammary Gland	M	+	M	M	M	M	+	+	+	M	M	+	M	M	M	M	+	+	+	+	M	M	+	M	M
Galactoceles									3																
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Cyst Epithelial Inclusion		X																							
Inflammation, Acute																4									
Inflammation, Chronic Active																4									
Necrosis																4									
Subcutaneous Tissue, Edema																									
Tail, Inflammation, Chronic Active																									

MUSCULOSKELETAL SYSTEM

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Fibrous Osteodystrophy		2								4	1													
Hyperostosis				1								3												

NERVOUS SYSTEM

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 Page 23
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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6	7	6	6	6	4	5	7	7	5	7	4	6	4	6	4	6	6	7	6	4	7	7	4	
	2	1	8	0	9	6	5	2	2	7	3	7	0	9	2	9	8	0	5	0	3	9	3	9	
	7	6	6	6	3	2	5	6	8	1	5	7	9	0	2	0	9	4	2	5	7	0	5	1	
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	
2.0 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	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
																									males (cont...)

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Necrosis																									
Spinal Cord																									+

RESPIRATORY SYSTEM

Larynx	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Foreign Body																									
Inflammation, Suppurative																									
Inflammation, Granulomatous																									
Metaplasia, Squamous																									
Mineralization																									
Thrombosis																									
Alveolar Epithelium, Hyperplasia																									
Artery, Mediastinum, Mineralization																									
Perivascular, Infiltration Cellular, Mononuclear Cell																									
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Inflammation, Suppurative																									
Thrombosis																									
Lateral Wall, Hyperplasia																									
Lateral Wall, Metaplasia, Squamous																									
Olfactory Epithelium, Atrophy																									

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	7	6	6	6	4	5	7	7	5	7	4	6	4	6	4	6	6	7	6	4	7	7	4
	2	1	8	0	9	6	5	2	2	7	3	7	0	9	2	9	8	0	5	0	3	9	3	9
	7	6	6	6	3	2	5	6	8	1	5	7	9	0	2	0	9	4	2	5	7	0	5	1
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
2.0 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	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	

males (cont...)

Olfactory Epithelium, Degeneration, Hyaline	2	1	1	2	2	2	1	1	1	1	2	1	1	1	1	2	2	1	1	1	2	1	1
Olfactory Epithelium, Fibrosis														1									
Olfactory Epithelium, Hyperplasia														1									
Olfactory Epithelium, Metaplasia	2							1						1					1				
Respiratory Epithelium, Degeneration, Hyaline					1	1	1				1	1		1				1				1	
Respiratory Epithelium, Hyperplasia	2	2	2	2		1		3							2	1		2	2	2			1
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

SPECIAL SENSES SYSTEM

Eye																							
Cataract																							
Inflammation, Chronic Active																							
Retina, Atrophy																							
Harderian Gland																							
Inflammation, Chronic Active																							

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst																							
Infarct																							
Mineralization																							
Nephropathy	2	4	3	2	3	3	3	4	4	2	4	2	3	2	3	3	4	3	4	2	3	3	4

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+ .. Tissue examined microscopically
x .. Lesion present
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BLANK .. Not examined microscopically
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1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	6	7	6	6	6	4	5	7	7	5	7	4	6	4	6	4	6	6	6	7	6	4	7	7	4				
	2	1	8	0	9	6	5	2	2	7	3	7	0	9	2	9	8	0	5	0	3	9	3	3	9				
	7	6	6	6	3	2	5	6	8	1	5	7	9	0	2	0	9	4	2	5	7	0	5	5	1				
.....																													
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			
2.0 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			
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			
	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	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...)			
Renal Tubule, Hyperplasia										1										2									
Urinary Bladder																												
Inflammation, Chronic Active	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Transitional Epithelium, Hyperplasia										3										4									

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Page 26

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	3	5	7	5	5	6	6	4	5	6	6	6	5	5	6	7	6	6	6	6	6	6	6	7	
	9	9	4	3	7	6	0	0	7	2	2	0	8	8	7	8	2	3	9	7	1	4	1	6	3	
	4	9	3	5	8	0	1	9	7	5	3	9	6	1	8	9	1	7	1	8	6	4	6	0	5	
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	
2.0 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																									

ALIMENTARY SYSTEM

Esophagus	+ +																								48	
Intestine Large, Cecum	+ +																								49	
Parasite Metazoan																										2
	X																									
Intestine Large, Colon	+ +																								50	
Parasite Metazoan																										4
	X																									
Intestine Large, Rectum	+ +																								50	
Parasite Metazoan																										3
	X																									
Intestine Small, Duodenum	+ +																								50	
Intestine Small, Ileum	+ +																								49	
Parasite Metazoan																										1
	X																									
Intestine Small, Jejunum	+ +																								50	
Liver	+ +																								50	
Angiectasis																										2
Basophilic Focus																										12
Clear Cell Focus																										1
Degeneration, Cystic																										18
Degeneration, Fatty																										2.0
Eosinophilic Focus	1	1	4																							
																										2

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6	3	5	7	5	5	6	6	4	5	6	6	5	5	6	7	6	6	6	6	6	6	6	7		
	9	9	4	3	7	6	0	0	7	2	2	0	8	8	7	8	2	3	9	7	1	4	1	6	3	
	4	9	3	5	8	0	1	9	7	5	3	9	6	1	8	9	1	7	1	8	6	4	6	0	5	
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	
2.0 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	4	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

Hepatodiaphragmatic Nodule																									1	
Mixed Cell Focus																										1
Necrosis																	3									2 2.5
Regeneration																										3 2.7
Bile Duct, Hyperplasia	1		1	3					2	1	2	4				2	2	2	3							31 2.2
Centrilobular, Necrosis				1				1		1					1				3	3	3		2	2		17 1.3
Mesentery					+	+							+							+	+	+				13
Artery, Mineralization																	3									2 3.5
Fat, Hemorrhage				2																		2				2 2.0
Fat, Necrosis					2								3									2				6 2.3
Oral Mucosa																										1
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		50
Atrophy				1													2	1							1	22 1.8
Basophilic Focus																								X		1
Hyperplasia																				2			2			2 2.0
Artery, Inflammation								3																		1 3.0
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		50
Atrophy																										1 2.0
Inflammation, Chronic Active																										1 2.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		50
Hyperplasia, Squamous																							1			1 1.0
Inflammation, Acute																										1 2.0
Mineralization																										2 2.5
Necrosis									3											3						6 3.5

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	3	5	7	5	5	6	6	4	5	6	6	5	5	6	7	6	6	6	6	6	6	6	6	6	7		
	9	9	4	3	7	6	0	0	7	2	2	0	8	8	7	8	2	3	9	7	1	4	1	6	3			
	4	9	3	5	8	0	1	9	7	5	3	9	6	1	8	9	1	7	1	8	6	4	6	0	5			
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
2.0 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
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	2	2	3	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	

Stomach, Glandular Mineralization Necrosis

+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	2	3.5		
																													3	3	2.0

Tongue				+																										1		
--------	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--	--

CARDIOVASCULAR SYSTEM

Blood Vessel Aorta, Mineralization

																																			2			
																																					3	3.5

Heart Cardiomyopathy Artery, Mineralization Atrium, Thrombosis

+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50				
1		2	2	1			2	2	2	2	3	2																										32	1.7	
																																						4	3.5	
																																							6	2.3

ENDOCRINE SYSTEM

Adrenal Cortex Hyperplasia Hypertrophy Vacuolization Cytoplasmic

+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50						
																																									19	1.9	
																																									3	2.0	
																																										3	2.3

Adrenal Medulla Hyperplasia

+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50							
																																														17	2.4

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Page 29

		DAY ON TEST																									
		0 6 9 4	0 3 9 9	0 5 4 3	0 7 3 5	0 5 7 8	0 5 6 0	0 6 0 1	0 6 4 9	0 4 5 7	0 5 6 5	0 6 2 3	0 6 4 9	0 5 6 1	0 5 6 8	0 6 7 7	0 6 8 1	0 5 8 9	0 6 7 1	0 6 6 8	0 6 6 1	0 6 6 8	0 6 6 1	0 6 6 8	0 6 6 1		
FISCHER 344 RATS MALE 2.0 PPM	ANIMAL ID	0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9	0 0 2 2 0	0 0 2 2 1	0 0 2 2 2	0 0 2 2 3	0 0 2 2 4	0 0 2 2 5	0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9	0 0 2 2 0	0 0 2 2 1	0 0 2 2 2	0 0 2 2 3	0 0 2 2 4	0 0 2 2 5	0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9	* TOTALS	
		0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9	0 0 2 2 0	0 0 2 2 1	0 0 2 2 2	0 0 2 2 3	0 0 2 2 4	0 0 2 2 5	0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9	0 0 2 2 0	0 0 2 2 1	0 0 2 2 2	0 0 2 2 3	0 0 2 2 4	0 0 2 2 5	0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9		
		0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9	0 0 2 2 0	0 0 2 2 1	0 0 2 2 2	0 0 2 2 3	0 0 2 2 4	0 0 2 2 5	0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9	0 0 2 2 0	0 0 2 2 1	0 0 2 2 2	0 0 2 2 3	0 0 2 2 4	0 0 2 2 5	0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9		
		0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9	0 0 2 2 0	0 0 2 2 1	0 0 2 2 2	0 0 2 2 3	0 0 2 2 4	0 0 2 2 5	0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9	0 0 2 2 0	0 0 2 2 1	0 0 2 2 2	0 0 2 2 3	0 0 2 2 4	0 0 2 2 5	0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9		
		0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9	0 0 2 2 0	0 0 2 2 1	0 0 2 2 2	0 0 2 2 3	0 0 2 2 4	0 0 2 2 5	0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9	0 0 2 2 0	0 0 2 2 1	0 0 2 2 2	0 0 2 2 3	0 0 2 2 4	0 0 2 2 5	0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9		

Islets, Pancreatic	+ +																									50		
Parathyroid Gland Hyperplasia	+ + + + + + + + + + M + + + + + + + + M + M M + + + + +																									45		
																											5	3.0
Pituitary Gland Pars Distalis, Hyperplasia Pars Intermedia, Hyperplasia	+ + + + + + + + 2 + + + + + + 2 + + + + + + + + + + + +																									50		
																											8	2.6
																											1	3.0
Thyroid Gland C-cell, Hyperplasia Follicular Cell, Hyperplasia	+ +																									49		
																											33	1.1
																											1	2.0

GENERAL BODY SYSTEM

Peritoneum																										1
------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----------

GENITAL SYSTEM

Epididymis	+ +																									50
Penis																										1
Preputial Gland	+ +																									50
Prostate	+ +																									50

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 Page 30

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	3	5	7	5	5	6	6	4	5	6	6	6	5	5	6	7	6	6	6	6	6	6	6	7
	9	9	4	3	7	6	0	0	7	2	2	0	8	8	7	8	2	3	9	7	1	4	1	6	3
	4	9	3	5	8	0	1	9	7	5	3	9	6	1	8	9	1	7	1	8	6	4	6	0	5
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
2.0 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	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	

Hyperplasia																								1			2																					3	1.7																		
Inflammation, Chronic Active																								3			3																					8	3.1																		
Seminal Vesicle																								+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49																	
Testes																								+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50																	
Atrophy																																															2																			1	2.0
Artery, Inflammation, Chronic Active																																																																	1	2.0	
Interstitial Cell, Hyperplasia																								1	1																									6	1.5																

HEMATOPOIETIC SYSTEM

Bone Marrow																								+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50																						
Necrosis																																																																							2	3.0
Lymph Node																																																				8																				
Lymph Node, Bronchial																								+	+	+	M	+	+	M	M	+	+	M	M	+	M	+	+	M	M	+	M	+	+	+	M	M	+	28																						
Lymph Node, Mandibular																								+	+	M	+	+	+	+	+	+	M	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	42																					
Infiltration Cellular, Plasma Cell																																																																					1	3.0		
Lymph Node, Mediastinal																								+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	47																					
Lymph Node, Mesenteric																								+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50																					
Spleen																								+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50																					

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DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
		6	3	5	7	5	5	6	6	4	5	6	6	5	5	6	7	6	6	6	6	6	6	7			
		9	9	4	3	7	6	0	0	7	2	2	0	8	8	7	8	2	3	9	7	1	4	1	6	3	
		4	9	3	5	8	0	1	9	7	5	3	9	6	1	8	9	1	7	1	8	6	4	6	0	5	
FISCHER 344 RATS MALE 2.0 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	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	2	3	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	0
																											* TOTALS

Fibrosis									2											2								13 2.3
Hematopoietic Cell Proliferation									2							2												2 2.0
Necrosis												4																2 3.0
Thymus Cyst																												40 1 3.0

INTEGUMENTARY SYSTEM

Mammary Gland Galactocoele																												25 2 2.5
Skin																												50 2 3.0
Cyst Epithelial Inclusion																												2 3.5
Inflammation, Acute																												2 3.5
Inflammation, Chronic Active																												1 4.0
Necrosis																												1 3.0
Subcutaneous Tissue, Edema																												2 2.5
Tail, Inflammation, Chronic Active																												2 2.5

MUSCULOSKELETAL SYSTEM

Bone																												50 5 2.2
Fibrous Osteodystrophy																												5 2.4
Hyperostosis																												5 2.4

NERVOUS 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
 Page 32

DAY ON TEST	0 0																								* TOTALS
	6	3	5	7	5	5	6	6	4	5	6	6	5	5	6	7	6	6	6	6	6	6	6	7	
	9 9 4 3 7 6 0 0 7 2 2 0 8 8 7 8 2 3 9 7 1 4 1 6 3																								
	4 9 3 5 8 0 1 9 7 5 3 9 6 1 8 9 1 7 1 8 6 4 6 0 5																								
FISCHER 344 RATS MALE 2.0 PPM	0 0																								* TOTALS
	ANIMAL ID																								
	2 2																								
	2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 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 9 0																								

Brain Necrosis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	2	2.5
Spinal Cord																											1

RESPIRATORY SYSTEM

Larynx	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Foreign Body																							X				1	
Inflammation, Suppurative																							4				4	
Inflammation, Granulomatous																											1	
Metaplasia, Squamous													2														2	
Mineralization																								3			3	
Thrombosis																											1	
Alveolar Epithelium, Hyperplasia						1											1							1			1	
Artery, Mediastinum, Mineralization																									3			3
Perivascular, Infiltration Cellular, Mononuclear Cell																											1	
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50			
Inflammation, Suppurative					2																				1		6	1.5
Thrombosis					1									2											1		15	2.7
Lateral Wall, Hyperplasia	1		1	2	1	1	2	2	1	2	3	1	1	2	1	2	1	1	2	2	2	1	3	1	1		49	1.5
Lateral Wall, Metaplasia, Squamous																										1	1.0	
Olfactory Epithelium, Atrophy	1		2	1	1				1																1		12	1.1

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6	3	5	7	5	5	6	6	4	5	6	6	5	5	6	7	6	6	6	6	6	6	6	7	
	9	9	4	3	7	6	0	0	7	2	2	0	8	8	7	8	2	3	9	7	1	4	1	6	3
	4	9	3	5	8	0	1	9	7	5	3	9	6	1	8	9	1	7	1	8	6	4	6	0	5
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
2.0 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	

Olfactory Epithelium, Degeneration, Hyaline	2	2	1	2	2	2	2	2	2	2	1	2	2	1	2	2	1	2	1	2	1	2	1	1	48	1.5	
Olfactory Epithelium, Fibrosis																								1	1.0		
Olfactory Epithelium, Hyperplasia																								1	1.0		
Olfactory Epithelium, Metaplasia	2	1		1		1		1		1		1		1		1		1		1		1		1		8	1.3
Respiratory Epithelium, Degeneration, Hyaline																								14	1.0		
Respiratory Epithelium, Hyperplasia	1	1	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	26	1.8
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	

SPECIAL SENSES SYSTEM

Eye																								3	
Cataract																								1	4.0
Inflammation, Chronic Active																								2	4.0
Retina, Atrophy																								1	4.0
Harderian Gland																								1	
Inflammation, Chronic Active																								1	4.0

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Cyst	2																								3	2.3	
Infarct																								2	2.0		
Mineralization																								2	3.0		
Nephropathy	3	1	2	3	4	2	2	3	2	2	3	3	2	2	2	3	4	4	3	3	2	4	3	3	3	49	2.9

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TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	3	5	7	5	5	6	6	4	5	6	6	6	5	5	6	7	6	6	6	6	6	6	6	7
	9	9	4	3	7	6	0	0	7	2	2	0	8	8	7	8	2	3	9	7	1	4	1	6	3
	4	9	3	5	8	0	1	9	7	5	3	9	6	1	8	9	1	7	1	8	6	4	6	0	5
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
2.0 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	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																								
Renal Tubule, Hyperplasia	3											2											5 2.0		
Urinary Bladder	+ +																							50	
Inflammation, Chronic Active																								1 3.0	
Transitional Epithelium, Hyperplasia																								1 4.0	

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DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		7	7	5	5	6	7	7	7	7	6	4	7	7	6	5	6	6	7	7	5	5	6	7	6	5	
		3	3	5	0	8	0	3	0	3	9	2	3	1	4	8	3	3	0	3	9	2	6	3	7	8	
		5	5	4	5	8	8	5	0	5	2	8	5	6	6	8	9	5	8	5	2	5	6	5	1	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	
8.0 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	
		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	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

males (cont...)

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Cecum Parasite Metazoan	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	X	X	X									X									X		X		
Intestine Large, Colon Mineralization Parasite Metazoan	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
																							X		X
Intestine Large, Rectum Parasite Metazoan	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
																							X		
Intestine Small, Duodenum Inflammation, Suppurative	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
					2																				
Intestine Small, Ileum Parasite Metazoan	+	+	A	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
																									X
Intestine Small, Jejunum	+	+	A	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver Angiectasis Basophilic Focus Clear Cell Focus Cyst	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	X	X	X			X	X		X	X		X	X	X	X			X			X		X	X	X
	X	X																							

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Page 36

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7	7	5	5	6	7	7	7	7	6	4	7	7	6	5	6	6	7	7	5	5	6	7	6	5	
	3	3	5	0	8	0	3	0	3	9	2	3	1	4	8	3	3	0	3	9	2	6	3	7	8	
	5	5	4	5	8	8	5	0	5	2	8	5	6	6	8	9	5	8	5	2	5	6	5	1	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	0
8.0 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	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
.....																										
Degeneration, Cystic				1		3	3	1								2		3		2						
Degeneration, Fatty																										
Eosinophilic Focus				X											X				X							
Hepatodiaphragmatic Nodule				X				X						X												
Mixed Cell Focus																				X						
Regeneration																									3	
Tension Lipidosis					X																					
Bile Duct, Hyperplasia	2	1	1		2		3		1	1	2		2		2	3		2	3	1	2	3	2	3	2	
Centrilobular, Necrosis									3		2				2				1		1		2	2	2	
.....																										
Mesentery							+		+						+	+					+					
Pigmentation									4																	
Fat, Hemorrhage					2																					
Fat, Necrosis														3	2						3					
.....																										
Oral Mucosa																									+	
Pharyngeal, Hyperplasia																									4	
.....																										
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Atrophy	3		2					2	2		1				2	1		2			3		1		3	3
Basophilic Focus				X									X													
Artery, Mineralization																										
.....																										
Salivary Glands	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
.....																										
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Mineralization											3															
Necrosis					4	4																				
.....																										

males (cont...)

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DAY ON TEST	0 0																							
	7 7 5 5 6 7 7 7 7 6 4 7 7 6 5 6 6 7 7 5 5 6 7 6 5																							
FISCHER 344 RATS MALE 8.0 PPM ANIMAL ID	3 3 5 0 8 0 3 0 3 9 2 3 1 4 8 3 3 0 3 9 2 6 3 7 8																							
	5 5 4 5 8 8 5 0 5 2 8 5 6 6 8 9 5 8 5 2 5 6 5 1 0																							
ANIMAL ID	0 0																							
	0 0																							
	4 4																							
	0 0 0 0 0 0 0 0 0 0 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 5																							

males (cont...)

Stomach, Glandular Mineralization Necrosis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
					3				4															
			2	3			2														2			

CARDIOVASCULAR SYSTEM

Blood Vessel Aorta, Mineralization										+														
										4														
Heart Cardiomyopathy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Artery, Mineralization	2	2	2	1	3	2	2		3	4		3	3	3	2	2		2	1	2	1	2	2	1
Atrium, Thrombosis										4														

ENDOCRINE SYSTEM

Adrenal Cortex Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hypertrophy	2	3				1	3		2			2	2					2	2					2
Necrosis												3									3			
Vacuolization Cytoplasmic					2							2												
Adrenal Medulla Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	3	2			3		3	1	3	2		3	3	2	2				2			3		
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
8.0 PPM 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	
		1	2	3	4	5	6	7	8	9	0	1	1	2	3	4	5	6	7	8	9	0	1	2	

males (cont...)

Parathyroid Gland Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
					2					2	4						3	2	2			2		
Pituitary Gland Pars Distalis, Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	I	+	+	+	+	+	+	+	+
																4								2
Thyroid Gland C-cell, Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Follicular Cell, Hyperplasia	1	1		1	1		2		1	1			1		2	1	1	1	1	1	2	1	1	1
					2																			1

GENERAL BODY SYSTEM

Peritoneum																									
								+																	

GENITAL SYSTEM

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Preputial Gland Hyperplasia	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inflammation, Chronic Active						3			3															
Prostate Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inflammation, Chronic Active	2						2						2			2								3
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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2) Mild 4) Marked
Page 39

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

males (cont...)

Mineralization	3																								
Testes	+ +																								
Atrophy	3																								
Artery, Inflammation, Chronic Active	1 3																								
Interstitial Cell, Hyperplasia	2 1 2																								

HEMATOPOIETIC SYSTEM

Bone Marrow	+ +																								
Lymph Node Renal, Hemorrhage	+ + 2 +																								
Lymph Node, Bronchial	M M + + + + + + + M + + M M + M M + M + M + + M + +																								
Lymph Node, Mandibular	+ + + + + + + + + M + + + + + + + + + + + + + + + + + + +																								
Lymph Node, Mediastinal	+ +																								
Lymph Node, Mesenteric	+ +																								
Spleen	+ +																								
Angiectasis																									
Fibrosis	2 2 3 3 2																								
Hematopoietic Cell Proliferation																									
Hyperplasia, Focal	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
 Page 40

TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7	7	5	5	6	7	7	7	7	6	4	7	7	6	5	6	6	7	7	5	5	6	7	6	5	
	3	3	5	0	8	0	3	0	3	9	2	3	1	4	8	3	3	0	3	9	2	6	3	7	8	
	5	5	4	5	8	8	5	0	5	2	8	5	6	6	8	9	5	8	5	2	5	6	5	1	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	
8.0 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	
	0	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	2	3	4	5	6	7	8	9	0	1	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
																										males (cont...)

Necrosis

2 2

Thymus

+ M + + + +

INTEGUMENTARY SYSTEM

Mammary Gland
Degeneration
Galactoceles

M + + + + M + + + M M + + + + + + M + + + + + M +
2 2 3

Skin
Inflammation, Granulomatous
Inflammation, Chronic Active
Subcutaneous Tissue, Tail, Thrombosis
Tail, Inflammation, Chronic Active

+
4 1 3 4 3 3

MUSCULOSKELETAL SYSTEM

Bone
Fibrous Osteodystrophy
Hyperostosis

+
2 2 2 4 2

NERVOUS SYSTEM

Brain

+ +

* .. 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 | 0 | 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 | 5 | 5 | 6 | 7 | 7 | 7 | 7 | 6 | 4 | 7 | 7 | 6 | 5 | 6 | 6 | 7 | 7 | 5 | 5 | 6 | 7 | 6 | 5 |
| | 3 | 3 | 5 | 0 | 8 | 0 | 3 | 0 | 3 | 9 | 2 | 3 | 1 | 4 | 8 | 3 | 3 | 0 | 3 | 9 | 2 | 6 | 3 | 7 | 8 |
| | 5 | 5 | 4 | 5 | 8 | 8 | 5 | 0 | 5 | 2 | 8 | 5 | 6 | 6 | 8 | 9 | 5 | 8 | 5 | 2 | 5 | 6 | 5 | 1 | 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 |
| 8.0 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 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | |

males (cont...)

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | | | | | | 4 | | | | | | | | | | | | | | |
| Alveolar Epithelium, Hyperplasia | | | | | | | 1 | | | | | | | 3 | | | | | | | | 1 | | |
| Artery, Mediastinum, Mineralization | | | | | | | | | | 4 | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Suppurative | | | | | | 1 | | | | 1 | 1 | | | 2 | 2 | 2 | 1 | | 2 | 2 | 2 | | | 1 |
| Thrombosis | | | | | | | | | | | 3 | | | | | 3 | 1 | | | | | 4 | | 2 |
| Glands, Hyperplasia | | | | 1 | 1 | | 1 | 1 | | | | | 1 | | | | | | 1 | 1 | 1 | 1 | 1 | 1 |
| Lateral Wall, Hyperplasia | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Lateral Wall, Metaplasia, Squamous | | | | | | | | 1 | | | | | | | | | 1 | | | | | | | |
| Nasopharyngeal Duct, Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Atrophy | 1 | 1 | | 2 | 1 | | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| Olfactory Epithelium, Degeneration, Hyaline | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 3 |
| Olfactory Epithelium, Fibrosis | | | 1 | 1 | 1 | | 1 | 2 | 1 | | | | 1 | 1 | | | | 1 | | | | | | 1 |
| Olfactory Epithelium, Hyperplasia | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 |
| Olfactory Epithelium, Metaplasia | 1 | 1 | | 1 | | | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | | 1 | 1 | 2 | 1 | 2 | 1 |
| Respiratory Epithelium, Degeneration, Hyaline | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 |
| Respiratory Epithelium, Hyperplasia | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 |
| Respiratory 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
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TDMS No. 05201 - 05

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Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

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Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

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

FISCHER 344 RATS MALE

8.0 PPM

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

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Eye | | | | | | | | | | | | | | | | | | | | | | | | |
| Cataract | | | | | | | | | | | | | | | | | | | | | | | | |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hydronephrosis | | | | 2 | | | | | | | | | | | | | | | | | 2 | | | |
| Mineralization | | | | | | | | | 4 | | | | | | | | | | | | | | | |
| Nephropathy | 3 | 3 | 3 | 2 | 4 | 4 | 4 | 4 | 4 | 2 | 4 | 4 | 4 | 2 | 3 | 4 | 4 | 4 | 2 | 2 | 4 | 4 | 2 | 2 |
| Stromal Hyperplasia | | | 3 | | | | | | | | | | | | | | | | | | | | | |
| Renal Tubule, Hyperplasia | | | | 1 | 2 | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
x .. Lesion present
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A .. Autolysis precludes evaluation
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TDMS No. 05201 - 05
 Test Type: CHRONIC
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 Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Furfuryl alcohol
 CAS Number: 98-00-0

Date Report Requested: 01/12/2009
 Time Report Requested: 09:25:45
 First Dose M/F: 11/26/91 / 11/26/91
 Lab: BNW

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|---|
| | 4 | 5 | 6 | 6 | 4 | 5 | 4 | 5 | 7 | 5 | 5 | 6 | 5 | 5 | 6 | 5 | 6 | 6 | 4 | 5 | 7 | 6 | 7 | | 6 | 7 |
| | 9 | 3 | 7 | 7 | 7 | 8 | 7 | 5 | 0 | 7 | 4 | 2 | 7 | 4 | 6 | 1 | 9 | 1 | 8 | 9 | 3 | 6 | 3 | 5 | 3 | |
| | 2 | 6 | 0 | 9 | 8 | 5 | 3 | 9 | 8 | 1 | 7 | 1 | 2 | 6 | 6 | 9 | 3 | 6 | 3 | 7 | 5 | 5 | 0 | 2 | 5 | |
| 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 | |
| 8.0 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 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|------------|------------|--|
| Esophagus | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Intestine Large, Cecum | + | + | A | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | A | + | + | A | + | + | 44 | | |
| Parasite Metazoan | | | | | | | X | | | | | | | | | | | | | | | X | | | | 8 | | |
| Intestine Large, Colon | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Parasite Metazoan | X | | | | | X | | | | | | | X | | | | | | | | | | | | 6 | 3.0 | | |
| Intestine Large, Rectum | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Parasite Metazoan | | | | | | X | | | | | | | | | | | | | | | X | | X | | 4 | | | |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Intestine Small, Ileum | + | + | A | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | A | + | + | A | + | + | 43 | | |
| Parasite Metazoan | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Intestine Small, Jejunum | + | + | A | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | A | + | + | A | + | + | 43 | | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2.3 | |
| Basophilic Focus | | | X | X | | | | X | X | | | X | | | | | | | | X | X | X | X | X | 27 | | | |
| Clear Cell Focus | | | | | | | | | | | | | | | | | | | | | | X | X | | 4 | | | |
| Cyst | 2 | | | | | | | | | | | 2 | | | | | | | | | | | | | 2 | 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
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TDMS No. 05201 - 05

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Lab: BNW

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|--|
| | 0
4
9
2 | 0
5
3
6 | 0
6
7
0 | 0
6
7
9 | 0
4
7
8 | 0
5
7
5 | 0
4
5
3 | 0
5
7
9 | 0
7
5
8 | 0
5
0
1 | 0
5
4
7 | 0
6
2
1 | 0
5
7
1 | 0
5
4
2 | 0
6
6
6 | 0
5
1
9 | 0
6
6
3 | 0
4
8
7 | 0
5
9
5 | 0
7
3
5 | 0
6
6
0 | 0
7
3
5 | 0
6
5
2 | 0
7
3
5 | | |
| 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 | |
| 8.0 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 | |
| Degeneration, Cystic | | | 1 | | | | | | | | | | | | | 3 | 2 | | 2 | | 3 | | | | 12 2.2 | |
| Degeneration, Fatty | | | | 2 | | | | | | 1 | | | | | | | | | | | | | 2 | | 3 1.7 | |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | X | | | 4 | |
| Mixed Cell Focus | | | | | | | | | | X | | | | | | | | | | | | | | | 2 | |
| Regeneration | | | | | | | | | | | | | | | 4 | | | | | | | | | | 2 3.5 | |
| Tension Lipidosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Bile Duct, Hyperplasia | 2 | 3 | 1 | | | | | | | | 2 | | 2 | | 2 | 3 | 3 | 2 | | | 3 | | 1 | | 30 2.1 | |
| Centrilobular, Necrosis | 2 | | | | | | | | | | | 1 | 1 | | 1 | 1 | 1 | | | | 1 | | | | 15 1.5 | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | 9 | |
| Fat, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| Fat, Necrosis | | | | | | | | | | | | | | | 2 | | 2 | | | | 2 | | | | 1 2.0 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | 7 2.3 | |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pharyngeal, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 4.0 | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Atrophy | | | | 2 | 1 | 1 | | | | | | | | | 2 | 1 | | | | | 3 | 2 | 1 | | 23 2.0 | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Artery, Mineralization | | | | | | | | | | | | | | | | | | | | | | 2 | | | 1 2.0 | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2 3.0 | |
| Necrosis | | | | 3 | | | | | | | 3 | | 2 | 2 | | | | | | | 2 | | 2 | 2 | 10 2.8 | |

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

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
|-----------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| FISCHER 344 RATS MALE | | 4 | 5 | 6 | 6 | 4 | 5 | 4 | 5 | 7 | 5 | 5 | 6 | 5 | 5 | 6 | 5 | 6 | 6 | 4 | 5 | 7 | 6 | 7 | 6 | 7 |
| 8.0 PPM | | 9 | 3 | 7 | 7 | 7 | 8 | 7 | 5 | 0 | 7 | 4 | 2 | 7 | 4 | 6 | 1 | 9 | 1 | 8 | 9 | 3 | 6 | 3 | 5 | 3 |
| ANIMAL ID | | 2 | 6 | 0 | 9 | 8 | 5 | 3 | 9 | 8 | 1 | 7 | 1 | 2 | 6 | 6 | 9 | 3 | 6 | 3 | 7 | 5 | 5 | 0 | 2 | 5 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 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 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | | | 2 | | | | | | | | | | | 2 | | | | | | | | | | | 12 2.4 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | 48 |
| Pars Distalis, Hyperplasia | | | | | | | | 2 | | | | | | | | | | | | | | | | | | 3 2.7 |
| Thyroid Gland | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| C-cell, Hyperplasia | | 1 | | 1 | | | | | | 1 | 1 | | 2 | 1 | 1 | 1 | 1 | | | | | | | | | 30 1.1 |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | 2 | | | | | | 2 2.0 |

GENERAL BODY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| Peritoneum | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|---|----|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Hyperplasia | | | 2 | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 2 3.0 | | |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 5 2.2 | | |
| Inflammation, Chronic Active | | | | | 3 | | | | | | 1 | | | | | | | | | | | | | | | 3 2.3 | | |
| Seminal Vesicle | + | + | A | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | M | + | + | 46 |

* .. 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 | 0 | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|--|
| | 4 | 5 | 6 | 6 | 4 | 5 | 4 | 5 | 7 | 5 | 5 | 6 | 5 | 5 | 6 | 5 | 6 | 4 | 5 | 7 | 6 | 7 | 6 | 7 | | |
| | 9 | 3 | 7 | 7 | 7 | 8 | 7 | 5 | 0 | 7 | 4 | 2 | 7 | 4 | 6 | 1 | 9 | 1 | 8 | 9 | 3 | 6 | 3 | 5 | 3 | |
| | 2 | 6 | 0 | 9 | 8 | 5 | 3 | 9 | 8 | 1 | 7 | 1 | 2 | 6 | 6 | 9 | 3 | 6 | 3 | 7 | 5 | 5 | 0 | 2 | 5 | |
| 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 | |
| 8.0 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 | 3 | 4 | 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 | 9 | 0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|---|--------------|-----------|
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Atrophy | | | | | | | | | | | 3 | | | | | | | | | | | 3 | 3 3.0 | | | |
| Artery, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | 3 | 4 2.3 | | | |
| Interstitial Cell, Hyperplasia | | | | | | | | | | | 1 | | | | | | | | | | | 1 | 4 1.3 | | | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|---------------|--------------|-----------|-----------|-----------|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Lymph Node | + | + | | | | | | | | | | | | | | | | | | | | | | 10 | | | | |
| Renal, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | | | |
| Lymph Node, Bronchial | + | + | + | M | + | + | + | M | + | + | + | M | + | + | + | + | + | + | + | + | + | M | + | M | M | M | 33 | |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | 48 |
| Lymph Node, Mediastinal | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | M | + | + | + | + | + | M | + | + | + | M | 46 | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Angiectasis | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | | | |
| Fibrosis | 2 | | | 2 | | | | | | | | | | | 1 | 2 | 3 | | | | | | | 10 2.2 | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | 2 | | | | | | | | | | | 2 | 2 2.0 | | | | | |
| Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | 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. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| | 4 | 5 | 6 | 6 | 4 | 5 | 4 | 5 | 7 | 5 | 5 | 6 | 5 | 5 | 6 | 6 | 4 | 5 | 7 | 6 | 7 | 6 | 7 | | |
| 9 | 3 | 7 | 7 | 7 | 8 | 7 | 5 | 0 | 7 | 4 | 2 | 7 | 4 | 6 | 1 | 9 | 1 | 8 | 9 | 3 | 6 | 3 | 5 | 3 | |
| 2 | 6 | 0 | 9 | 8 | 5 | 3 | 9 | 8 | 1 | 7 | 1 | 2 | 6 | 6 | 9 | 3 | 6 | 3 | 7 | 5 | 5 | 0 | 2 | 5 | |
| FISCHER 344 RATS MALE
ANIMAL ID | 0 | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 8.0 PPM | 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 | |

Necrosis 3 3 2.3

Thymus + + + M + + + + + M M + M + + M + + + M + M + M 41

INTEGUMENTARY SYSTEM

Mammary Gland Degeneration Galactocele M M M M + + M M + M M + M M M M + + M M + M + + + 29 1 3.0

Galactocele 2 2 2 6 2.2

Skin + 50 1 4.0

Inflammation, Granulomatous 2 2.0

Inflammation, Chronic Active 1 4.0

Subcutaneous Tissue, Tail, Thrombosis 3 6 3.0

MUSCULOSKELETAL SYSTEM

Bone + 50 6 2.5

Fibrous Osteodystrophy 3 1 2.0

Hyperostosis 2 1 2.0

NERVOUS SYSTEM

Brain + 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
Page 49
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|------------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 | 5 | 6 | 6 | 4 | 5 | 4 | 5 | 7 | 5 | 5 | 6 | 5 | 5 | 6 | 5 | 6 | 6 | 4 | 5 | 7 | 6 | 7 | 6 | 7 |
| | 9 | 3 | 7 | 7 | 7 | 8 | 7 | 5 | 0 | 7 | 4 | 2 | 7 | 4 | 6 | 1 | 9 | 1 | 8 | 9 | 3 | 6 | 3 | 5 | 3 |
| | 2 | 6 | 0 | 9 | 8 | 5 | 3 | 9 | 8 | 1 | 7 | 1 | 2 | 6 | 6 | 9 | 3 | 6 | 3 | 7 | 5 | 5 | 0 | 2 | 5 |
| 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 |
| 8.0 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 | 3 | 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 | | | | | | | | | | | | | | | | | | | | | | | | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|--------|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hemorrhage | | | | | | 1 | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | 2 4.0 | |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | 1 | | | | | 3 | | | | | | | | | | | 5 1.8 | |
| Artery, Mediastinum, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | 3 | | 2 3.5 | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Suppurative | | | | 1 | 1 | | | | | | | | | 4 | 2 | | | | | | 2 | | | | | 17 1.7 | |
| Thrombosis | | | | | | | | | | | | | | 4 | 4 | | 4 | 3 | 4 | | | | | | | 11 3.3 | |
| Glands, Hyperplasia | | | | 1 | | 1 | 1 | | | | | | 2 | 1 | 1 | | | | 1 | 1 | | | 1 | 1 | 1 | 22 1.0 | |
| Lateral Wall, Hyperplasia | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 50 2.4 | |
| Lateral Wall, Metaplasia, Squamous | | | 1 | | 1 | | | | | | 1 | | | 2 | | | | | | | | 1 | 1 | | | 8 1.1 | |
| Nasopharyngeal Duct, Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 3.0 | |
| Olfactory Epithelium, Atrophy | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 3 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 3 | 2 | 2 | 47 1.8 | |
| Olfactory Epithelium, Degeneration, Hyaline | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 50 2.6 | |
| Olfactory Epithelium, Fibrosis | | | 1 | 1 | 1 | | | | | | | | | 1 | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 26 1.0 | |
| Olfactory Epithelium, Hyperplasia | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 1 | 2 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 42 1.0 | |
| Olfactory Epithelium, Metaplasia | | | 2 | 2 | 1 | 2 | | | | | 2 | | | 1 | 2 | | | | 1 | 1 | 1 | 1 | 2 | 3 | 2 | 37 1.5 | |
| Respiratory Epithelium, Degeneration, Hyaline | 1 | | 1 | 1 | 2 | 1 | 2 | 3 | | | 2 | 2 | 1 | | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | | 1 | 45 1.6 | |
| Respiratory Epithelium, Hyperplasia | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 50 2.5 |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | 1 | | | | 1 | | | | | | | | | | | 1 | | 3 1.0 |

* .. 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 | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|------------------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|----------|---|
| | 0 | 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 | 5 | 6 | 6 | 4 | 5 | 4 | 5 | 7 | 5 | 5 | 6 | 5 | 6 | 6 | 4 | 5 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | |
| 9 | 3 | 7 | 7 | 7 | 8 | 7 | 5 | 0 | 7 | 4 | 2 | 7 | 4 | 6 | 1 | 9 | 1 | 8 | 9 | 3 | 6 | 3 | 5 | 3 | | |
| 2 | 6 | 0 | 9 | 8 | 5 | 3 | 9 | 8 | 1 | 7 | 1 | 2 | 6 | 6 | 9 | 3 | 6 | 3 | 7 | 5 | 5 | 0 | 2 | 5 | | |
| 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 | |
| 8.0 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 | |
| | 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 | 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 | |
| | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |

Trachea + 50

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|-----|
| Eye | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Cataract | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | + | 1 |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|----|-----|
| Kidney | | | | | | | | | | | | | | | | | | | | | | | | 50 | | | |
| Hydronephrosis | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | 2 | 4.0 | | |
| Nephropathy | 2 | 2 | 3 | 4 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 4 | 4 | 4 | 4 | 4 | 50 | 3.1 |
| Stromal Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | | |
| Renal Tubule, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 | | |
| Urinary Bladder | | | | | | | | | | | | | | | | | | | | | | | | 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
Page 51
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | 6 5 6 5 4 6 6 5 6 6 6 4 6 5 5 5 6 6 6 4 6 6 6 5 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS MALE
ANIMAL ID | 6 9 0 6 6 1 3 8 0 1 8 7 3 2 3 5 0 2 2 7 1 9 8 8 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 4 6 8 9 3 1 1 9 0 2 6 8 6 2 5 1 2 2 2 2 3 1 1 9 | | | | | | | | | | | | | | | | | | | | | | | | |
| 32.0 PPM | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1 1 1 2 2 2 2 2 5 | | | | | | | | | | | | | | | | | | | | | | | | |

males (cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Esophagus | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Cecum
Parasite Metazoan | + + + + + A + + + + + A A + + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Colon
Mineralization
Parasite Metazoan | + + + + + + + + + + + A A + + + + + + + + + + + + +
2 3 2 2
X X X | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Rectum
Mineralization
Parasite Metazoan | + + + + + + + + + + + A + + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Duodenum
Inflammation, Suppurative | + + + + + + + + + + + A + + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Ileum
Inflammation, Suppurative
Mineralization | + + + + + A + + + + + A A + + + + + + + + + + + + +
3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Jejunum | + + + + + A + + + + + A + + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | | | | | | | |
| Liver
Angiectasis
Basophilic Focus | +
X | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | 6 5 6 5 4 6 6 5 6 6 4 6 5 5 5 6 6 6 4 6 6 6 5 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS MALE
ANIMAL ID | 6 9 0 6 6 1 3 8 0 1 8 7 3 2 3 5 0 2 2 7 1 9 8 8 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 4 6 8 9 3 1 1 9 0 2 6 8 6 2 5 1 2 2 2 3 1 1 9 | | | | | | | | | | | | | | | | | | | | | | | | |
| 32.0 PPM | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 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 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 | | | | | | | | | | | | | | | | | | | | | | | | |
| | males (cont...) | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | 2 2 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Fatty | 1 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Eosinophilic Focus | X X X | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatodiaphragmatic Nodule | X X X | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | X | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | 2 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | 1 1 1 2 1 1 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Centrilobular, Necrosis | 1 1 1 3 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Mesentery | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Thrombosis | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Artery, Inflammation, Chronic Active | 3 4 3 3 4 2 3 3 3 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| Artery, Mineralization | 3 4 3 3 4 2 3 3 3 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, Hemorrhage | 1 3 2 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, Necrosis | 1 3 2 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| Oral Mucosa | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | + + + + + + + + + + + A + + + + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrophy | 1 1 1 2 2 1 2 2 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Artery, Inflammation | 4 4 4 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Artery, Mineralization | 4 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | 3 2 2 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

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

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

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Necrosis | | | | | | | | | | | | | | | | | | 2 | 3 | | | | | | 4 |
| Stomach, Glandular
Mineralization
Necrosis | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | 4 | 4 | 4 | 3 | | 2 | | | 2 | | 4 | | 3 | | 3 | 1 | 3 | 3 | | 2 | 4 | 4 | 4 | | |
| | | | | | | | | | | | 1 | | | 2 | 2 | | | 1 | | | | | | | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Blood Vessel
Aorta, Mineralization | + | + | + | + | | + | | + | | + | | + | | + | | + | + | | + | + | + | + | | | | | | | | |
| | 4 | 4 | 4 | 3 | | 2 | | 2 | | 4 | | 2 | | 3 | | 4 | 1 | | 3 | 4 | 4 | 4 | | | | | | | | |
| Heart
Cardiomyopathy
Inflammation, Suppurative
Artery, Mineralization
Atrium, Thrombosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | |
| | 2 | 3 | 3 | 3 | | 3 | 2 | 1 | 2 | 2 | 3 | 3 | 3 | | 1 | 3 | 2 | 3 | 2 | | 2 | 3 | 3 | 3 | 1 | | | | | |
| | | | | | | | | | | | | | | | | | | 3 | | | 2 | 3 | 2 | | | 2 | 3 | 4 | 4 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|---|--|--|--|--|
| Adrenal Cortex
Hyperplasia
Hypertrophy
Necrosis
Vacuolization Cytoplasmic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | | |
| | 2 | | | | | 2 | 1 | | | | 2 | | 2 | 2 | | | | | 2 | 2 | | 2 | | 2 | | | | | | | |
| | | | | | | | | | | | | | | | | | | 3 | | | 2 | | | 2 | | | 1 | | | | |
| Adrenal Medulla
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | | |
| | 3 | 4 | | | | | | | 2 | 2 | 2 | | | | 2 | 3 | | 2 | | 2 | 3 | | 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
 Page 54

TDMS No. 05201 - 05
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol
 CAS Number: 98-00-0

Date Report Requested: 01/12/2009
 Time Report Requested: 09:25:45
 First Dose M/F: 11/26/91 / 11/26/91
 Lab: BNW

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | 6 5 6 5 4 6 6 5 6 6 6 4 6 5 5 5 6 6 6 4 6 6 6 5 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS MALE
ANIMAL ID | 6 9 0 6 6 1 3 8 0 1 8 7 3 2 3 5 0 2 2 7 1 9 8 8 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 4 6 8 9 3 1 1 9 0 2 6 8 6 2 5 1 2 2 2 3 1 1 9 | | | | | | | | | | | | | | | | | | | | | | | | |
| 32.0 PPM | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 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 1 1 1 1 1 1 1 1 1 2 2 2 3 4 5 males (cont...) | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Islets, Pancreatic
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Parathyroid Gland
Hyperplasia
Necrosis | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | 2 4 4 4 4 4 2 2 4 4 4 4 3 4 3 4 4 4 4 4 4 3 4 4 4 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Pituitary Gland
Pars Distalis, Angiectasis
Pars Distalis, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | 3 2 2 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland
C-cell, Hyperplasia
Follicular Cell, Hyperplasia | + | + | + | + | + | A | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | 1 1 1 1 1 1 1 1 1 1 1 1 1 3 1 1 3 1 3 1 3 1 3 1 3 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Penis | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Preputial Gland
Inflammation, Chronic Active | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | 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. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) |
|------------------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|
| | 6 6 8 | 5 9 4 | 6 0 6 | 5 6 8 | 4 6 9 | 0 1 3 | 0 3 1 | 0 8 1 | 0 0 9 | 0 6 0 | 0 6 2 | 0 4 8 | 0 5 6 | 0 5 3 | 0 5 2 | 0 5 5 | 0 6 0 | 0 6 2 | 0 6 2 | 0 4 7 | 0 6 1 | 0 6 9 | 0 5 8 | 0 6 8 | 0 5 8 | |
| FISCHER 344 RATS MALE | 0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32.0 PPM | 6 6 0 0 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ANIMAL ID | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | | |

Prostate
Inflammation, Chronic Active

+
2 3

Seminal Vesicle
Mineralization

+ + + + + + + + + + + A + + + + + + + + + + + + +
3

Testes
Atrophy
Artery, Inflammation, Chronic Active
Interstitial Cell, Hyperplasia

+
2 1 3 1 3 2 2 2 3
2 1

HEMATOPOIETIC SYSTEM

Bone Marrow

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

Lymph Node

+ +

Ectasia

+ +

Iliac, Ectasia

4 2 4 2

Renal, Ectasia

2 1 2

Renal, Hemorrhage

2 1 2

Lymph Node, Bronchial

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

Lymph Node, Mandibular

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

Lymph Node, Mediastinal

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

* .. 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:
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 Furfuryl alcohol
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| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 5 | 6 | 5 | 4 | 6 | 6 | 5 | 6 | 6 | 4 | 6 | 5 | 5 | 5 | 6 | 6 | 6 | 4 | 6 | 6 | 6 | 5 | 6 | 6 | 5 | 6 |
| 6 | 9 | 0 | 6 | 6 | 1 | 3 | 8 | 0 | 1 | 8 | 7 | 3 | 2 | 3 | 5 | 0 | 2 | 2 | 7 | 1 | 9 | 8 | 8 | 0 | 8 | 0 | 0 |
| 8 | 4 | 6 | 8 | 9 | 3 | 1 | 1 | 9 | 0 | 2 | 6 | 8 | 6 | 2 | 5 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 1 | 9 | 0 | 0 | 0 |

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|
| Hemorrhage | 2 | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric | + M + M + + + + + + + + A + + + + + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accessory Spleen | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fibrosis | 3 | | | | | | 2 | | | | | | 1 | | | | | | 2 | | | | | | 3 | | | | | | 3 | | | | | | 2 | | | | | |
| Hematopoietic Cell Proliferation | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | 4 | | | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | 2 | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus | M + + M + + + + + + + + + M M M M + + + M + + + + M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|--|--|
| Mammary Gland Galactocele | + M + + M + + 3 M + + 2 M + + + M M + + + + + + 3 3 + M M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Skin | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fibrosis, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tail, Inflammation, Chronic Active | 3 | | | | | | 3 | | | | | | 3 | | | | | | 4 | | | | | | 1 | | | | | | 3 | | | | | | 4 | | | | | | 2 | | | | | | 2 | | | | | |

MUSCULOSKELETAL SYSTEM

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

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 2) Mild 4) Marked
 Page 57

TDMS No. 05201 - 05
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 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/F 344/N

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Furfuryl alcohol
 CAS Number: 98-00-0

Date Report Requested: 01/12/2009
 Time Report Requested: 09:25:45
 First Dose M/F: 11/26/91 / 11/26/91
 Lab: BNW

| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|---|
| DAY ON TEST | | 6 | 5 | 6 | 5 | 4 | 6 | 6 | 5 | 6 | 6 | 4 | 6 | 5 | 5 | 5 | 6 | 6 | 6 | 4 | 6 | 6 | 6 | 5 | 6 | | | | | |
| | | 6 | 9 | 0 | 6 | 6 | 1 | 3 | 8 | 0 | 1 | 8 | 7 | 3 | 2 | 3 | 5 | 0 | 2 | 2 | 7 | 1 | 9 | 8 | 8 | 0 | | | | |
| | | 8 | 4 | 6 | 8 | 9 | 3 | 1 | 1 | 9 | 0 | 2 | 6 | 8 | 6 | 2 | 5 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 1 | 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 | 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 |
| 32.0 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 | 6 | 6 | 6 | 6 |
| | | 0 | 0 | 0 | 0 | 0 | 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 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 4 | 5 | males (cont...) | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|--|---|--|---|---|---|--|---|---|---|---|--|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Fibrous Osteodystrophy | 3 | 4 | 3 | 4 | | 3 | | 3 | 4 | 3 | | 3 | 3 | 4 | 4 | | 3 | 4 | 4 | 3 | 2 | | | | | | | | | | | | | | |
| Fracture | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

NERVOUS SYSTEM

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

RESPIRATORY SYSTEM

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Metaplasia, Osseous | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | |
| Mineralization | 1 | 4 | 4 | 2 | | | | | | | | 2 | 1 | | | | | 1 | | | 3 | | | | | 3 | 4 | 4 | | | | | | | | |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar Epithelium, Hyperplasia | | | 2 | 1 | | | | | 2 | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | 1 | | |
| Artery, Mediastinum, Mineralization | 3 | 3 | 4 | 4 | | | | | 2 | 4 | | | | | | | | 3 | | | 4 | | | | | | | | 3 | 4 | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Inflammation, Suppurative | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 1 | 1 | 2 | | 1 | 2 | | | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | | | |
| Thrombosis | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Glands, Hyperplasia | 2 | 2 | 3 | 3 | 2 | 1 | 2 | 1 | 3 | 1 | 4 | 2 | 2 | 2 | 1 | 4 | 2 | 4 | 2 | 3 | 1 | 2 | 2 | 2 | 1 | | | | | | | | | | | |
| Lateral Wall, Hyperplasia | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | | | |
| Lateral Wall, Metaplasia, Squamous | | 2 | 1 | 1 | | | | | 1 | | | | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | | | | | | | | | | |
| Olfactory Epithelium, Atrophy | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | | | | | | |
| Olfactory Epithelium, Degeneration, Hyaline | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | | | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | 3 | 4 | 2 | 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 58

TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | 6 5 6 5 4 6 6 5 6 6 6 4 6 5 5 5 6 6 6 4 6 6 6 5 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS MALE
ANIMAL ID | 6 9 0 6 6 1 3 8 0 1 8 7 3 2 3 5 0 2 2 7 1 9 8 8 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 4 6 8 9 3 1 1 9 0 2 6 8 6 2 5 1 2 2 2 3 1 1 9 | | | | | | | | | | | | | | | | | | | | | | | | |
| 32.0 PPM | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 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...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Olfactory Epithelium, Fibrosis | 3 | 3 | 3 | 3 | 2 | | 2 | 1 | 2 | | 2 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Olfactory Epithelium, Hyperplasia | 2 | 1 | 3 | 2 | 2 | | 1 | 1 | 2 | | | 1 | 2 | 2 | 1 | 2 | 2 | 2 | | 2 | 1 | | 2 | 1 | 2 |
| Olfactory Epithelium, Metaplasia | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 |
| Respiratory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | 2 | 2 | | | | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | 3 | 4 | 4 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 4 | 4 | 3 |
| Respiratory Epithelium, Metaplasia, Squamous | | 2 | | 1 | | | 2 | 1 | | | | | | 1 | | | | 2 | 1 | 2 | | 2 | 1 | 1 | |
| Trachea Inflammation, Suppurative | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | 3 | | | | | | | | | | | | | | | | | | | | | | | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cataract | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | |
| Retina, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

URINARY SYSTEM

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

* .. 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. 05201 - 05
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Furfuryl alcohol
 CAS Number: 98-00-0

Date Report Requested: 01/12/2009
 Time Report Requested: 09:25:45
 First Dose M/F: 11/26/91 / 11/26/91
 Lab: BNW

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|---|--|--|--|--|--|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| | 6 | 5 | 6 | 5 | 4 | 6 | 6 | 5 | 6 | 6 | 6 | 4 | 6 | 5 | 5 | 5 | 6 | 6 | 6 | 4 | 6 | 6 | 6 | 5 | 6 | 0 | | | | | | | |
| | 6 | 9 | 0 | 6 | 6 | 1 | 3 | 8 | 0 | 1 | 8 | 7 | 3 | 2 | 3 | 5 | 0 | 2 | 2 | 7 | 1 | 9 | 8 | 8 | 0 | | | | | | | | |
| | 8 | 4 | 6 | 8 | 9 | 3 | 1 | 1 | 9 | 0 | 2 | 6 | 8 | 6 | 2 | 5 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 1 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| 32.0 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 | 0 | 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 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | males (cont...) | | | | | | |
| Cyst | | | | | | | | | | 2 | 3 | | | | | | | | | | | | 2 | | | | | | | | | | |
| Hyperplasia, Oncocytic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infarct | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | 3 | 4 | 4 | 3 | | | | | | | | 4 | 2 | | | | | 2 | 3 | | | | | | 2 | 3 | 4 | 4 | | | | | |
| Nephropathy | 4 | 4 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | |
| Renal Tubule, Hyperplasia | | | | | | | | | | 3 | 2 | | | | | | | | | | | | | | | | 3 | 3 | | | | | |
| Urinary Bladder Inflammation, Chronic Active | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | | |

* .. 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 60

TDMS No. 05201 - 05

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 01/12/2009

Test Type: CHRONIC

Furfuryl alcohol

Time Report Requested: 09:25:45

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 98-00-0

First Dose M/F: 11/26/91 / 11/26/91

Species/Strain: RATS/F 344/N

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|----|
| | 6 | 5 | 6 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 3 | 6 | 6 | 6 | 5 | 6 | 4 | 5 | 6 | 4 | 6 | 6 | |
| | 0 | 8 | 5 | 2 | 8 | 4 | 1 | 2 | 8 | 1 | 7 | 5 | 4 | 6 | 5 | 3 | 3 | 9 | 3 | 2 | 8 | 3 | 9 | 3 | 2 |
| | 4 | 0 | 1 | 1 | 5 | 9 | 0 | 2 | 3 | 5 | 4 | 0 | 7 | 4 | 1 | 8 | 7 | 9 | 7 | 1 | 0 | 7 | 7 | 8 | 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 |
| 32.0 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 | |
| Degeneration, Cystic | | | 3 | | | | | | | 3 | | | | | | | 3 | 1 | | | | | | | 9 |
| Degeneration, Fatty | 1 | | | | | | 1 | | | 1 | | | | | | | | | | 1 | | | 1 | | 7 |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Hepatodiaphragmatic Nodule | | | | | | | X | X | X | | | | | | | | | | | | | | | | 6 |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | X | | 2 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Bile Duct, Hyperplasia | | 2 | | 1 | | | | | 2 | | | | 1 | | | 2 | | | 1 | | 2 | | | | 13 |
| Centrilobular, Necrosis | | | | 2 | | | | | | | | | | | | | | | | | | 1 | | | 8 |
| Mesentery | | + | + | | | | + | | | + | + | + | | + | + | + | + | | | | + | + | | + | 26 |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Artery, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | 4 | | 3 |
| Artery, Mineralization | | | 2 | | | | 4 | | | 3 | 3 | 4 | | 4 | 4 | 2 | 2 | | | | 2 | 4 | | 3 | 22 |
| Fat, Hemorrhage | | | | | | | 4 | | | | | | | | | | | | | | | | | | 2 |
| Fat, Necrosis | | 2 | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pancreas | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Atrophy | | | 2 | | | | 3 | | | | | | 1 | | 2 | | | 1 | | 3 | | 2 | | 2 | 17 |
| Basophilic Focus | | | | | | | | | | X | | | | | | | | | | | | | | | 1 |
| Hyperplasia | | | | | | | | | | | 1 | | | | | | | | | | | | | | 2 |
| Artery, Inflammation | | | | | | | | | | | | 4 | | | | | | | | | | | | | 5 |
| Artery, Mineralization | | | | | | | | | | | | | | | 4 | | | | | | | | | | 3 |
| Salivary Glands | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Stomach, Forestomach | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Mineralization | | | | | | 3 | 2 | | | | | 4 | | 2 | 3 | | 2 | | | | | 2 | | | 12 |

* .. 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. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

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First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 6 | 5 | 6 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 3 | 6 | 6 | 6 | 5 | 6 | 4 | 5 | 6 | 4 | 6 | 6 | |
| | 0 | 8 | 5 | 2 | 8 | 4 | 1 | 2 | 8 | 1 | 7 | 5 | 4 | 6 | 5 | 3 | 3 | 9 | 3 | 2 | 8 | 3 | 9 | 3 | 2 |
| | 4 | 0 | 1 | 1 | 5 | 9 | 0 | 2 | 3 | 5 | 4 | 0 | 7 | 4 | 1 | 8 | 7 | 9 | 7 | 1 | 0 | 7 | 7 | 8 | 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 |
| 32.0 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 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|--|--|---------------|--------------|
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | 2 | 1 | | | | | | | | | | | | | | | | | | 6 2.3 | | | | |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | 3 | | | 4 | 4 | | | | | | | | | | | | | | | | | | 32 3.3 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | 3 | | | 4 | 4 | 4 | | | | | | | | | | | | | | | | | | 4 1.5 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|--------------|--|---|---|---|---------------|---|---------------|
| Blood Vessel | | | | | | | | | | | | | | | | | | | | | | | | + | + | | | + | + | + | | | + | + | + | + | | | + | + | + | + | + | + | + | 31 | | | | | | | | |
| Aorta, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | 2 | | | 4 | 3 | | | 4 | 3 | 4 | | | 4 | 4 | 4 | 4 | | | 3 | 4 | 4 | | | 4 | 3 | 31 3.4 | | |
| Heart | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | | | | |
| Cardiomyopathy | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | 3 | 1 | 2 | 3 | 3 | | | 2 | 4 | 4 | 3 | | | 3 | 3 | | | 4 | 3 | 2 | | | 3 | 3 | 2 | 3 | 4 | 42 2.6 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | | | | | | | |
| Artery, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | 2 | | | 3 | 2 | | | 4 | 3 | 3 | | | 4 | 4 | 3 | 3 | | | 3 | 4 | 4 | | | 3 | 3 | 29 3.1 | | |
| Atrium, Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 1.7 | | | | | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------|-----------|
| Adrenal Cortex | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 24 2.0 | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 2.0 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 2.0 | |
| Adrenal Medulla | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 19 2.4 | |

* .. 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

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| | 6 | 5 | 6 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 3 | 6 | 6 | 6 | 6 | 5 | 6 | 4 | 5 | 6 | 4 | 6 | 6 |
| | 0 | 8 | 5 | 2 | 8 | 4 | 1 | 2 | 8 | 1 | 7 | 5 | 4 | 6 | 5 | 3 | 3 | 9 | 3 | 2 | 8 | 3 | 9 | 3 | 2 |
| | 4 | 0 | 1 | 1 | 5 | 9 | 0 | 2 | 3 | 5 | 4 | 0 | 7 | 4 | 1 | 8 | 7 | 9 | 7 | 1 | 0 | 7 | 7 | 8 | 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 |
| 32.0 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 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----------|------------|------------|
| Islets, Pancreatic
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | 1 | 3.0 | |
| Parathyroid Gland
Hyperplasia
Necrosis | 4 | 2 | 3 | | | 4 | 4 | | 3 | 4 | 3 | 3 | | 4 | 4 | 4 | 4 | 4 | 4 | | 4 | 4 | | 4 | 4 | 49 | 39 | 3.6 |
| Pituitary Gland
Pars Distalis, Angiectasis
Pars Distalis, Hyperplasia | 2 | | | | | | | 2 | | 2 | | 3 | | 2 | | 2 | | | | | | | | 3 | | 50 | 1 | 3.0 |
| Thyroid Gland
C-cell, Hyperplasia
Follicular Cell, Hyperplasia | 1 | 1 | 1 | | | | | 1 | 1 | 1 | | | | | 1 | | | | | | | | | | 1 | 47 | 21 | 1.2 |
| | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----------|----------|------------|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Penis | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Preputial Gland
Inflammation, Chronic Active | 2 | 3 | | | | 2 | | | | | | | | | | | | | | | | | | | | 50 | 4 | 2.3 |

* .. 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

TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 5 | 6 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 3 | 6 | 6 | 6 | 5 | 6 | 4 | 5 | 6 | 4 | 6 | 6 | |
| | 0 | 8 | 5 | 2 | 8 | 4 | 1 | 2 | 8 | 1 | 7 | 5 | 4 | 6 | 5 | 3 | 3 | 9 | 3 | 2 | 8 | 3 | 9 | 3 | 2 |
| | 4 | 0 | 1 | 1 | 5 | 9 | 0 | 2 | 3 | 5 | 4 | 0 | 7 | 4 | 1 | 8 | 7 | 9 | 7 | 1 | 0 | 7 | 7 | 8 | 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 |
| 32.0 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 | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|----|---|---|----|---|--|---|--|--|--|---|--|--|--|--|---|--|--|--|----|-----|--|---|-----|---|-----|-----|
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | M | + | + | + | + | + | + | + | + | + | 45 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accessory Spleen | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fibrosis | 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 3 | 1 | | 1 | | | | 1 | | | | | | | | | 12 | 2.0 | | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2 | | | 2 | | | | | | | | | | | | | | | | | | | | 4 | 2.5 | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | 3 | 3.0 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 |
| Thymus | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | M | M | + | + | + | + | 38 | | | | | | | | | | | | | | | | | | | | | | | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|---|--|---|---|--|--|--|--|--|---|--|--|---|--|--|--|--|--|--|--|--|----|-----|---|-----|-----|
| Mammary Gland | M | M | + | M | M | + | + | M | M | M | M | + | + | M | + | + | M | M | M | + | M | + | M | M | + | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Galactocele | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2 | | | 3 | | | | | | | | | | | | | | | | | | | | | | | 7 | 2.7 | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fibrosis, Focal | | | | | | | | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.5 |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Tail, Inflammation, Chronic Active | 2 | | 3 | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 3 | | | | | | 2 | | | 3 | | | | | | | | | 18 | 2.8 | | | |

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
Page 66
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

TDMS No. 05201 - 05
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol
CAS Number: 98-00-0

Date Report Requested: 01/12/2009
Time Report Requested: 09:25:45
First Dose M/F: 11/26/91 / 11/26/91
Lab: BNW

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
|------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------|-----------------|--|
| 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 | | | | |
| | | 6 | 5 | 6 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 3 | 6 | 6 | 6 | 5 | 6 | 4 | 5 | 6 | 4 | 6 | 6 | | | |
| | | 0 | 8 | 5 | 2 | 8 | 4 | 1 | 2 | 8 | 1 | 7 | 5 | 4 | 6 | 5 | 3 | 3 | 9 | 3 | 2 | 8 | 3 | 9 | 3 | 2 | | |
| | | 4 | 0 | 1 | 1 | 5 | 9 | 0 | 2 | 3 | 5 | 4 | 0 | 7 | 4 | 1 | 8 | 7 | 9 | 7 | 1 | 0 | 7 | 7 | 8 | 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 | | | |
| 32.0 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 | | | |
| | | 2 | 2 | 2 | 2 | 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 | |
| Fibrous Osteodystrophy | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 34 | | |
| Fracture | | | | | | | | | | X | | | | | | | | | | | | | | | | 3.2 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |

NERVOUS SYSTEM

Brain + 50

RESPIRATORY SYSTEM

Larynx + 50

Lung + 50

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|----|-----|-----|
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1.0 |
| Metaplasia, Osseous | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Mineralization | | | 4 | 4 | | | 3 | 3 | 4 | | | 4 | 4 | 4 | 2 | | | | 3 | 4 | | | 2 | 2 | 24 | 3.0 | |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | 1 | 2 | 8 | 1.4 | | | |
| Artery, Mediastinum, Mineralization | 3 | 2 | | | 4 | 3 | | | 4 | 4 | 4 | | | 4 | 4 | 4 | 4 | 3 | 4 | 4 | | | 3 | 4 | 26 | 3.5 | |

Nose + 50

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Inflammation, Suppurative | 2 | 1 | 2 | | | 1 | 1 | 3 | 2 | 2 | 1 | 4 | 2 | | | 2 | 2 | 2 | 3 | 2 | 1 | 2 | 3 | 2 | 2 | 44 | 2.1 | |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | 1.0 | |
| Glands, Hyperplasia | 2 | 4 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 1 | 2 | | | 3 | 3 | 49 | 2.3 |
| Lateral Wall, Hyperplasia | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 3 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 50 | 3.5 | |
| Lateral Wall, Metaplasia, Squamous | | | 1 | 1 | 1 | | | 2 | | | 2 | 1 | 1 | 1 | | | 2 | 1 | | | 1 | 1 | 1 | 2 | 2 | 1 | 33 | 1.3 |
| Olfactory Epithelium, Atrophy | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 50 | 2.4 | |
| Olfactory Epithelium, Degeneration, Hyaline | 2 | 4 | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | | | 2 | 3 | 3 | 2 | 3 | 2 | 4 | 3 | 3 | 2 | 2 | 3 | 2 | 47 | 2.7 | |

* .. 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 67

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|-----------------|
| | 6 | 5 | 6 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 3 | 6 | 6 | 6 | 5 | 6 | 4 | 5 | 6 | 4 | 6 | 6 | | |
| | 0 | 8 | 5 | 2 | 8 | 4 | 1 | 2 | 8 | 1 | 7 | 5 | 4 | 6 | 5 | 3 | 3 | 9 | 3 | 2 | 8 | 3 | 9 | 3 | 2 | |
| | 4 | 0 | 1 | 1 | 5 | 9 | 0 | 2 | 3 | 5 | 4 | 0 | 7 | 4 | 1 | 8 | 7 | 9 | 7 | 1 | 0 | 7 | 7 | 8 | 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 | |
| 32.0 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 | |
| Olfactory Epithelium, Fibrosis | 2 | 2 | 2 | 2 | | 3 | 2 | 2 | 2 | 2 | 2 | | 2 | 2 | 1 | | 2 | | 2 | 1 | 1 | 1 | | 3 | 2 | 40 2.0 |
| Olfactory Epithelium, Hyperplasia | 1 | 1 | 2 | 2 | | 3 | 2 | 2 | 2 | 2 | 2 | | 2 | 2 | 1 | | 2 | 1 | 2 | 2 | | 1 | | 2 | 2 | 40 1.8 |
| Olfactory Epithelium, Metaplasia | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 2 | | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 49 2.2 |
| Respiratory Epithelium, Degeneration, Hyaline | | | | | | | | | | | | | 1 | | | | | | | | | | | | | 3 1.7 |
| Respiratory Epithelium, Hyperplasia | 4 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 4 | 50 3.5 |
| Respiratory Epithelium, Metaplasia, Squamous | 1 | 1 | 2 | 1 | | 2 | 2 | | 1 | | | 1 | | 1 | 1 | | | 1 | | 1 | 2 | 2 | 1 | | | 26 1.4 |
| Trachea Inflammation, Suppurative | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 1 3.0 |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cataract | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Retina, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary System | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 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

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| DAY ON TEST | 6 | 5 | 6 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 3 | 6 | 6 | 6 | 5 | 6 | 4 | 5 | 6 | 4 | 6 | 6 | | | |
| | 0 | 8 | 5 | 2 | 8 | 4 | 1 | 2 | 8 | 1 | 7 | 5 | 4 | 6 | 5 | 3 | 3 | 9 | 3 | 2 | 8 | 3 | 9 | 3 | 2 | | |
| | 4 | 0 | 1 | 1 | 5 | 9 | 0 | 2 | 3 | 5 | 4 | 0 | 7 | 4 | 1 | 8 | 7 | 9 | 7 | 1 | 0 | 7 | 7 | 8 | 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 | | |
| 32.0 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 | 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 | |
| ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 2.3 |
| Hyperplasia, Oncocytic | | | | | | | | | | | | | 4 | | | | | | | | | | | | | 1 | 4.0 |
| Infarct | | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Mineralization | 2 | | 2 | | | 4 | 3 | | | 4 | 4 | 4 | | 4 | 4 | 4 | 2 | | 3 | | 4 | 3 | | 3 | 3 | 28 | 3.3 |
| Nephropathy | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 1 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 4 | 4 | 3 | 4 | 4 | 50 | 3.7 |
| Renal Tubule, Hyperplasia | | | 2 | | | | | | | | | | | | | | | | | | 2 | | | | | 6 | 2.5 |
| ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Chronic Active | | 2 | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |

*** END OF MALE DATA ***

* .. 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 | | 0 | 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 | 6 | 5 | 6 | 7 | 4 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 4 | 4 | 7 | 7 | 7 | 7 | 7 | |
| | | 3 | 3 | 8 | 9 | 3 | 7 | 7 | 3 | 1 | 2 | 3 | 0 | 3 | 3 | 3 | 8 | 3 | 2 | 3 | 7 | 7 | 3 | 3 | 3 | 0 | |
| | | 5 | 1 | 1 | 3 | 5 | 0 | 3 | 5 | 6 | 1 | 5 | 7 | 5 | 5 | 5 | 1 | 5 | 7 | 5 | 8 | 7 | 6 | 6 | 6 | 7 | |
| 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 | 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 | 1 |
| | 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 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 2 | 3 | 4 | 5 |

females (cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parasite Metazoan | | | | | | | | | | | | X | | | | | X | | | | | | X | X | | |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parasite Metazoan | | | | | | | | | | | | | | | | | | | X | | | | | X | | |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parasite Metazoan | | | | | | | | X | | | | | | | | | | | | | | | | X | | |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parasite Metazoan | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | X | | X | | X | | | X | X | X | X | | X | X | X | X | X | X | X | X | | | | X | X | X |
| Clear Cell Focus | | X | | | | | | | | | | | | X | | | | | | | | | | | | |
| Cyst | | | | | 4 | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Fatty | 1 | | 1 | 3 | | 2 | | | | | | | | | | | | | | | | | | | 2 | 3 |
| Eosinophilic Focus | | | | | | | | | | | | | X | | | | | | | | | | | X | | |

* .. 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 70

TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 6 | 5 | 6 | 7 | 4 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 4 | 4 | 7 | 7 | 7 | 7 | 7 |
| | 3 | 3 | 8 | 9 | 3 | 7 | 7 | 3 | 1 | 2 | 3 | 0 | 3 | 3 | 3 | 8 | 3 | 2 | 3 | 7 | 7 | 3 | 3 | 3 | 0 |
| | 5 | 1 | 1 | 3 | 5 | 0 | 3 | 5 | 6 | 1 | 5 | 7 | 5 | 5 | 5 | 1 | 5 | 7 | 5 | 8 | 7 | 6 | 6 | 6 | 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 | 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 |
| | 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 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | | X | | | | | | | X | X | | | | | | | | | | | | | | | |
| Necrosis | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | 2 | 1 | | | | | | | | | | | | | | | | | | | | 2 |
| Centrilobular, Necrosis | | | 1 | | | | | | | | | 1 | | | | | | | | | | | | | 1 |
| Mesentery | | + | | | | | | | + | | | | | + | + | + | | | | | + | | | | |
| Fat, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, Necrosis | | 2 | | | | | | | 2 | | | | | 2 | 2 | 2 | | | | | | | | | 2 |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | + |
| Pancreas | | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | 1 | | 4 | 2 | | | | | 1 | | | | | | | | | | | 2 | | | 1 | 2 |
| Basophilic Focus | | | | | | X | | | | | | | X | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Salivary Glands | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | 3 | | | | | 1 | | | | | | | | | | | | | | 3 |
| Stomach, Glandular | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

females (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 71

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

females (cont...)

Tongue

Tooth
Pulp, Necrosis

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cardiomyopathy | 1 | 1 | | | 1 | | | 1 | 1 | 2 | 1 | | 2 | 2 | 2 | 1 | 1 | | 1 | | | 2 | | 2 | |
| Atrium, Thrombosis | | | | 1 | | | | | | | | 3 | | | | | | | | | | | | | 1 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | 1 | | | 2 | | | 2 | | 2 | 2 | 2 | | | 1 | 2 | 3 | | 2 | | | | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | 2 | | 2 | | | | | | | | | | | 3 | | | | | | 2 | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia | | 2 | 1 | 2 | | | | | | | | | | 3 | | | | | | | | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Parathyroid Gland | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + |
| 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
 Page 72

TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

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

Pituitary Gland
Pars Distalis, Hyperplasia

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | | | 2 | | | | | | | | | | 2 | | | | | 3 | | | | | 2 |

Thyroid Gland
C-cell, Hyperplasia

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| 2 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | | 2 | 1 | 1 | 2 |

GENERAL BODY SYSTEM
NONE

GENITAL SYSTEM

Clitoral Gland
Hyperplasia
Inflammation, Chronic Active

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M | + | + | + | + | + | + | + | + | M | + | M | + | + | + | + | + | M | + | + | + | + | + | + | + |
| | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 3 |

Ovary
Cyst

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | | | | | | | | | | 4 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | 3 | 3 |

Uterus

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

HEMATOPOIETIC SYSTEM

Bone Marrow
Hyperplasia, Histiocytic

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

* .. 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. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

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

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | | | + |
| Lymph Node, Bronchial | + | + | M | M | + | + | M | + | + | + | + | + | + | + | + | + | + | + | M | + | M | M | + | + | + | + |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node, Mediastinal | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | M | M |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Fibrosis | 3 | | | | 2 | | | | | | | | | | | | | | | 1 | | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | 2 | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | 3 | | | | |
| Inflammation, Granulomatous | | | | | | | | | | | | | 3 | | | | | | | | | | | | | |
| Metaplasia, Lipocyte | | | | | | | | | | | | 3 | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | 2 | | | | | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Galactocele | | | | 2 | | | | | 3 | | | | | | | | | | | | | | | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

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

Cyst Epithelial Inclusion

X

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperostosis | | | 1 | | 3 | | | | | | | 3 | | | | 2 | | | | | | 2 | | | |

NERVOUS SYSTEM

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

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Epiglottis, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Infiltration Cellular, Histiocyte Inflammation, Suppurative Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Perivascular, Infiltration Cellular, Mononuclear Cell | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nose | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

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Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

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

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|--|
| Thrombosis | 4 | | | | 1 | | | | 1 | | | | 4 | | | | | | | | | | | | |
| Olfactory Epithelium, Degeneration, Hyaline | 2 | | 2 | | 1 | | 1 | | 1 | | 2 | | 1 | | 2 | | 1 | | 1 | | 1 | | 1 | | |
| Respiratory Epithelium, Degeneration, Hyaline | 1 | | | | 1 | | | | 1 | | | | 1 | | | | | | | | | | | | |
| Trachea | + + + + + + + + + A + + + + + + + + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | | | | | | | |

SPECIAL SENSES SYSTEM

Eye
Cataract
Retina, Atrophy

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|
| Kidney | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infarct | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Histiocyte Nephropathy | 2 | | 2 | | 1 | | 2 | | 2 | | 2 | | 3 | | 2 | | 2 | | 2 | | 1 | | 2 | | 2 | | 3 | | 2 | | 3 | | 2 | |
| Urinary Bladder | + + + + + + + + + I + + + + + + + + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|-------|
| Esophagus | + | | | | | | | | | | | | | | | | | | | | | | | | 49 | |
| Intestine Large, Cecum
Parasite Metazoan | + | | | | | | | | | | | | | | | | | | | | | | | | 49 | 5 |
| Intestine Large, Colon
Parasite Metazoan | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | 2 |
| Intestine Large, Rectum
Parasite Metazoan | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | 4 |
| Intestine Small, Duodenum | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Intestine Small, Ileum
Parasite Metazoan | + | | | | | | | | | | | | | | | | | | | | | | | | 49 | 1 |
| Intestine Small, Jejunum | + | | | | | | | | | | | | | | | | | | | | | | | | 49 | |
| Liver | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 3 2.3 |
| Basophilic Focus | X X | | | | | | | | | | | | | | | | | | | | | | | | X X X | 30 |
| Clear Cell Focus | X | | | | | | | | | | | | | | | | | | | | | | | | X | 5 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Degeneration, Fatty | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2 |
| Eosinophilic Focus | X | | | | | | | | | | | | | | | | | | | | | | | | | 3 1 |

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 + .. Tissue examined microscopically
 x .. Lesion present
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 Lab: BNW

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|-----------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|----------|
| | 0736 | 0776 | 0666 | 0676 | 0666 | 0664 | 0695 | 0659 | 0686 | 0686 | 0677 | 0665 | 0677 | 0677 | 0677 | 0676 | 0677 | 0677 | 0677 | 0677 | 0677 | 0677 | 0677 | |
| 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 | |
| CONTROL | 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 | |
| | 2 | 2 | 2 | 2 | 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 | |
| Hepatodiaphragmatic Nodule | | | | | X | | | | X | | | | | | | | | X | | | | | 4 | |
| Infiltration Cellular, Histiocyte | | | | | | | | 2 | | | | | | | | | | | | | | | 1 2.0 | |
| Mixed Cell Focus | | X | | | X | | | | | | | X | X | X | | X | | | | | | | 9 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Thrombosis | | | | | | | | | | | | | | | 2 | | | | | | | | 1 2.0 | |
| Bile Duct, Hyperplasia | | | | | | | | | | | | | | | 2 | | | | 1 | 1 | | | 6 1.5 | |
| Centrilobular, Necrosis | | | | | | | 1 | | | | | | | | 1 | | | | 1 | | | | 6 1.0 | |
| Mesentery | | | | | + | + | + | | | | | | | | | + | + | | | + | + | + | + | 15 |
| Fat, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | 2 | | 1 2.0 |
| Fat, Necrosis | | | | | | 3 | 2 | | | | | | | | 2 | 2 | | | 2 | 3 | | 2 | 13 2.2 | |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Pancreas | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Atrophy | | | | | | | | | | | 1 | | | | | | 1 | | | | | 3 | 10 1.8 | |
| Basophilic Focus | | | | | | | X | | | | | | X | | | | | | | | | | 4 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Salivary Glands | | | | | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Stomach, Forestomach | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Necrosis | | | | | | | | | | | 3 | | 3 | | 3 | | | | | | | | 5 3.0 | |
| Stomach, Glandular | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Mineralization | | | | | | | | | | | | | | | | 1 | | | | | | | 2 1.0 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |

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

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|
| Tongue | + | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Tooth | + | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pulp, Necrosis | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|
| Heart | + | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Cardiomyopathy | 1 | | | | | | | | | | | | | | | | | | | | | | | | 29 1.3 |
| Atrium, Thrombosis | 1 2 | | | | | | | | | | | | | | | | | | | | | | | | 3 1.7 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|
| Adrenal Cortex | + | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Angiectasis | 2 | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Hyperplasia | 1 2 2 1 1 2 2 | | | | | | | | | | | | | | | | | | | | | | | | 19 1.8 |
| Hypertrophy | 1 | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Necrosis | 3 | | | | | | | | | | | | | | | | | | | | | | | | 4 2.5 |
| Vacuolization Cytoplasmic | 2 | | | | | | | | | | | | | | | | | | | | | | | | 5 2.2 |
| Adrenal Medulla | + | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Hyperplasia | 2 1 1 1 3 2 2 | | | | | | | | | | | | | | | | | | | | | | | | 12 1.8 |
| Islets, Pancreatic | + | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Parathyroid Gland | + | | | | | | | | | | | | | | | | | | | | | | | | 46 |
| Hyperplasia | M + M + + | | | | | | | | | | | | | | | | | | | | | | | | 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
Page 79

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Pars Distalis, Hyperplasia | | | | 1 | 3 | | | | | | | | | | | | | | 1 | | | 4 | | | | | 8 2.3 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------|
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| C-cell, Hyperplasia | 2 | | | | 2 | 1 | | 1 | | 1 | 1 | 1 | 2 | | 2 | 1 | 2 | 2 | | 1 | 3 | | 1 | 1 | 1 | | 40 1.5 |

GENERAL BODY SYSTEM
NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | M | + | + | + | + | + | + | M | 1 2.0 |
| Inflammation, Chronic Active | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | 2 2.5 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 3.3 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Hyperplasia, Histiocytic | | | | | | | | | | | | | | | | | | | | | | | | 4 | | 4 | 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

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|--|
| | 7 7 6 6 7 6 6 4 0 7 7 6 5 7 7 7 7 6 7 7 7 7 7
3 3 0 6 3 5 0 5 9 3 0 7 9 3 3 3 0 0 3 3 3 3 3 3
6 6 9 1 6 2 9 6 8 6 7 3 9 6 6 6 7 4 6 6 6 6 6 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | |
| | 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 | |
| Lymph Node | + | | | | | | | | | | | | | | | | | | | | | | | 4 | |
| Lymph Node, Bronchial | + M + + + + M + + + + + M + M + M + M + + + + + M + | | | | | | | | | | | | | | | | | | | | | | | 37 | |
| Lymph Node, Mandibular | + + + M + + + + + M + + M + + + + + + + + + + M + | | | | | | | | | | | | | | | | | | | | | | | 46 | |
| Lymph Node, Mediastinal | + + + M + + + M + + + + + + + + + M + + + M + + + + | | | | | | | | | | | | | | | | | | | | | | | 43 | |
| Lymph Node, Mesenteric | + | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Spleen | + | | | | | | | | | | | | | | | | | | | | | | | 49 | |
| Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | 5 2.2 | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | 2 2.5 | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Metaplasia, Lipocyte | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Thymus | + + + + + + + + + + + + + + M + + + + + + + + + + M + | | | | | | | | | | | | | | | | | | | | | | | 47 | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|
| Mammary Gland | + | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Galactocele | | | | | | | | | | | | | | | | | | | | | | | | 3 2.7 |
| Skin | + | | | | | | | | | | | | | | | | | | | | | | | 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
 Page 81

TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

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

Cyst Epithelial Inclusion 1

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperostosis | | | | | | | | | | | | | | | | | | 3 | 4 | | | | 3 | | | 8 2.6 |

NERVOUS SYSTEM

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

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Epiglottis, Metaplasia, Squamous | | | 3 | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Infiltration Cellular, Histiocyte | | | | | | | 3 | | | | | | | | | | | | | | | | | | | 2 2.5 |
| Inflammation, Suppurative | | | 2 | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Alveolar Epithelium, Hyperplasia | 1 | 2 | | 2 | | | | | | | | | 1 | 1 | 3 | | | | | | | | | | | 9 1.4 |
| Perivascular, Infiltration Cellular, Mononuclear Cell | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Inflammation, Suppurative | | 1 | | | | | 2 | | | | | | 2 | | | | 4 | | | | | | | | | 4 2.3 |

* .. 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

TDMS No. 05201 - 05

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 01/12/2009

Test Type: CHRONIC

Furfuryl alcohol

Time Report Requested: 09:25:45

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 98-00-0

First Dose M/F: 11/26/91 / 11/26/91

Species/Strain: RATS/F 344/N

Lab: BNW

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 7 | 7 | 5 | 7 | 6 | 4 | 6 | 6 | 7 | 4 | 5 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 2 | 3 | 3 | 7 | 3 | 7 | 6 | 7 | 5 | 3 | 9 | 8 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 7 | 5 | 5 | 1 | 5 | 9 | 9 | 7 | 1 | 5 | 7 | 1 | 5 | 5 | 2 | 6 | 8 | 6 | 7 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 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 | 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 |
| | | 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 | 3 | 3 |
| | | 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 | 2 | 2 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 5 |
| | 2.0 PPM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

females (cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum
Parasite Metazoan | + | + | + | A | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon
Parasite Metazoan | + | + | + | A | + | + | + | A | + | + | + | + | + | + | + | + | + | X | + | X | + | + | + | + | + | + | + |
| Intestine Large, Rectum
Parasite Metazoan | + | + | + | A | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | A | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | A | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | X | | X | | X | X | | | X | X | X | X | X | | X | | X | | | X | X | X | | X | | X | X |
| Clear Cell Focus | | | | | | | | | X | | X | | | | | | | X | | | | | X | | | | |
| Degeneration, Fatty | | | | | | 2 | | | | | | | | | 2 | | 3 | | | 2 | | | | | | | |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | |
| Hepatodiaphragmatic Nodule | | | | X | | | | | | | | X | X | | X | | | | | | | | | X | X | | |

* .. 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

TDMS No. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | | | females
(cont...) | |
|--|---|--|--|--|--|--|---|--|--|--|--|---|---|--|---|--|--|--|---|--|--|--|--|--|--|----------------------|--|
| | 7 7 7 5 7 6 4 6 6 7 4 5 7 7 7 7 7 6 6 7 7 7 7 7 7 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS FEMALE
2.0 PPM ANIMAL ID | 2 3 3 7 3 7 6 7 5 3 9 8 3 3 3 3 0 3 3 9 3 3 3 3 3 | | | | | | | | | | | | | | | | | | | | | | | | | females
(cont...) | |
| | 7 5 5 1 5 9 9 7 1 5 7 1 5 5 2 6 8 6 7 3 6 6 6 6 6 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | X | | | | | | X | | | | | X | X | | X | | | | X | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Regeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Centrilobular, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pharyngeal, Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 5 | 7 | 6 | 4 | 6 | 6 | 7 | 4 | 5 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 2 | 3 | 3 | 7 | 3 | 7 | 6 | 7 | 5 | 3 | 9 | 8 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | 7 | 5 | 5 | 1 | 5 | 9 | 9 | 7 | 1 | 5 | 7 | 1 | 5 | 5 | 2 | 6 | 8 | 6 | 7 | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| 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 | |
| 2.0 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 | |
| | 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 | 3 | 3 | 3 | 3 | |
| | 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 | 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...)

CARDIOVASCULAR SYSTEM

Blood Vessel
Aorta, Mineralization

+
2

Heart
Cardiomyopathy
Artery, Mineralization
Atrium, Thrombosis

+
1 1 2 2 2 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2
3

ENDOCRINE SYSTEM

Adrenal Cortex
Degeneration, Cystic
Hyperplasia
Hypertrophy
Necrosis
Vacuolization Cytoplasmic

+
Hyperplasia 1 1 2 2 2
Hypertrophy 2 3
Necrosis 3
Vacuolization Cytoplasmic 2 2

Adrenal Medulla
Hyperplasia

+
Hyperplasia 1 1 2

Islets, Pancreatic

+ + + A + + + M +

Parathyroid Gland
Hyperplasia

+ + + 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 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 |
| 2.0 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 | |
| ANIMAL ID | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 4 | 5 | |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow
Hyperplasia, Histiocytic | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node
Renal, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | + |
| Lymph Node, Bronchial | M | M | + | + | M | M | + | + | + | M | + | M | M | + | + | M | + | + | M | M | + | + | M | + | + |
| Lymph Node, Mandibular | M | + | + | + | + | + | + | + | + | M | M | M | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node, Mediastinal | M | + | + | M | M | M | + | + | + | + | + | + | M | + | + | M | + | + | + | + | + | + | + | + | M |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen
Fibrosis | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hematopoietic Cell Proliferation | | | | | | | | | | | 4 | | 4 | | | | | | | | | 3 | | | |
| Necrosis | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | M | + | + | M | + | + | + | + | + |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland
Galactocele | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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 | 0 | 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 | 5 | 7 | 6 | 4 | 6 | 6 | 7 | 4 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 2 | 3 | 3 | 7 | 3 | 7 | 6 | 7 | 5 | 3 | 9 | 8 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | |
| | 7 | 5 | 5 | 1 | 5 | 9 | 9 | 7 | 1 | 5 | 7 | 1 | 5 | 5 | 2 | 6 | 8 | 6 | 7 | 3 | 6 | 6 | 6 | 6 | 6 | |
| 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 | |
| 2.0 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 | 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 | 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 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic Active | | | | | | 2 | | | | | | | | | | | | | | | 3 | | | | |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fibrous Osteodystrophy | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| Hyperostosis | | | | | 3 | | | | | | | 1 | 1 | 1 | | | 4 | | 4 | | | | | 3 | |

NERVOUS SYSTEM

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

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mineralization | | | | | 3 | | | | | | | | | | | | | | | | | | | | |
| Alveolar Epithelium, Hyperplasia | | | 2 | 1 | | 1 | 1 | 1 | | | | 3 | 1 | 2 | | | | | | | 1 | | | 1 | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thrombosis | | | | | | | | | 4 | | | | | | | | | | | | | | | | |
| Lateral Wall, Hyperplasia | 1 | 1 | | 1 | 1 | 2 | | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | | 2 | | 1 | 1 | 1 | 1 | 1 | 1 | |
| Lateral Wall, Metaplasia, 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
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BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
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| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 7 | 7 | 5 | 7 | 6 | 4 | 6 | 6 | 7 | 4 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 7 |
| | 2 | 3 | 3 | 7 | 3 | 7 | 6 | 7 | 5 | 3 | 9 | 8 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 9 | 3 | 3 | 3 | 3 |
| | 7 | 5 | 5 | 1 | 5 | 9 | 9 | 7 | 1 | 5 | 7 | 1 | 5 | 5 | 2 | 6 | 8 | 6 | 7 | 3 | 6 | 6 | 6 | 6 |

FISCHER 344 RATS FEMALE

ANIMAL ID

2.0 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 |
| 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 | 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, Atrophy | | | | 1 | | | 2 | | | | | | | | | | | 1 | | | | | | | |
| Olfactory Epithelium, Degeneration, Hyaline | 2 | 1 | 2 | 1 | 1 | 3 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 2 |
| Olfactory Epithelium, Metaplasia | | | | 1 | | | | | | | | | | | | | | | 1 | | | | | | |
| Respiratory Epithelium, Degeneration, Hyaline | 1 | | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | | 2 | 1 | 1 | 1 | 1 | |
| Respiratory Epithelium, Hyperplasia | 2 | 1 | | | | | 2 | | 1 | 1 | | | | | | | | | 1 | | 1 | 2 | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

SPECIAL SENSES SYSTEM

Zymbal's Gland

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hydronephrosis | | | | | | | | | | | | | | | | | | | | | | | | |
| Infarct | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| Nephropathy | 2 | 2 | 1 | | 3 | 4 | 1 | | 1 | 3 | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 3 |
| Urinary Bladder | + | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. 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. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 5 | 6 | 4 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 7 | |
| | 3 | 0 | 3 | 3 | 3 | 9 | 3 | 1 | 4 | 7 | 2 | 3 | 3 | 3 | 0 | 2 | 3 | 3 | 3 | 5 | 3 | 3 | 2 | 0 | 3 |
| | 6 | 3 | 6 | 6 | 6 | 0 | 6 | 6 | 7 | 6 | 8 | 6 | 6 | 6 | 6 | 8 | 6 | 6 | 6 | 1 | 6 | 5 | 1 | 7 | 6 |
| 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 | |
| 2.0 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 | 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 | 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 |
| Mixed Cell Focus | | X | | X | X | | | | | | | | | X | | X | | X | | X | | | | | 13 |
| Necrosis | | | | | | | | | | | | | | | 3 | | | | | | | | | | 1 3.0 |
| Regeneration | | | | | | | | | | 3 | | | | | | | | | | | | | | | 1 3.0 |
| Vacuolization Cytoplasmic, Focal | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Bile Duct, Hyperplasia | | | | | | | | | | 3 | | 1 | | | | | | 1 | 2 | | | 2 | 3 | 1 | 7 1.9 |
| Centrilobular, Necrosis | 1 | | | | | 1 | | | | 2 | | | | 1 | | | | | | | | | 1 | | 6 1.2 |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | 8 |
| Fat, Necrosis | | | | | | + | | | | + | + | | | | + | + | + | | | | | | | | 7 1.9 |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pharyngeal, Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | 11 1.8 |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | 6 2.3 |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.5 |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | 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. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|--|
| | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 5 | 6 | 4 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 7 | | |
| | 3 | 0 | 3 | 3 | 3 | 9 | 3 | 1 | 4 | 7 | 2 | 3 | 3 | 3 | 0 | 2 | 3 | 3 | 3 | 5 | 3 | 3 | 2 | 0 | 3 | |
| | 6 | 3 | 6 | 6 | 6 | 0 | 6 | 6 | 7 | 6 | 8 | 6 | 6 | 6 | 6 | 8 | 6 | 6 | 6 | 1 | 6 | 5 | 1 | 7 | 6 | |
| 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 | |
| 2.0 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 | 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 | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|--------|
| Blood Vessel | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Aorta, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cardiomyopathy | | | 1 | | | 2 | 1 | | | | | | 1 | 2 | | 1 | | | 1 | | 1 | 1 | | | 2 | | 24 1.3 |
| Artery, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Atrium, Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2 3 2.7 | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|--------|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Hyperplasia | 2 | 1 | | | 2 | | 2 | 2 | 2 | | 2 | 2 | 2 | | 2 | 1 | 2 | 2 | 1 | 2 | 3 | | | | | | 22 1.8 |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 4 2.3 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 3 2.0 | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 3 7 1.7 | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Parathyroid Gland | + | + | + | + | M | + | + | + | + | + | + | + | + | + | M | M | + | + | + | M | + | + | + | + | + | 43 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 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

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| | 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 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 5 | 6 | 4 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 7 | 0 | 48 |
| 3 | 0 | 3 | 3 | 3 | 9 | 3 | 1 | 4 | 7 | 2 | 3 | 3 | 3 | 0 | 2 | 3 | 3 | 3 | 5 | 3 | 3 | 2 | 0 | 3 | 4.0 |
| 6 | 3 | 6 | 6 | 6 | 0 | 6 | 6 | 7 | 6 | 8 | 6 | 6 | 6 | 6 | 8 | 6 | 6 | 6 | 1 | 6 | 5 | 1 | 7 | 6 | 1.0 |

FISCHER 344 RATS FEMALE

2.0 PPM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | 48 |
| Hyperplasia, Histiocytic | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Lymph Node | | | | | | | | | | | | | | | | + | | | | | | | + | + | 5 |
| Renal, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Lymph Node, Bronchial | + | + | M | M | M | M | + | + | + | + | M | + | + | + | + | + | M | M | M | + | M | + | + | + | 30 |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Lymph Node, Mediastinal | + | M | + | M | + | + | + | + | + | + | M | M | + | + | + | + | M | + | + | + | + | M | + | + | 37 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | 3 2.7 |
| Hematopoietic Cell Proliferation | | | | | | | | 4 | | | | | | | | | | | | | | | | | 4 3.8 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Thymus | + | + | M | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | M | + | 44 |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | 49 |
| Galactocele | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | 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 | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| | 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 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 5 | 6 | 4 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 7 | 50 |
| 3 | 0 | 3 | 3 | 3 | 9 | 3 | 1 | 4 | 7 | 2 | 3 | 3 | 3 | 0 | 2 | 3 | 3 | 3 | 5 | 3 | 3 | 2 | 0 | 3 | 2.5 |
| 6 | 3 | 6 | 6 | 6 | 0 | 6 | 6 | 7 | 6 | 8 | 6 | 6 | 6 | 6 | 8 | 6 | 6 | 6 | 1 | 6 | 5 | 1 | 7 | 6 | 2.4 |

FISCHER 344 RATS FEMALE

2.0 PPM

Skin
Inflammation, Chronic Active

MUSCULOSKELETAL SYSTEM

Bone
Fibrous Osteodystrophy
Hyperostosis

NERVOUS SYSTEM

Brain

RESPIRATORY SYSTEM

Larynx

Lung
Mineralization
Alveolar Epithelium, Hyperplasia

Nose
Inflammation, Suppurative
Thrombosis
Lateral Wall, Hyperplasia
Lateral Wall, 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

Page 96

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 05201 - 05
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol
 CAS Number: 98-00-0

Date Report Requested: 01/12/2009
 Time Report Requested: 09:25:45
 First Dose M/F: 11/26/91 / 11/26/91
 Lab: BNW

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

FISCHER 344 RATS FEMALE
 ANIMAL ID
2.0 PPM

*** TOTALS**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|------------|------------|------------|
| Olfactory Epithelium, Atrophy | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | 6 | 1.3 | | |
| Olfactory Epithelium, Degeneration, Hyaline | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 50 | 1.6 | | |
| Olfactory Epithelium, Metaplasia | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | 5 | 1.2 | | |
| Respiratory Epithelium, Degeneration, Hyaline | 1 | 1 | | 1 | 2 | 1 | 2 | 1 | 3 | 1 | 1 | | | | | 1 | 1 | 2 | 2 | | 1 | | 1 | 1 | 1 | 39 | 1.2 |
| Respiratory Epithelium, Hyperplasia | 1 | | | 1 | | | | 2 | 1 | 2 | | 2 | 2 | 2 | | | | | | 1 | 1 | | | | 18 | 1.4 | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------|
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------|

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|-----------|------------|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Hydronephrosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Infarct | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Nephropathy | 1 | 1 | 2 | 2 | | 2 | 1 | 2 | 1 | 3 | | 2 | 2 | 2 | | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 45 | 1.9 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |

* .. 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 | 0 | 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 | 6 | 7 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 5 | 5 | 6 | 5 | 7 |
| | 3 | 3 | 3 | 3 | 3 | 0 | 6 | 3 | 2 | 2 | 3 | 3 | 2 | 5 | 0 | 3 | 1 | 1 | 5 | 3 | 4 | 4 | 7 | 2 | 3 |
| | 5 | 9 | 5 | 5 | 5 | 9 | 3 | 5 | 7 | 3 | 5 | 5 | 8 | 2 | 0 | 5 | 5 | 8 | 8 | 6 | 7 | 7 | 0 | 2 | 6 |
| 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 |
| 8.0 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 | 5 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

females (cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | M | M | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + |
| Parasite Metazoan | | | | X | | | | | | | X | X | | | | | | | X | | | | | X | |
| Intestine Large, Colon | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parasite Metazoan | | | | X | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Rectum | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parasite Metazoan | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Duodenum | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + |
| Intestine Small, Ileum | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | X | X | X | X | X | | X | X | | X | X | | X | X | | X | X | | X | | X | | X | X | |
| Clear Cell Focus | | | X | | X | | | | | | | | | | | X | | | | | | | | | |
| Degeneration, Cystic | | | | | | 2 | | | | | | | | | | | | | | | | | | | |
| Degeneration, Fatty | | | | | | | | | | 1 | 3 | | | 3 | | 2 | | | | 2 | 3 | | | | |
| Eosinophilic Focus | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Hepatodiaphragmatic Nodule | | | | X | | | | | | | | X | | | | | | | X | | | | X | | |

* .. 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. 05201 - 05
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol
 CAS Number: 98-00-0

Date Report Requested: 01/12/2009
 Time Report Requested: 09:25:45
 First Dose M/F: 11/26/91 / 11/26/91
 Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 6 | 7 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 5 | 5 | 6 | 5 | 7 | 7 |
| | 3 | 3 | 3 | 3 | 3 | 0 | 6 | 3 | 2 | 2 | 3 | 3 | 2 | 5 | 0 | 3 | 1 | 1 | 5 | 3 | 4 | 4 | 7 | 2 | 3 | 3 |
| | 5 | 9 | 5 | 5 | 5 | 9 | 3 | 5 | 7 | 3 | 5 | 5 | 8 | 2 | 0 | 5 | 5 | 8 | 8 | 6 | 7 | 7 | 0 | 2 | 6 | 6 |
| 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 | 0 |
| 8.0 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 |
| 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 | 5 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Granulomatous | | | | | | | 2 | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Centrilobular, Necrosis | | | | | | | 1 | | | 1 | | | | 2 | 2 | | | | | 1 | 2 | | 2 | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pharyngeal, Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | | |

females (cont...)

* .. 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 | | 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 | 6 | 7 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 7 | 5 | 6 | 7 | 5 | 5 | 6 | 5 | 7 | |
| | | 3 | 3 | 3 | 3 | 3 | 0 | 6 | 3 | 2 | 2 | 3 | 3 | 2 | 5 | 0 | 3 | 1 | 1 | 5 | 3 | 4 | 4 | 7 | 2 | 3 |
| | | 5 | 9 | 5 | 5 | 5 | 9 | 3 | 5 | 7 | 3 | 5 | 5 | 8 | 2 | 0 | 5 | 5 | 8 | 8 | 6 | 7 | 7 | 0 | 2 | 6 |
| 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 |
| 8.0 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...)

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cardiomyopathy | 2 | | 1 | | 1 | | | 1 | 1 | | 2 | | | | | | | | 1 | | | 1 | | 1 | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | 2 | 1 | 1 | 2 | | 1 | | | 2 | | 2 | | | | 2 | | | 2 | 2 | 2 | | | | | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | 2 | | 3 | 2 | |
| Vacuolization Cytoplasmic | | | | 2 | | | | | | 2 | | | | | | | | | | | | | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | |
| Hyperplasia | | | | | | 2 | | | | | | | | 2 | | | | | | | 1 | | | | |
| Islets, Pancreatic | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia | 2 | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Parathyroid Gland | + | + | + | + | + | + | M | + | + | M | + | M | + | + | + | + | + | + | + | + | + | + | + | M | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pars Distalis, Angiectasis | | | | 3 | | | | | | | | | | | | | | | | | | | | | |
| Pars Distalis, Hyperplasia | | | | 3 | | | | | | | 4 | 2 | | 2 | | | | 2 | | | 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
 Page 100

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|--------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------------|
| | | 7 | 6 | 7 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 7 | 5 | 6 | 7 | 5 | 5 | 6 | 5 | 7 | |
| | | 3 | 3 | 3 | 3 | 3 | 0 | 6 | 3 | 2 | 2 | 3 | 3 | 2 | 5 | 0 | 3 | 1 | 1 | 5 | 3 | 4 | 4 | 7 | 2 | 3 |
| | | 5 | 9 | 5 | 5 | 5 | 9 | 3 | 5 | 7 | 3 | 5 | 5 | 8 | 2 | 0 | 5 | 5 | 8 | 8 | 6 | 7 | 7 | 0 | 2 | 6 |
| 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 |
| 8.0 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 | 5 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 4 | 5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | females (cont...) |

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

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cyst | | | | | | 4 | | | | | | | | | | | 2 | | 2 | | | | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Vagina | | | | | | | | | | | | | | | | | | | | | | | | | | + | + |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | | |
| Hyperplasia, Histiocytic | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node | | | | | | | + | | | | | | | | | | | | | | | | | | | + | |
| Renal, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | 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 | 0 | 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 | 6 | 7 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 5 | 5 | 6 | 5 | 7 |
| | 3 | 3 | 3 | 3 | 3 | 0 | 6 | 3 | 2 | 2 | 3 | 3 | 2 | 5 | 0 | 3 | 1 | 1 | 5 | 3 | 4 | 4 | 7 | 2 | 3 |
| | 5 | 9 | 5 | 5 | 5 | 9 | 3 | 5 | 7 | 3 | 5 | 5 | 8 | 2 | 0 | 5 | 5 | 8 | 8 | 6 | 7 | 7 | 0 | 2 | 6 |
| 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 |
| 8.0 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 | 5 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Renal, Pigmentation | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Bronchial | + | + | + | + | + | + | + | M | + | + | + | + | + | M | M | + | + | + | + | + | + | + | + | M |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + |
| Lymph Node, Mediastinal Hemorrhage | + | + | + | + | + | + | M | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node, Mesenteric Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Accessory Spleen | | | | | | | | | | X | | | | | | | X | | | | | | | |
| Fibrosis | | | | | | 2 | | | | | | | | | | | | | 1 | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | M | + | + | + | + | + |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland Galactocele | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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 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 | 0 | 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 | 6 | 7 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 5 | 5 | 6 | 5 | 7 |
| | 3 | 3 | 3 | 3 | 3 | 0 | 6 | 3 | 2 | 2 | 3 | 3 | 2 | 5 | 0 | 3 | 1 | 1 | 5 | 3 | 4 | 4 | 7 | 2 | 3 |
| | 5 | 9 | 5 | 5 | 5 | 9 | 3 | 5 | 7 | 3 | 5 | 5 | 8 | 2 | 0 | 5 | 5 | 8 | 8 | 6 | 7 | 7 | 0 | 2 | 6 |
| 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 |
| 8.0 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 | 5 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

females (cont...)

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperostosis | | | | | | | | | | 2 | | | | 3 | | | | 2 | 4 | | | 2 | | 2 | |

NERVOUS SYSTEM

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

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Granulomatous | | | | | | | | | | | | | | 2 | | | | | | | | | 2 | | |
| Alveolar Epithelium, Hyperplasia | 1 | | 1 | | | | | | | | | | 1 | 1 | | 4 | | | | | | 1 | 1 | | |
| Nose | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thrombosis | | | | | | | | | | 2 | | | | 1 | | | | | 2 | 3 | | 2 | | | |
| Glands, Hyperplasia | | 1 | 1 | | 1 | 1 | | 1 | 1 | | | 1 | 1 | | | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | |
| Lateral Wall, Hyperplasia | 2 | 2 | 2 | 2 | 2 | 3 | | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Olfactory Epithelium, Atrophy | | 2 | 2 | 2 | 2 | 2 | | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| Olfactory Epithelium, Degeneration, Hyaline | 3 | 3 | 3 | 3 | 3 | 3 | | 2 | 2 | 2 | | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 2 |
| Olfactory Epithelium, Fibrosis | | 2 | 2 | 1 | 1 | | | | | | 2 | | | | | | | | 1 | 1 | | | 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. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 6 | 7 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 7 | 5 | 6 | 7 | 5 | 5 | 6 | 5 | 7 | |
| FISCHER 344 RATS FEMALE | 3 | 3 | 3 | 3 | 3 | 0 | 6 | 3 | 2 | 2 | 3 | 3 | 2 | 5 | 0 | 3 | 1 | 1 | 5 | 3 | 4 | 4 | 7 | 2 | 3 |
| | 5 | 9 | 5 | 5 | 5 | 9 | 3 | 5 | 7 | 3 | 5 | 5 | 8 | 2 | 0 | 5 | 5 | 8 | 8 | 6 | 7 | 7 | 0 | 2 | 6 |
| 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 | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 8.0 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 | |
| | 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 | 2 | 2 | 1 | 1 | 1 | | 1 | | | | 2 | 1 | | | | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | | |
| Olfactory Epithelium, Metaplasia | 2 | 2 | 2 | 1 | | | 2 | 1 | | | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | | 1 | 2 | 2 | 2 |
| Respiratory Epithelium, Degeneration, Hyaline | 3 | 2 | 2 | 1 | 2 | 2 | | 2 | 2 | 2 | 2 | | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | | 1 | 1 |
| Respiratory Epithelium, Hyperplasia | 2 | 2 | 2 | 3 | 3 | | 2 | 2 | 3 | 2 | 1 | 2 | 2 | | 2 | 1 | 3 | 3 | 1 | 2 | 2 | 2 | 2 | 3 | 2 |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | 1 | | | | | | | | | | | | | | 1 | | | | | |
| Trachea | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cataract | | | | | | | | | | | | | | | | | | | | | | | | | |
| Retina, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Nephropathy | 2 | 1 | 1 | 2 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 3 | | | | 1 | 1 | 2 |
| 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:

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TDMS No. 05201 - 05

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First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
| | 6 | 6 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 5 | 7 | 7 | 6 | 6 | 7 | 6 | 7 | 7 | 7 | 1 | 7 | 7 | 7 | 5 | |
| | 9 | 0 | 9 | 3 | 4 | 3 | 3 | 9 | 3 | 3 | 8 | 3 | 3 | 7 | 7 | 2 | 1 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 9 | |
| | 4 | 6 | 3 | 6 | 6 | 6 | 6 | 4 | 2 | 6 | 9 | 6 | 6 | 9 | 9 | 9 | 6 | 6 | 6 | 6 | 1 | 6 | 6 | 6 | 5 | |
| 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 | |
| 8.0 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 | 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 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | M | + | + | + | + | + | 45 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Parasite Metazoan | X | | | | X | | | | | | | | | | | | | | X | | | | | | 8 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Parasite Metazoan | | | | | | | | | | | | X | | | | | | | | | | | | | 2 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | X | + | + | + | + | + | + | + | + | X | + | + | + | + | + | 47 |
| Parasite Metazoan | | | | | | | | | | | | | | | | | | | X | | X | | | | 3 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Angiectasis | | | | | | | 1 | | | | | | | | | 2 | | | | | | | | | 3 |
| Basophilic Focus | | X | | X | X | X | X | | | X | X | X | X | X | | X | | X | X | X | | X | X | X | 34 |
| Clear Cell Focus | | | | X | | X | | | | X | | | | | | | | | | | | | | | 6 |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Degeneration, Fatty | 2 | | 3 | | | | | | | 3 | | | | | | 2 | | | | | | | | | 10 |
| Eosinophilic Focus | | | | | X | X | | | | | | | | X | | | | | | | | | | | 4 |
| Hepatodiaphragmatic Nodule | | | | X | | | | | | | | X | | | | | | | | | | | | | 6 |

* .. 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. 05201 - 05

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 01/12/2009

Test Type: CHRONIC

Furfuryl alcohol

Time Report Requested: 09:25:45

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 98-00-0

First Dose M/F: 11/26/91 / 11/26/91

Species/Strain: RATS/F 344/N

Lab: BNW

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
|-----------------------------------|-----------|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|----------|-----------|--|-----------|----------|
| FISCHER 344 RATS FEMALE | ANIMAL ID | 6 | 6 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 5 | 7 | 7 | 6 | 6 | 7 | 6 | 7 | 7 | 7 | 1 | 7 | 7 | 7 | 5 | | | | | |
| | | 9 | 0 | 9 | 3 | 4 | 3 | 3 | 9 | 3 | 3 | 8 | 3 | 3 | 7 | 7 | 2 | 1 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 9 | | | | | |
| 8.0 PPM | | 4 | 6 | 3 | 6 | 6 | 6 | 6 | 4 | 2 | 6 | 9 | 6 | 6 | 9 | 9 | 9 | 6 | 6 | 6 | 6 | 1 | 6 | 6 | 6 | 5 | | | | | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 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 | | | | | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | | | | |
| Bile Duct, Hyperplasia | | 1 | 2 | | X | | | | | | | | | | | | | | | | | | | | | | | | | | 6 |
| Centrilobular, Necrosis | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 8 | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | | | | | |
| Fat, Necrosis | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 2.0 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| Pharyngeal, Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 4.0 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | | | | |
| Atrophy | | 2 3 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 49 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | | | | |
| Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | | 2.0 | | | | | |
| Necrosis | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 2.6 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| Necrosis | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 2.0 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | | 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. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| | 0694 | 0663 | 0609 | 0673 | 0654 | 0677 | 0677 | 0666 | 0677 | 0675 | 0677 | 0675 | 0677 | 0666 | 0667 | 0676 | 0677 | 0677 | 0677 | 0617 | 0677 | 0677 | 0675 | 0693 | |
| 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 |
| 8.0 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 | 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 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Cardiomyopathy | | 1 | | | | | | 1 | 1 | 1 | 1 | 2 | | | 2 | 2 | 2 | 1 | 1 | | 2 | | 2 | 1 | | | 23 1.3 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | 1 2.0 |
| Hyperplasia | | 1 | | 2 | | 2 | | | | 2 | | 2 | | | 2 | | | | | | 2 | 2 | | | 3 | 2 | 21 1.9 |
| Hypertrophy | | | | | | | | | | | | 2 | 2 | | | | | | | | | 2 | | | | | 6 2.2 |
| Vacuolization Cytoplasmic | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | 3 2.0 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Hyperplasia | 2 | 1 | 1 | 2 | | | | | | | | 2 | | | | 3 | | | | | | | | 3 | | | 10 1.9 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Pars Distalis, Angiectasis | | | | 4 | 3 | | | | | | | | | | | | | | | | | | | | | | 3 3.3 |
| Pars Distalis, Hyperplasia | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | 7 2.4 |

* .. 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
 Page 107

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|---|
| | 6 | 6 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 5 | 7 | 7 | 6 | 6 | 7 | 6 | 7 | 7 | 7 | 1 | 7 | 7 | 7 | 5 | |
| | 9 | 0 | 9 | 3 | 4 | 3 | 3 | 9 | 3 | 3 | 8 | 3 | 3 | 7 | 7 | 2 | 1 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 9 | |
| | 4 | 6 | 3 | 6 | 6 | 6 | 6 | 4 | 2 | 6 | 9 | 6 | 6 | 9 | 9 | 9 | 6 | 6 | 6 | 6 | 1 | 6 | 6 | 6 | 5 | |
| 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 | |
| 8.0 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 | 5 | |
| | 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 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| C-cell, Hyperplasia | 2 | 1 | 2 | 3 | 1 | 1 | 2 | 1 | 1 | | | 1 | 2 | | 1 | 1 | | 1 | 2 | | | 1 | 1 | 1 | 1 | 35 1.3 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Clitoral Gland | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Hyperplasia | | | | | | | | | | | | | 3 | | | | | | | | | | 2 | | | 2 2.5 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | 3 | | | 1 3.0 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Cyst | | | | | | | | | 2 | | | | | | | | | | | | | | 3 | 3 | | 6 2.7 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Vagina | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|-------|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Hyperplasia, Histiocytic | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | |
| Renal, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 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. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|--------------------------------|--|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 6 | 6 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 5 | 7 | 7 | 6 | 6 | 7 | 6 | 7 | 7 | 7 | 1 | 7 | 7 | 7 | 5 | |
| | | 9 | 0 | 9 | 3 | 4 | 3 | 3 | 9 | 3 | 3 | 8 | 3 | 3 | 7 | 7 | 2 | 1 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 9 | |
| | | 4 | 6 | 3 | 6 | 6 | 6 | 6 | 4 | 2 | 6 | 9 | 6 | 6 | 9 | 9 | 9 | 6 | 6 | 6 | 6 | 1 | 6 | 6 | 6 | 5 | |
| 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 | |
| 8.0 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 | 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 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | |

Renal, Pigmentation

1 2.0

Lymph Node, Bronchial

+ M + + + M + + + + + + + + + + M + + + M + + + M 40

Lymph Node, Mandibular

M + + + + + + + + + + + + + + + + + + M + + + + 46

Lymph Node, Mediastinal Hemorrhage

+ + + + + M + + + + + + + + + + + M + + + + + 45
1 2.0

Lymph Node, Mesenteric Hemorrhage

+ 49
4 1 4.0

Spleen Accessory Spleen Fibrosis Hematopoietic Cell Proliferation Hemorrhage

+ 49
2
3 1.7
2 3.0
1 3.0

Thymus

+ M + + + + + + + + M + + + + + + + + + + + M + + 44

INTEGUMENTARY SYSTEM

Mammary Gland Galactocele

+ 49
1 3.0

Skin

+ 48

* .. 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. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

Table with columns for DAY ON TEST, FISCHER 344 RATS FEMALE, 8.0 PPM, ANIMAL ID, and * TOTALS. Contains numerical data for 49 animals across various days (0-9).

MUSCULOSKELETAL SYSTEM

Table for Musculoskeletal System showing findings like Bone Hyperostosis with counts and mean severity grades.

NERVOUS SYSTEM

Table for Nervous System showing findings like Brain with counts and mean severity grades.

RESPIRATORY SYSTEM

Table for Respiratory System showing findings like Larynx, Lung, and Nose with various sub-lesions, counts, and mean severity grades.

* .. 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 | 0 | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | 6 6 6 7 5 7 7 6 7 7 5 7 7 6 6 7 6 7 7 7 1 7 7 7 5 | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS FEMALE
8.0 PPM | 9 0 9 3 4 3 3 9 3 3 8 3 3 7 7 2 1 3 3 3 1 3 3 3 9 | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 6 3 6 6 6 6 4 2 6 9 6 6 9 9 9 6 6 6 6 1 6 6 6 5 | | | | | | | | | | | | | | | | | | | | | | | |
| ANIMAL ID | 0 | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | | | | |
| 8.0 PPM | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 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, Hyperplasia | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 31 1.2 | |
| Olfactory Epithelium, Metaplasia | 1 | | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | | | | | | 1 | 37 1.5 | | |
| Respiratory Epithelium, Degeneration, Hyaline | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 3 | 1 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 4 | | 3 | 3 | 2 | 2 | 45 1.9 |
| Respiratory Epithelium, Hyperplasia | 2 | 2 | 3 | | 2 | 1 | 1 | 2 | 2 | 3 | 2 | | 2 | 3 | 2 | 3 | | | 2 | | 2 | | 2 | 2 | 40 2.1 | |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------------|
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Cataract | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Retina, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|---------------|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Nephropathy | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | | 2 | 2 | 3 | 2 | 47 1.9 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.5 | |

* .. 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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Lab: BNW

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 4 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 5 | 6 | 6 | 7 | 7 | 7 | 7 |
| | 3 | 1 | 3 | 3 | 7 | 0 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 8 | 3 | 3 | 1 | 2 | 6 | 4 | 3 | 3 | 3 | 3 |
| | 5 | 5 | 3 | 5 | 0 | 7 | 5 | 8 | 5 | 5 | 8 | 2 | 2 | 8 | 6 | 5 | 5 | 1 | 5 | 5 | 2 | 5 | 6 | 6 | 6 |
| 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 |
| 32.0 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 | 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 | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parasite Metazoan | | | | | | | | | | | | | | | X | | | | | | | | | X |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parasite Metazoan | | | X | | | | | | | | | | | | | | | | | | | | X | |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parasite Metazoan | | | X | X | | | | | | | | | | | | | | | | | | | | X |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | 2 | | 1 | 2 | | 1 | | | | | | | 1 | | | | | | | | | |
| Basophilic Focus | X | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Clear Cell Focus | | | | | | | | | | X | | | | | X | | | | | | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Fatty | | 3 | 2 | | 2 | | 1 | | | | 3 | | 3 | | | | 4 | | | 3 | | | | |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Hepatodiaphragmatic Nodule | | | X | X | | | X | | | | | | | | | | | | | | | | | |

* .. 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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1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
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| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|--|--|--|--|--|---|--|--|--|--|--|---|---|---|---|--|--|--|--|--|---|---|--|----------------------|
| | 7 7 7 7 6 7 7 4 7 7 5 7 7 5 6 7 7 7 5 6 6 7 7 7 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS FEMALE
ANIMAL ID | 3 1 3 3 7 0 3 3 3 3 1 1 1 1 8 3 3 1 2 6 4 3 3 3 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 5 3 5 0 7 5 8 5 5 8 2 2 8 6 5 5 1 5 5 2 5 6 6 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| 32.0 PPM | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 32.0 PPM | 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | females
(cont...) |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | X | | | | | | X | | | | | | | | | | | | | | | X | X | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Regeneration | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | | | | | | | | | | | | 2 | 2 | | | | | | | 1 | | |
| Centrilobular, Necrosis | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | |
| Metaplasia, Hepatocyte | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tooth | | | | | | | | | | | | | | | | | | | | | | | | | |

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|--------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------------|
| | 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 | 6 | 7 | 7 | 4 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 5 | 6 | 6 | 7 | 7 | 7 | 7 | |
| | 3 | 1 | 3 | 3 | 7 | 0 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 8 | 3 | 3 | 1 | 2 | 6 | 4 | 3 | 3 | 3 | 3 | |
| | 5 | 5 | 3 | 5 | 0 | 7 | 5 | 8 | 5 | 5 | 8 | 2 | 2 | 8 | 6 | 5 | 5 | 1 | 5 | 5 | 2 | 5 | 6 | 6 | 6 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | |
| 32.0 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 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 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...) |

Degeneration

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cardiomyopathy | 1 | | 1 | | | 1 | 2 | | 1 | 2 | | 1 | | 1 | 1 | | | | | | | 1 | | 1 | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia | 1 | 2 | | 2 | | | 2 | | | 2 | | 2 | 2 | | | 2 | 1 | 1 | | | | | 2 | 2 | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | 3 | | 2 | | | | | | | | 2 | | 2 | | | | | | | | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia | | 1 | 2 | | | | | | | | | 2 | | | 3 | 2 | 2 | | | | | 2 | | | 3 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | |
| Hyperplasia | | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Pars Distalis, Hyperplasia | | | | | | | | | | | 2 | | | | 2 | | 2 | | | | | 3 | 3 | | 3 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | 7 7 7 7 6 7 7 4 7 7 5 7 7 5 6 7 7 7 5 6 6 7 7 7 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS FEMALE
32.0 PPM
ANIMAL ID | 3 1 3 3 7 0 3 3 3 3 1 1 1 1 8 3 3 1 2 6 4 3 3 3 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 5 3 5 0 7 5 8 5 5 8 2 2 8 6 5 5 1 5 5 2 5 6 6 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| C-cell, Hyperplasia | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 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 | | | | | | | | | | | | | | | | | | | | | | | | |

females (cont...)

GENERAL BODY SYSTEM
NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | M | + | M | + | + | + | |
| Ovary Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 1 | 2 | 3 | + | + | + |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node Renal, Ectasia | | | | | + | | + | | | | | | + | + | | | | | | | | | | | + | |
| Lymph Node Renal, Hemorrhage | | | | | | | 2 | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Bronchial | M | M | M | + | M | + | + | + | + | + | + | + | + | M | M | M | M | + | M | M | + | M | M | M | + | + |

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lymph Node, Mandibular | + | + | M | M | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | M | + | + |
| Lymph Node, Mediastinal Hemorrhage | + | + | M | M | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | M | + | + | + | + | + | M |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Accessory Spleen | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fibrosis | | | | | | 2 | | 2 | | | | | | 2 | | | | | | | | | | | 2 | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | 3 | 3 | | | | | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus | + | + | M | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | M | + | + | + | + | + | M |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Galactocele | | | | | | 2 | 2 | | | | | | 2 | | 2 | | | | | | | | | | | |
| Hyperplasia, Atypical | | | | | | | | | | | | | | | 2 | | | | | | | | | | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous Tissue, Necrosis | | | | | | | | | | | | | | | 3 | | | | | | | | | | | |
| Tail, Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Tail, Inflammation, Chronic Active | | | | | | | | | | | | | 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

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|--------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 4 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 5 | 6 | 6 | 7 | 7 | 7 | 7 |
| | | 3 | 1 | 3 | 3 | 7 | 0 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 8 | 3 | 3 | 1 | 2 | 6 | 4 | 3 | 3 | 3 | 3 |
| | | 5 | 5 | 3 | 5 | 0 | 7 | 5 | 8 | 5 | 5 | 8 | 2 | 2 | 8 | 6 | 5 | 5 | 1 | 5 | 5 | 2 | 5 | 6 | 6 | 6 |
| 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 |
| 32.0 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 | 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...)

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fibrous Osteodystrophy | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Hyperostosis | 3 | | | | | 2 | | | | | | | | | 3 | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | |

NERVOUS SYSTEM

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

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Granulomatous | | | | | | | | | | | 2 | | | | | | | | | | | | | 2 | |
| Alveolar Epithelium, Hyperplasia | 1 | | 1 | 1 | | | | 1 | | | | | | | | | | 2 | 1 | | | | 2 | 1 | |
| Mediastinum, Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Suppurative | 1 | | 1 | | 2 | | 2 | 1 | 2 | 1 | | 1 | 3 | | 2 | | | | | | 2 | 2 | | | 2 |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | 3 | | | |
| Glands, Hyperplasia | 1 | 3 | 3 | | 1 | 3 | 3 | 3 | 2 | 3 | | 1 | 1 | | 1 | 2 | 4 | 1 | 3 | 3 | 2 | 2 | 3 | 3 | 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 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | 7 7 7 7 6 7 7 4 7 7 5 7 7 5 6 7 7 7 5 6 6 7 7 7 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS FEMALE
ANIMAL ID | 3 1 3 3 7 0 3 3 3 3 1 1 1 1 8 3 3 1 2 6 4 3 3 3 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 5 3 5 0 7 5 8 5 5 8 2 2 8 6 5 5 1 5 5 2 5 6 6 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| 32.0 PPM | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 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 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 | | | | | | | | | | | | | | | | | | | | | | | | |

females (cont...)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lateral Wall, Hyperplasia | 2 | 4 | 3 | 3 | 4 | 4 | 3 | 4 | 3 | 3 | 4 | 3 | 4 | 3 | 3 | 4 | 2 | 3 | 3 | 4 | 3 | 3 | 3 | 3 |
| Lateral Wall, Metaplasia, Squamous | | | | 1 | 1 | | | 1 | 1 | | 1 | 1 | | | | | | | | 1 | | | | |
| Olfactory Epithelium, Atrophy | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 |
| Olfactory Epithelium, Degeneration, Hyaline | 3 | 4 | 3 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 3 |
| Olfactory Epithelium, Fibrosis | 1 | | 2 | | | 2 | | | | | 2 | | 1 | | | 2 | 2 | | 2 | 2 | 2 | | 1 | 1 |
| Olfactory Epithelium, Hyperplasia | 1 | 1 | 2 | | 1 | 1 | 1 | | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | | 2 | 2 | 1 | 1 | 1 | 1 | 1 |
| Olfactory Epithelium, Metaplasia | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 |
| Respiratory Epithelium, Degeneration, Hyaline | | | | | | | | | 2 | | | | | | 2 | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | 2 | 3 | 4 | 3 | 3 | 4 | 2 | 4 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Respiratory Epithelium, Metaplasia, Squamous | | 1 | 1 | | | | | | | | | | | | | | 2 | | 1 | | | | | 1 |

Trachea +

SPECIAL SENSES SYSTEM

Eye +

URINARY SYSTEM

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

Urinary Bladder +

* .. 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. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
|--------------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------------|---|---|---|---|
| | | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 4 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 5 | 6 | 6 | 7 | 7 | 7 | 7 |
| | | 3 | 1 | 3 | 3 | 7 | 0 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 8 | 3 | 3 | 1 | 2 | 6 | 4 | 3 | 3 | 3 | 3 |
| | | 5 | 5 | 3 | 5 | 0 | 7 | 5 | 8 | 5 | 5 | 8 | 2 | 2 | 8 | 6 | 5 | 5 | 1 | 5 | 5 | 2 | 5 | 6 | 6 | 6 |
| 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 |
| 32.0 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...) | | | | |
| Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 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

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * TOTALS |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|----------|
| | 5 | 5 | 4 | 5 | 7 | 6 | 4 | 7 | 3 | 6 | 6 | 6 | 6 | 7 | 7 | 4 | 6 | 5 | 7 | 6 | 5 | 7 | 7 | 6 | 6 | | |
| | 9 | 9 | 9 | 8 | 3 | 1 | 2 | 3 | 0 | 9 | 8 | 3 | 2 | 3 | 3 | 3 | 7 | 7 | 6 | 2 | 3 | 2 | 0 | 3 | 5 | | |
| | 7 | 9 | 7 | 1 | 6 | 6 | 9 | 6 | 2 | 3 | 9 | 9 | 1 | 8 | 6 | 6 | 8 | 1 | 0 | 1 | 2 | 6 | 6 | 6 | 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 | | |
| 32.0 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 | | |
| Mixed Cell Focus | | | | | | | X | | | | | | | | | X | | X | | | | | | | | 8 | |
| Necrosis | | | | | | | | | | | | | | | | | | | 2 | | | | | | | 2 2.0 | |
| Regeneration | | | | 4 | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| Bile Duct, Hyperplasia | | | | 2 | | | | | | 2 | | 1 | | | | | | | | | | | | 2 | | 7 1.7 | |
| Centrilobular, Necrosis | | | 1 | 1 | | | | | | 1 | 1 | 1 | | | | | | | 1 | | | | 1 | | | 9 1.0 | |
| Mesentery | | | | | | + | | + | | | | | | | | | | | | | | | | | | 7 | |
| Fat, Necrosis | | | | | 2 | | | | | | | | | | | | | | | | | | | 3 | | 6 2.2 | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Atrophy | | | | | | | | | 2 | | | | | 1 | | 1 | | | | | | | | 2 | 1 | 11 1.5 | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | X | | | 1 | |
| Metaplasia, Hepatocyte | | | | | | | | | | | | | | | | | | | | | | | | 2 | | 1 2.0 | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 3 | | 1 3.0 | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Necrosis | 3 | | | | | | | | | | | | 3 | | 4 | | | | | | | | | | 3 | 12 3.2 | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 7 2.1 | |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Hyperplasia, Squamous | | | | | | | | | | | | | + | | | | | | | | | | | | | 1 3.0 | |
| Tooth | | | | | | | | | | | | | | | | | | | | | | | | | | 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 | 0 | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | 5 5 4 5 7 6 4 7 3 6 6 6 6 7 7 4 6 5 7 6 5 7 7 6 | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS FEMALE
ANIMAL ID | 9 9 9 8 3 1 2 3 0 9 8 3 2 3 3 3 7 7 6 2 3 2 0 3 5 | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 9 7 1 6 6 9 6 2 3 9 9 1 8 6 6 8 1 0 1 2 6 6 6 8 | | | | | | | | | | | | | | | | | | | | | | | |
| 32.0 PPM | 0 | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 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 | | | | | | | | | | | | | | | | | | | | | | | |

Degeneration 4 1 4.0

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|
| Heart | + | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Cardiomyopathy | 1 1 1 2 1 1 1 | | | | | | | | | | | | | | | | | | | | | | | | 19 1.2 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|
| Adrenal Cortex | + | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Hyperplasia | 2 | | | | | | | | | | | | | | | | | | | | | | | | 23 1.8 |
| Hypertrophy | 2 | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Necrosis | 2 | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Vacuolization Cytoplasmic | 2 3 3 2 | | | | | | | | | | | | | | | | | | | | | | | | 8 2.4 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|
| Adrenal Medulla | + | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Hyperplasia | 3 2 2 3 | | | | | | | | | | | | | | | | | | | | | | | | 14 2.2 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|
| Islets, Pancreatic | + | | | | | | | | | | | | | | | | | | | | | | | | 50 |
|--------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|
| Parathyroid Gland | + + + + + M + + + + + M + + + + + M + + + + + | | | | | | | | | | | | | | | | | | | | | | | | 46 |
| Hyperplasia | 2 3 2 | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|
| Pituitary Gland | + | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Pars Distalis, Hyperplasia | 2 3 2 | | | | | | | | | | | | | | | | | | | | | | | | 9 2.4 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|
| Thyroid Gland | + + + + + + + + + + + M + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | | | | | | | 48 |
|---------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|

* .. 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. 05201 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Furfuryl alcohol

CAS Number: 98-00-0

Date Report Requested: 01/12/2009

Time Report Requested: 09:25:45

First Dose M/F: 11/26/91 / 11/26/91

Lab: BNW

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--------------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------|
| | 5 5 4 5 7 6 4 7 3 6 6 6 6 7 7 4 6 5 7 6 5 7 7 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS FEMALE
ANIMAL ID | 9 9 9 8 3 1 2 3 0 9 8 3 2 3 3 3 7 7 6 2 3 2 0 3 5 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 9 7 1 6 6 9 6 2 3 9 9 1 8 6 6 8 1 0 1 2 6 6 6 8 | | | | | | | | | | | | | | | | | | | | | | | | |
| 32.0 PPM | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 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 0 | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------|
| C-cell, Hyperplasia | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 39 1.3 |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------|

GENERAL BODY SYSTEM
NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|--------------|
| Clitoral Gland
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | M | + | 45 | 1 3.0 |
| Ovary
Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 7 2.0 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|--------------|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Lymph Node
Renal, Ectasia | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | 1 2.0 |
| Renal, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | 1 2.0 |
| Lymph Node, Bronchial | M | + | + | + | M | + | M | + | + | M | M | + | + | M | M | + | + | M | + | M | M | + | M | M | + | 25 | |

* .. 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 | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--------------------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| | 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 | 4 | 5 | 7 | 6 | 4 | 7 | 3 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 4 | 6 | 5 | 7 | 6 | 5 | 7 | 7 | 6 | |
| 9 | 9 | 9 | 8 | 3 | 1 | 2 | 3 | 0 | 9 | 8 | 3 | 2 | 3 | 3 | 3 | 7 | 7 | 6 | 2 | 3 | 2 | 0 | 3 | 5 | |
| 7 | 9 | 7 | 1 | 6 | 6 | 9 | 6 | 2 | 3 | 9 | 9 | 1 | 8 | 6 | 6 | 8 | 1 | 0 | 1 | 2 | 6 | 6 | 6 | 8 | |
| FISCHER 344 RATS FEMALE | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32.0 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 | |
| 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 | 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 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|----|
| Lymph Node, Mandibular | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | M | + | + | 42 | |
| Lymph Node, Mediastinal Hemorrhage | + | + | + | + | + | + | M | + | M | + | + | + | + | + | M | + | M | + | + | + | M | + | + | + | + | 40 | |
| | | | | | | | | | | | | 3 | | | | | | | | | | | | | | 1 3.0 | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Accessory Spleen | | | | | | | | | | | | | | | | | | | | | | X | | | | 1 | |
| Fibrosis | | | | | | | | | | | | 3 | | | | | | | | | | | | | | 5 2.2 | |
| Hematopoietic Cell Proliferation | | | 3 | | | | 4 | | | | | | | | | | | | | | 3 | | | | | 5 3.2 | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | 1 | | | | | | | | | | | | 1 1.0 | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | M | + | M | 43 |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Galactocele | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | 5 2.0 |
| Hyperplasia, Atypical | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | | | 3 | | | | 1 3.0 |
| Subcutaneous Tissue, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Tail, Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Tail, Inflammation, Chronic Active | | | | | | | 3 | | | | | | | | | | | | | 2 | 1 | | | | 3 | | 5 2.4 |

* .. 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

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| DAY ON TEST | 5 | 5 | 4 | 5 | 7 | 6 | 4 | 7 | 3 | 6 | 6 | 6 | 6 | 7 | 7 | 4 | 6 | 5 | 7 | 6 | 5 | 7 | 7 | 6 | |
| | 9 | 9 | 9 | 8 | 3 | 1 | 2 | 3 | 0 | 9 | 8 | 3 | 2 | 3 | 3 | 3 | 7 | 7 | 6 | 2 | 3 | 2 | 0 | 3 | 5 |
| | 7 | 9 | 7 | 1 | 6 | 6 | 9 | 6 | 2 | 3 | 9 | 9 | 1 | 8 | 6 | 6 | 8 | 1 | 0 | 1 | 2 | 6 | 6 | 6 | 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 |
| 32.0 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 | | | | | | | | | | | | | | | | | | | | | | | | |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Fibrous Osteodystrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Hyperostosis | 2 | | | | | | | | 4 | | | 3 | | | | | | | | | | | | | | | | 6 | 2.8 |
| Inflammation, Chronic | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | 1 | 3.0 |

NERVOUS SYSTEM

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

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|-----|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | 1 | | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 3 | 2.7 | |
| Alveolar Epithelium, Hyperplasia | | | | | | 1 | | | 1 | | | | | | 2 | | | | | | | | | | 2 | | | 12 | 1.3 | | |
| Mediastinum, Inflammation, Granulomatous | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | | |
| Inflammation, Suppurative | 3 | | | | | | | | | 2 | | | 1 | 2 | | | 1 | | | 1 | | | | | 2 | | | 3 | 2 | 23 | 1.7 |
| Thrombosis | 3 | | | | | | | | | | | | 4 | | | | 2 | | | | | | | | | | | 3 | 5 | 3.0 | |
| Glands, Hyperplasia | 2 | 2 | 2 | 1 | 3 | 3 | 1 | 2 | | | 2 | 2 | 2 | 3 | 1 | 3 | 2 | 2 | 3 | 3 | 2 | 4 | 3 | 2 | 2 | 2 | | | 46 | 2.2 | |

* .. 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 | 0 | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--------------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------|
| | 5 4 8 3 1 2 3 0 9 8 3 2 3 3 7 7 4 6 5 7 6 5 7 7 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| FISCHER 344 RATS FEMALE
ANIMAL ID | 0 | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
| | 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| 32.0 PPM | 2 2 2 2 3 | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
| | 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 | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|------------|------------|
| Lateral Wall, Hyperplasia | 4 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 3 | 2 | 3 | 4 | 3 | 3 | 4 | 4 | 3 | 3 | 4 | 2 | 49 | 3.3 |
| Lateral Wall, Metaplasia, Squamous | 1 | 1 | | 1 | 1 | 1 | | 1 | | 1 | | 1 | | 1 | 1 | | 1 | 2 | 1 | 1 | 1 | 1 | | | 24 | 1.0 | |
| Olfactory Epithelium, Atrophy | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 49 | 2.3 | |
| Olfactory Epithelium, Degeneration, Hyaline | 4 | | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 4 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 2 | 3 | 48 | 3.3 |
| Olfactory Epithelium, Fibrosis | | 1 | 1 | | 2 | 2 | | 3 | | 1 | 2 | 2 | 2 | | 2 | 2 | | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 31 | 1.7 |
| Olfactory Epithelium, Hyperplasia | | 2 | 2 | 1 | 2 | 2 | | | | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | | 3 | 2 | 2 | 1 | 41 | 1.5 |
| Olfactory Epithelium, Metaplasia | 2 | 3 | 2 | 1 | 3 | 2 | | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 48 | 2.2 |
| Respiratory Epithelium, Degeneration, Hyaline | | 3 | | 1 | | | | | | | | | | | | | | 1 | 3 | | | | | | 6 | 2.0 | |
| Respiratory Epithelium, Hyperplasia | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 49 | 3.2 |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | 1 | | | 1 | | | | | 2 | 1 | | | | | | 1 | | | | | 10 | 1.2 | |

Trachea + **50**

SPECIAL SENSES SYSTEM

Eye + **1**

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|------------|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst | | | | | | | | | | | | | 3 | | | | | | | | | | | | | 1 | 3.0 |
| Nephropathy | 1 | 1 | 1 | 1 | 3 | 2 | 2 | 3 | | 3 | 2 | 2 | 4 | 3 | 2 | 2 | 3 | 2 | | 2 | 1 | | 3 | 2 | 3 | 47 | 2.4 |
| Renal Tubule, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 3 | | 2 | 2.5 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 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

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| DAY ON TEST | 5 | 5 | 4 | 5 | 7 | 6 | 4 | 7 | 3 | 6 | 6 | 6 | 6 | 7 | 7 | 4 | 6 | 5 | 7 | 6 | 5 | 7 | 7 | 6 | 6 | 6 | | |
| | 9 | 9 | 9 | 8 | 3 | 1 | 2 | 3 | 0 | 9 | 8 | 3 | 2 | 3 | 3 | 3 | 7 | 7 | 6 | 2 | 3 | 2 | 0 | 3 | 5 | 5 | | |
| | 7 | 9 | 7 | 1 | 6 | 6 | 9 | 6 | 2 | 3 | 9 | 9 | 1 | 8 | 6 | 6 | 8 | 1 | 0 | 1 | 2 | 6 | 6 | 6 | 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 | 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 | |
| 32.0 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 | 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 | 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 | 0 | * TOTALS | |
| ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Transitional Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |

*** 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