

**TDMS No.** 88006 - 03

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

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

ALPHA-METHYLSTYRENE

**CAS Number:** 98-83-9

**Pathologist:** RENNE, R.

Revised F1

**Date Report Reqsted:** 02/02/2006

**Time Report Reqsted:** 13:44:41

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

**Lab:** BNW

**C Number:** C88006B

**Lock Date:** 03/26/2004

**Cage Range:** ALL

**Date Range:** ALL

**Reasons For Removal:** ALL

**Removal Date Range:** ALL

**Treatment Groups:** Include ALL

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Species/Strain: RATS/F 344

Pathologist: RENNE, R.

Lab: BNW

FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM
<b>Disposition Summary</b>				
Animals Initially in Study	50	50	50	50
Early Deaths				
Accidentally Killed			1	1
Moribund Sacrifice	19	15	21	25
Natural Death	4	3	5	2
Survivors				
Natural Death				1
Terminal Sacrifice	27	32	23	21
Animals Examined Microscopically	50	50	50	50
<b>ALIMENTARY SYSTEM</b>				
Intestine Large, Cecum	(48)	(47)	(46)	(47)
Ulcer		1 (2%)		
Epithelium, Atrophy		1 (2%)		
Intestine Small, Duodenum	(49)	(48)	(47)	(47)
Ulcer		1 (2%)		
Intestine Small, Jejunum	(46)	(47)	(44)	(47)
Inflammation, Chronic Active		1 (2%)		
Epithelium, Ulcer		1 (2%)		
Liver	(50)	(50)	(50)	(50)
Angiectasis		1 (2%)	1 (2%)	4 (8%)
Basophilic Focus	2 (4%)	8 (16%)	3 (6%)	1 (2%)
Basophilic Focus, Multiple		1 (2%)		
Bile Stasis		1 (2%)		
Clear Cell Focus	8 (16%)	7 (14%)	5 (10%)	3 (6%)
Clear Cell Focus, Multiple	1 (2%)			
Degeneration, Cystic	2 (4%)	2 (4%)	3 (6%)	1 (2%)
Hemorrhage				1 (2%)
Hepatodiaphragmatic Nodule		2 (4%)	5 (10%)	10 (20%)
Necrosis	2 (4%)	2 (4%)	3 (6%)	4 (8%)
Thrombosis		1 (2%)	1 (2%)	1 (2%)
Vacuolization Cytoplasmic	3 (6%)	1 (2%)	4 (8%)	
Bile Duct, Dilatation		2 (4%)		
Bile Duct, Hyperplasia	30 (60%)	42 (84%)	39 (78%)	30 (60%)
Mesentery	(15)	(15)	(8)	(5)
Necrosis	15 (100%)	14 (93%)	8 (100%)	5 (100%)

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

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FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM
Fat, Hemorrhage		1 (7%)		
Oral Mucosa	(1)	(0)	(0)	(1)
Gingival, Hyperplasia, Squamous, Focal	1 (100%)			1 (100%)
Pancreas	(50)	(50)	(50)	(50)
Acinus, Atrophy	2 (4%)	2 (4%)	1 (2%)	
Stomach, Forestomach	(50)	(50)	(49)	(50)
Hyperplasia, Squamous	1 (2%)		1 (2%)	1 (2%)
Inflammation, Suppurative				1 (2%)
Necrosis	1 (2%)			
Ulcer	4 (8%)	1 (2%)	2 (4%)	
Epithelium, Mineralization		1 (2%)		
Stomach, Glandular	(50)	(50)	(49)	(50)
Erosion	2 (4%)		2 (4%)	3 (6%)
Ulcer	1 (2%)			
Epithelium, Mineralization		1 (2%)		
Tongue	(0)	(1)	(0)	(1)
Epithelium, Hyperplasia				1 (100%)
Tooth	(0)	(0)	(2)	(0)
Inflammation, Suppurative			1 (50%)	
Peridental Tissue, Inflammation			1 (50%)	
CARDIOVASCULAR SYSTEM				
Blood Vessel	(0)	(1)	(2)	(0)
Pulmonary Artery, Infiltration Cellular, Polymorphonuclear			1 (50%)	
Pulmonary Artery, Mineralization			1 (50%)	
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	7 (14%)	3 (6%)	4 (8%)	6 (12%)
Atrium, Myocardium, Hypertrophy		1 (2%)		
Atrium, Necrosis				1 (2%)
Atrium, Thrombosis	3 (6%)	1 (2%)	5 (10%)	5 (10%)
Myocardium, Hypertrophy		1 (2%)		
Valve, Thrombosis	1 (2%)			
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(50)
Atrophy	1 (2%)	1 (2%)		
Hyperplasia	14 (28%)	10 (20%)	12 (24%)	9 (18%)

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

FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM
Hypertrophy	2 (4%)	2 (4%)		
Mineralization	1 (2%)			
Necrosis			1 (2%)	
Vacuolization Cytoplasmic	9 (18%)	21 (42%)	10 (20%)	5 (10%)
Adrenal Medulla	(50)	(50)	(50)	(50)
Atrophy	1 (2%)			
Hyperplasia	15 (30%)	13 (26%)	9 (18%)	14 (28%)
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	1 (2%)	3 (6%)		
Parathyroid Gland	(47)	(49)	(48)	(47)
Hyperplasia	1 (2%)		1 (2%)	
Pituitary Gland	(49)	(49)	(49)	(49)
Cyst		1 (2%)	1 (2%)	1 (2%)
Hemorrhage		1 (2%)		
Hyperplasia	9 (18%)	8 (16%)	6 (12%)	14 (29%)
Thyroid Gland	(49)	(50)	(50)	(50)
Cyst				1 (2%)
C-cell, Hyperplasia	8 (16%)	9 (18%)	9 (18%)	6 (12%)
Follicle, Cyst				1 (2%)
Follicular Cell, Hyperplasia		3 (6%)	1 (2%)	2 (4%)
GENERAL BODY SYSTEM				
Peritoneum	(0)	(2)	(0)	(3)
GENITAL SYSTEM				
Epididymis	(50)	(50)	(50)	(50)
Penis	(1)	(0)	(0)	(0)
Inflammation, Chronic Active	1 (100%)			
Preputial Gland	(50)	(50)	(50)	(50)
Cyst	1 (2%)	2 (4%)	2 (4%)	1 (2%)
Hyperplasia	2 (4%)	4 (8%)	1 (2%)	2 (4%)
Inflammation, Suppurative			1 (2%)	
Prostate	(50)	(50)	(50)	(50)
Cyst			1 (2%)	
Hyperplasia	6 (12%)		1 (2%)	2 (4%)
Inflammation, Suppurative	34 (68%)	35 (70%)	31 (62%)	24 (48%)
Seminal Vesicle	(50)	(50)	(50)	(50)
Cyst			1 (2%)	

FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM
Dilatation			1 (2%)	
Inflammation, Suppurative		1 (2%)	1 (2%)	
Testes	(50)	(50)	(50)	(50)
Artery, Inflammation, Chronic Active			1 (2%)	
Germinal Epithelium, Atrophy	5 (10%)	5 (10%)	8 (16%)	6 (12%)
Germinal Epithelium, Mineralization		1 (2%)		
Interstitial Cell, Hyperplasia	6 (12%)	7 (14%)	10 (20%)	7 (14%)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Lymph Node	(6)	(3)	(6)	(12)
Deep Cervical, Hemorrhage				1 (8%)
Lymph Node, Bronchial	(10)	(8)	(14)	(15)
Hyperplasia, Histiocytic			1 (7%)	
Infiltration Cellular, Histiocyte			1 (7%)	
Lymph Node, Mediastinal	(17)	(25)	(20)	(18)
Angiectasis	1 (6%)		1 (5%)	
Hemorrhage		1 (4%)		
Hyperplasia, Lymphoid		2 (8%)		1 (6%)
Infiltration Cellular, Histiocyte			1 (5%)	
Pigmentation			1 (5%)	1 (6%)
Lymph Node, Mesenteric	(50)	(49)	(49)	(50)
Spleen	(50)	(50)	(49)	(50)
Accessory Spleen	1 (2%)		1 (2%)	1 (2%)
Fibrosis	2 (4%)	1 (2%)	1 (2%)	1 (2%)
Hematopoietic Cell Proliferation	1 (2%)	1 (2%)		
Hemorrhage		1 (2%)		2 (4%)
Hyperplasia, Lymphoid		1 (2%)		1 (2%)
Necrosis	3 (6%)	3 (6%)	5 (10%)	8 (16%)
Thymus	(42)	(49)	(47)	(47)
Cyst		1 (2%)		
Inflammation			1 (2%)	
Thrombosis			1 (2%)	
INTEGUMENTARY SYSTEM				
Mammary Gland	(48)	(49)	(50)	(50)
Galactocele	2 (4%)	1 (2%)	3 (6%)	2 (4%)
Hyperplasia		1 (2%)		

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Pathologist: RENNE, R.

Date Report Requested: 02/02/2006

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FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion	2 (4%)	3 (6%)		
Hyperkeratosis		2 (4%)	1 (2%)	2 (4%)
Hyperplasia, Squamous		1 (2%)		
Inflammation, Chronic		1 (2%)	1 (2%)	
Ulcer	1 (2%)	2 (4%)	2 (4%)	3 (6%)
Subcutaneous Tissue, Metaplasia, Osseous			1 (2%)	
Subcutaneous Tissue, Mineralization	1 (2%)			
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Hyperostosis	1 (2%)			
Maxilla, Fracture			1 (2%)	
Skeletal Muscle	(2)	(1)	(1)	(0)
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Compression	11 (22%)	11 (22%)	8 (16%)	2 (4%)
Gliososis				1 (2%)
Hemorrhage	7 (14%)	2 (4%)	4 (8%)	2 (4%)
Cerebrum, Demyelination, Focal				1 (2%)
Cerebrum, Necrosis, Focal	1 (2%)			
Choroid Plexus, Hemorrhage			1 (2%)	
Meninges, Hemorrhage				1 (2%)
RESPIRATORY SYSTEM				
Larynx	(50)	(49)	(50)	(50)
Foreign Body	4 (8%)	5 (10%)	2 (4%)	5 (10%)
Inflammation, Suppurative	6 (12%)		4 (8%)	2 (4%)
Inflammation, Chronic	4 (8%)	11 (22%)	6 (12%)	10 (20%)
Epiglottis, Hyperplasia				1 (2%)
Respiratory Epithelium, Hyperplasia		2 (4%)		
Respiratory Epithelium, Metaplasia, Squamous	1 (2%)			
Lung	(50)	(50)	(50)	(50)

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

FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM
Hemorrhage	7 (14%)	3 (6%)	1 (2%)	7 (14%)
Inflammation, Suppurative			1 (2%)	
Inflammation, Chronic	4 (8%)	1 (2%)	3 (6%)	2 (4%)
Thrombosis	1 (2%)			
Alveolar Epithelium, Degeneration, Mucoid, Focal			1 (2%)	
Alveolar Epithelium, Hyperplasia	3 (6%)	6 (12%)	6 (12%)	3 (6%)
Alveolus, Emphysema		2 (4%)	1 (2%)	
Alveolus, Infiltration Cellular, Histiocyte	11 (22%)	12 (24%)	10 (20%)	4 (8%)
Interstitialium, Fibrosis	3 (6%)		2 (4%)	1 (2%)
Mediastinum, Inflammation, Suppurative			1 (2%)	
Nose	(50)	(50)	(50)	(49)
Foreign Body	6 (12%)	4 (8%)	3 (6%)	2 (4%)
Hemorrhage			1 (2%)	
Inflammation, Suppurative	10 (20%)	8 (16%)	7 (14%)	5 (10%)
Inflammation, Chronic		1 (2%)	2 (4%)	
Glands, Dilatation	3 (6%)	7 (14%)	6 (12%)	
Goblet Cell, Hyperplasia	5 (10%)	5 (10%)	5 (10%)	5 (10%)
Nasolacrimal Duct, Inflammation, Suppurative	2 (4%)	1 (2%)	1 (2%)	
Nerve, Olfactory Epithelium, Degeneration				1 (2%)
Olfactory Epithelium, Degeneration	1 (2%)	3 (6%)	3 (6%)	16 (33%)
Olfactory Epithelium, Degeneration, Hyaline	1 (2%)	1 (2%)	1 (2%)	
Olfactory Epithelium, Hyperplasia, Basal Cell		17 (34%)	18 (36%)	43 (88%)
Olfactory Epithelium, Metaplasia	2 (4%)	1 (2%)	3 (6%)	2 (4%)
Respiratory Epithelium, Degeneration, Hyaline	2 (4%)		2 (4%)	
Respiratory Epithelium, Hyperplasia		1 (2%)		2 (4%)
Respiratory Epithelium, Metaplasia, Squamous				1 (2%)
Pleura	(6)	(5)	(6)	(5)
Inflammation, Chronic	5 (83%)	5 (100%)	6 (100%)	5 (100%)
Mesothelium, Hyperplasia		1 (20%)		
SPECIAL SENSES SYSTEM				
Eye	(49)	(49)	(50)	(49)
Atrophy			1 (2%)	1 (2%)

FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM
Cornea, Fibrosis				1 (2%)
Cornea, Hyperplasia, Squamous		1 (2%)		1 (2%)
Cornea, Mineralization	1 (2%)			
Lens, Cataract	3 (6%)		5 (10%)	1 (2%)
Retina, Atrophy	1 (2%)		1 (2%)	
Sclera, Metaplasia, Osseous	32 (65%)	32 (65%)	32 (64%)	25 (51%)
Harderian Gland	(50)	(50)	(50)	(50)
Inflammation, Chronic			2 (4%)	
Zymbal's Gland	(0)	(1)	(2)	(2)
Inflammation			1 (50%)	
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Cyst	2 (4%)	2 (4%)	2 (4%)	
Infarct	3 (6%)			5 (10%)
Nephropathy	41 (82%)	46 (92%)	46 (92%)	45 (90%)
Thrombosis				1 (2%)
Bilateral, Pelvis, Dilatation		1 (2%)	1 (2%)	
Bilateral, Infarct				1 (2%)
Bilateral, Infarct, Multiple				1 (2%)
Cortex, Renal Tubule, Accumulation, Hyaline Droplet			1 (2%)	1 (2%)
Glomerulus, Fibrosis	1 (2%)			
Papilla, Mineralization	12 (24%)	16 (32%)	10 (20%)	33 (66%)
Pelvis, Transitional Epithelium, Hyperplasia	1 (2%)	2 (4%)	1 (2%)	1 (2%)
Pelvis, Transitional Epithelium, Mineralization	1 (2%)			
Pelvis, Dilatation		1 (2%)	1 (2%)	
Pelvis, Hemorrhage			1 (2%)	
Renal Tubule, Casts		1 (2%)		
Renal Tubule, Mineralization		1 (2%)		
Urinary Bladder	(50)	(50)	(50)	(50)
Calculus Micro Observation Only	2 (4%)	1 (2%)	1 (2%)	1 (2%)
Cyst			1 (2%)	
Hemorrhage	1 (2%)	2 (4%)	2 (4%)	1 (2%)
Inflammation, Suppurative	1 (2%)			
Inflammation, Chronic		1 (2%)		
Necrosis			2 (4%)	
Transitional Epithelium, Hyperplasia	1 (2%)	2 (4%)	1 (2%)	2 (4%)



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FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM

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

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FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM
<b>Disposition Summary</b>				
Animals Initially in Study	50	50	50	50
Early Deaths				
Accidently Killed	2			
Moribund Sacrifice	15	21	12	20
Natural Death	6	5	2	4
Survivors				
Terminal Sacrifice	27	24	36	26
Animals Examined Microscopically	50	50	50	50
<b>ALIMENTARY SYSTEM</b>				
Intestine Large, Rectum	(49)	(48)	(50)	(50)
Intestine Small, Ileum	(45)	(46)	(48)	(47)
Necrosis		1 (2%)		
Intestine Small, Jejunum	(45)	(46)	(48)	(48)
Diverticulum		2 (4%)		
Liver	(50)	(50)	(50)	(50)
Angiectasis	3 (6%)	1 (2%)	2 (4%)	1 (2%)
Basophilic Focus	21 (42%)	23 (46%)	21 (42%)	21 (42%)
Basophilic Focus, Multiple	5 (10%)	5 (10%)	10 (20%)	8 (16%)
Clear Cell Focus	6 (12%)	6 (12%)	6 (12%)	2 (4%)
Clear Cell Focus, Multiple	3 (6%)		1 (2%)	
Eosinophilic Focus	1 (2%)		2 (4%)	1 (2%)
Hematopoietic Cell Proliferation				1 (2%)
Hepatodiaphragmatic Nodule	2 (4%)	6 (12%)	6 (12%)	7 (14%)
Inflammation, Suppurative			1 (2%)	
Necrosis	2 (4%)	1 (2%)	3 (6%)	1 (2%)
Thrombosis	1 (2%)		1 (2%)	
Vacuolization Cytoplasmic	8 (16%)	5 (10%)	1 (2%)	
Bile Duct, Bile Stasis	1 (2%)			
Bile Duct, Hyperplasia			2 (4%)	
Hepatocyte, Regeneration			1 (2%)	
Serosa, Fibrosis			1 (2%)	
Mesentery	(14)	(17)	(12)	(10)
Necrosis	14 (100%)	17 (100%)	12 (100%)	10 (100%)
Oral Mucosa	(1)	(0)	(1)	(0)
Inflammation, Suppurative	1 (100%)			

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FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM
Pancreas	(50)	(50)	(50)	(50)
Acinus, Atrophy	1 (2%)			
Duct, Cyst		1 (2%)		
Stomach, Forestomach	(50)	(50)	(50)	(50)
Diverticulum		1 (2%)		
Hyperplasia, Squamous		4 (8%)	2 (4%)	2 (4%)
Inflammation, Suppurative				1 (2%)
Ulcer	5 (10%)	5 (10%)	3 (6%)	2 (4%)
Epithelium, Muscularis, Inflammation, Suppurative		1 (2%)		
Stomach, Glandular	(49)	(50)	(50)	(50)
Erosion	2 (4%)			2 (4%)
Hyperplasia				1 (2%)
Ulcer		1 (2%)	1 (2%)	
Tongue	(0)	(1)	(2)	(0)
Epithelium, Hyperplasia		1 (100%)	1 (50%)	
CARDIOVASCULAR SYSTEM				
Blood Vessel	(0)	(1)	(0)	(1)
Infiltration Cellular, Polymorphonuclear		1 (100%)		
Inflammation				1 (100%)
Thrombosis				1 (100%)
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy			1 (2%)	
Atrium, Thrombosis	1 (2%)	1 (2%)		
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(50)
Angiectasis	3 (6%)			
Hyperplasia	7 (14%)	5 (10%)	10 (20%)	8 (16%)
Hypertrophy		1 (2%)		2 (4%)
Necrosis	1 (2%)	1 (2%)	1 (2%)	
Thrombosis				1 (2%)
Vacuolization Cytoplasmic	18 (36%)	18 (36%)	18 (36%)	12 (24%)
Adrenal Medulla	(49)	(50)	(50)	(50)
Hemorrhage		1 (2%)		
Hyperplasia			2 (4%)	3 (6%)
Islets, Pancreatic	(50)	(50)	(50)	(50)

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FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM
Pituitary Gland	(50)	(49)	(50)	(50)
Cyst	4 (8%)	5 (10%)	3 (6%)	2 (4%)
Hemorrhage	2 (4%)		1 (2%)	1 (2%)
Hyperplasia	7 (14%)	8 (16%)	8 (16%)	14 (28%)
Thyroid Gland	(50)	(50)	(50)	(50)
C-cell, Hyperplasia	8 (16%)	5 (10%)	9 (18%)	6 (12%)
Follicle, Cyst				1 (2%)
Follicular Cell, Hyperplasia				2 (4%)
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Clitoral Gland	(50)	(50)	(50)	(50)
Cyst	2 (4%)			
Hyperplasia	7 (14%)	6 (12%)	3 (6%)	4 (8%)
Inflammation, Chronic	2 (4%)		1 (2%)	
Ovary	(50)	(50)	(50)	(50)
Atrophy	1 (2%)			
Cyst	9 (18%)	2 (4%)	9 (18%)	8 (16%)
Uterus	(50)	(50)	(50)	(50)
Cyst			1 (2%)	
Hemorrhage	1 (2%)	1 (2%)	1 (2%)	2 (4%)
Hydrometra			1 (2%)	
Necrosis	1 (2%)			
Thrombosis			1 (2%)	1 (2%)
Cervix, Myometrium, Hyperplasia	2 (4%)			
Endometrium, Hyperplasia	6 (12%)	3 (6%)	4 (8%)	5 (10%)
Endometrium, Inflammation, Suppurative			1 (2%)	
Myometrium, Hyperplasia		1 (2%)		
Vagina	(0)	(1)	(0)	(1)
Infiltration Cellular, Mixed Cell				1 (100%)
HEMATOPOIETIC SYSTEM				
Lymph Node	(2)	(3)	(2)	(5)
Inflammation, Chronic Active				1 (20%)

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

FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM
Pancreatic, Hemorrhage			1 (50%)	
Lymph Node, Bronchial	(4)	(7)	(8)	(3)
Angiectasis	1 (25%)			
Congestion	1 (25%)			
Hemorrhage				1 (33%)
Hyperplasia, Lymphoid	1 (25%)	1 (14%)	1 (13%)	
Lymph Node, Mandibular	(3)	(0)	(1)	(1)
Lymph Node, Mediastinal	(26)	(25)	(21)	(28)
Hyperplasia, Lymphoid			1 (5%)	
Pigmentation				1 (4%)
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Congestion	1 (2%)			
Spleen	(50)	(50)	(50)	(50)
Accessory Spleen		1 (2%)		
Fibrosis	1 (2%)		2 (4%)	1 (2%)
Hematopoietic Cell Proliferation	2 (4%)	2 (4%)	2 (4%)	3 (6%)
Pigmentation				1 (2%)
Thymus	(50)	(48)	(48)	(48)
Cyst		1 (2%)		
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(50)	(50)
Galactocele	2 (4%)	3 (6%)	4 (8%)	1 (2%)
Inflammation, Suppurative		1 (2%)	1 (2%)	
Necrosis				1 (2%)
Duct, Cyst				1 (2%)
Epithelium, Hyperplasia	1 (2%)			
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion		1 (2%)		
Hyperkeratosis	1 (2%)	1 (2%)		
Inflammation, Chronic				1 (2%)
Ulcer		1 (2%)	3 (6%)	1 (2%)
Subcutaneous Tissue, Hemorrhage				1 (2%)
Subcutaneous Tissue, Inflammation, Granulomatous		1 (2%)		
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)

FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM
Maxilla, Fracture	1 (2%)			
Skeletal Muscle	(2)	(1)	(0)	(0)
Infiltration Cellular, Lipocyte	1 (50%)			
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Compression	7 (14%)	7 (14%)	11 (22%)	8 (16%)
Hemorrhage	6 (12%)	4 (8%)	5 (10%)	1 (2%)
Cerebellum, Hydrocephalus		1 (2%)		
Cerebrum, Infiltration Cellular, Mononuclear Cell, Focal	1 (2%)			
RESPIRATORY SYSTEM				
Larynx	(50)	(50)	(50)	(50)
Foreign Body	1 (2%)	1 (2%)	2 (4%)	3 (6%)
Inflammation, Suppurative	2 (4%)		1 (2%)	
Inflammation, Chronic	1 (2%)	1 (2%)		4 (8%)
Epiglottis, Metaplasia, Squamous	1 (2%)			1 (2%)
Respiratory Epithelium, Hyperplasia	1 (2%)	1 (2%)	2 (4%)	2 (4%)
Respiratory Epithelium, Metaplasia, Squamous			1 (2%)	
Lung	(50)	(50)	(50)	(50)
Hemorrhage	1 (2%)		1 (2%)	1 (2%)
Infiltration Cellular, Polymorphonuclear		1 (2%)		
Inflammation, Suppurative			1 (2%)	
Inflammation, Granulomatous		1 (2%)		
Inflammation, Chronic	5 (10%)	1 (2%)	6 (12%)	5 (10%)
Alveolar Epithelium, Hyperplasia	3 (6%)	6 (12%)	2 (4%)	5 (10%)
Alveolar Epithelium, Metaplasia, Squamous	1 (2%)			
Alveolus, Infiltration Cellular, Histiocyte	20 (40%)	19 (38%)	22 (44%)	30 (60%)
Bronchiole, Foreign Body		1 (2%)		
Bronchiole, Hyperplasia	1 (2%)			1 (2%)
Bronchiole, Inflammation, Chronic		1 (2%)		
Interstitialium, Fibrosis				1 (2%)
Nose	(49)	(49)	(50)	(50)
Foreign Body	1 (2%)	2 (4%)	3 (6%)	2 (4%)
Inflammation, Suppurative	2 (4%)	5 (10%)	6 (12%)	6 (12%)

TDMS No. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

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

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 02/02/2006

Time Report Requested: 13:44:41

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

Lab: BNW

FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM
Inflammation, Chronic				1 (2%)
Glands, Dilatation			2 (4%)	
Goblet Cell, Hyperplasia	1 (2%)	1 (2%)	3 (6%)	3 (6%)
Nasolacrimal Duct, Inflammation, Suppurative	1 (2%)	1 (2%)	4 (8%)	2 (4%)
Olfactory Epithelium, Degeneration	1 (2%)	1 (2%)	7 (14%)	24 (48%)
Olfactory Epithelium, Degeneration, Hyaline	4 (8%)	8 (16%)	6 (12%)	4 (8%)
Olfactory Epithelium, Hyperplasia, Basal Cell		14 (29%)	30 (60%)	49 (98%)
Olfactory Epithelium, Metaplasia	1 (2%)			1 (2%)
Respiratory Epithelium, Degeneration, Hyaline	1 (2%)	3 (6%)	2 (4%)	
Respiratory Epithelium, Hyperplasia		1 (2%)	1 (2%)	1 (2%)
Respiratory Epithelium, Metaplasia, Squamous	1 (2%)		2 (4%)	2 (4%)
Pleura	(16)	(13)	(15)	(30)
Inflammation, Chronic	16 (100%)	13 (100%)	15 (100%)	27 (90%)
Mesothelium, Hyperplasia				1 (3%)
SPECIAL SENSES SYSTEM				
Eye	(48)	(49)	(50)	(50)
Atrophy				2 (4%)
Inflammation, Suppurative	1 (2%)			
Anterior Chamber, Hemorrhage				1 (2%)
Lens, Cataract	5 (10%)	1 (2%)	4 (8%)	5 (10%)
Lens, Mineralization			3 (6%)	
Retina, Atrophy	2 (4%)			2 (4%)
Sclera, Metaplasia, Osseous		1 (2%)		
URINARY SYSTEM				
Kidney	(49)	(50)	(50)	(50)
Cyst			1 (2%)	
Infiltration Cellular, Lipocyte			1 (2%)	
Nephropathy	34 (69%)	27 (54%)	35 (70%)	31 (62%)
Capsule, Hemorrhage		1 (2%)		
Cortex, Infarct		1 (2%)		1 (2%)
Cortex, Infarct, Multiple			1 (2%)	

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

TDMS No. 88006 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

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

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 02/02/2006

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

Lab: BNW

FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM
Papilla, Mineralization	1 (2%)	6 (12%)	8 (16%)	7 (14%)
Pelvis, Transitional Epithelium, Hyperplasia	5 (10%)	3 (6%)		
Pelvis, Transitional Epithelium, Mineralization	31 (63%)	26 (52%)	31 (62%)	16 (32%)
Pelvis, Dilatation		1 (2%)		
Renal Tubule, Degeneration	1 (2%)			
Renal Tubule, Pigmentation				2 (4%)
Ureter	(1)	(0)	(0)	(0)
Transitional Epithelium, Hyperplasia	1 (100%)			
Urinary Bladder	(50)	(50)	(50)	(50)
Serosa, Edema		1 (2%)		
Transitional Epithelium, Hyperplasia		1 (2%)		2 (4%)

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