

**TDMS No.** 99017 - 05

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

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

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

Diethylamine

**CAS Number:** 109-89-7

**Date Report Requested:** 12/30/2008

**Time Report Requested:** 09:38:54

**First Dose M/F:** 08/25/03 / 08/25/03

**Lab:** BNW

F1\_R2

**C Number:** C99017  
**Lock Date:** 07/24/2006  
**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

FISCHER 344 RATS MALE	CONTROL	31 PPM	62.5 PPM	125 PPM
<b>Disposition Summary</b>				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	19	24	20	13
Natural Death	3	5	5	1
Survivors				
Terminal Sacrifice	28	21	25	36
Animals Examined Microscopically	50	50	50	50

## ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Intestine Large, Cecum	(49)	(47)	(49)	(50)
Necrosis	1 (2%)		1 (2%)	
Serosa, Inflammation, Suppurative		1 (2%)		
Intestine Small, Duodenum	(49)	(49)	(49)	(50)
Intestine Small, Ileum	(48)	(47)	(46)	(49)
Necrosis			1 (2%)	
Intestine Small, Jejunum	(48)	(47)	(48)	(50)
Inflammation, Suppurative		1 (2%)		
Ulcer		1 (2%)		
Artery, Inflammation, Chronic				1 (2%)
Liver	(50)	(50)	(50)	(50)
Angiectasis			1 (2%)	
Basophilic Focus	2 (4%)	2 (4%)	3 (6%)	5 (10%)
Basophilic Focus, Multiple	6 (12%)	1 (2%)	1 (2%)	
Clear Cell Focus	3 (6%)	8 (16%)	2 (4%)	4 (8%)
Clear Cell Focus, Multiple	9 (18%)	1 (2%)	2 (4%)	6 (12%)
Degeneration, Cystic	1 (2%)			
Hepatodiaphragmatic Nodule	4 (8%)	2 (4%)	4 (8%)	
Necrosis	1 (2%)	2 (4%)	1 (2%)	
Vacuolization Cytoplasmic	5 (10%)	4 (8%)	5 (10%)	2 (4%)
Bile Duct, Cyst		1 (2%)		
Bile Duct, Dilatation				1 (2%)
Bile Duct, Hyperplasia			1 (2%)	1 (2%)
Kupffer Cell, Pigmentation	1 (2%)			
Periportal, Inflammation, Chronic	1 (2%)	1 (2%)	1 (2%)	
Periportal, Pigmentation				1 (2%)
Mesentery	(10)	(13)	(16)	(10)
Inflammation, Chronic			1 (6%)	
Necrosis	9 (90%)	12 (92%)	13 (81%)	10 (100%)
Fat, Hemorrhage	1 (10%)	1 (8%)	1 (6%)	

FISCHER 344 RATS MALE	CONTROL	31 PPM	62.5 PPM	125 PPM
Pancreas	(49)	(50)	(50)	(50)
Acinus, Atrophy	24 (49%)	22 (44%)	29 (58%)	31 (62%)
Acinus, Hyperplasia				1 (2%)
Duct, Cyst	1 (2%)			1 (2%)
Salivary Glands	(50)	(50)	(50)	(50)
Duct, Cyst	1 (2%)			
Stomach, Forestomach	(50)	(50)	(50)	(50)
Diverticulum	1 (2%)			
Hyperplasia, Squamous	2 (4%)			
Inflammation, Suppurative			1 (2%)	
Ulcer	1 (2%)	4 (8%)	2 (4%)	2 (4%)
Muscularis, Degeneration				1 (2%)
Stomach, Glandular	(50)	(50)	(50)	(50)
Erosion			3 (6%)	
Inflammation, Chronic Active				1 (2%)
Tongue	(0)	(0)	(1)	(0)
Epithelium, Hyperplasia			1 (100%)	
<b>CARDIOVASCULAR SYSTEM</b>				
Blood Vessel	(0)	(0)	(1)	(1)
Adventitia, Inflammation, Chronic				1 (100%)
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	23 (46%)	24 (48%)	21 (42%)	25 (50%)
Atrium, Thrombosis	1 (2%)	4 (8%)	3 (6%)	
Atrium, Ventricle, Thrombosis			1 (2%)	
Myocardium, Mineralization				1 (2%)
Ventricle, Thrombosis			1 (2%)	
<b>ENDOCRINE SYSTEM</b>				
Adrenal Cortex	(50)	(50)	(50)	(50)
Atrophy	1 (2%)	1 (2%)	1 (2%)	
Hyperplasia	15 (30%)	17 (34%)	10 (20%)	12 (24%)
Hyperplasia, Focal		1 (2%)	1 (2%)	
Necrosis		1 (2%)		
Vacuolization Cytoplasmic	9 (18%)	7 (14%)	16 (32%)	6 (12%)
Adrenal Medulla	(50)	(50)	(50)	(49)
Hyperplasia	15 (30%)	18 (36%)	25 (50%)	17 (35%)
Bilateral, Hyperplasia	1 (2%)			1 (2%)
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	1 (2%)	1 (2%)		1 (2%)
Pituitary Gland	(50)	(48)	(50)	(50)
Atrophy	1 (2%)		1 (2%)	

FISCHER 344 RATS MALE	CONTROL	31 PPM	62.5 PPM	125 PPM
Cyst	2 (4%)			1 (2%)
Hemorrhage	1 (2%)	1 (2%)	1 (2%)	
Pars Distalis, Hyperplasia	7 (14%)	9 (19%)	9 (18%)	7 (14%)
Thyroid Gland	(50)	(50)	(50)	(50)
Cyst				1 (2%)
Ultimobranchial Cyst				1 (2%)
C-cell, Hyperplasia	17 (34%)	13 (26%)	7 (14%)	11 (22%)
Follicular Cell, Hyperplasia	1 (2%)		1 (2%)	1 (2%)
<b>GENERAL BODY SYSTEM</b>				
Peritoneum	(0)	(1)	(1)	(1)
Mesothelium, Tunica Vaginalis, Hyperplasia				1 (100%)
<b>GENITAL SYSTEM</b>				
Epididymis	(50)	(50)	(50)	(50)
Necrosis, Fatty	1 (2%)			
Preputial Gland	(50)	(50)	(50)	(50)
Cyst	2 (4%)			2 (4%)
Hyperplasia		3 (6%)	1 (2%)	1 (2%)
Inflammation, Suppurative		1 (2%)		1 (2%)
Prostate	(50)	(50)	(50)	(50)
Hyperplasia	2 (4%)		1 (2%)	4 (8%)
Inflammation, Suppurative	29 (58%)	28 (56%)	29 (58%)	26 (52%)
Seminal Vesicle	(50)	(50)	(50)	(50)
Cyst			1 (2%)	
Inflammation, Suppurative			1 (2%)	2 (4%)
Testes	(50)	(50)	(50)	(50)
Mineralization		2 (4%)	1 (2%)	
Artery, Inflammation, Chronic Active	1 (2%)			1 (2%)
Germinal Epithelium, Atrophy	9 (18%)	11 (22%)	7 (14%)	15 (30%)
Germinal Epithelium, Mineralization	1 (2%)			
Interstitial Cell, Hyperplasia	2 (4%)		1 (2%)	2 (4%)
Tunic, Hyperplasia				1 (2%)
<b>HEMATOPOIETIC SYSTEM</b>				
Bone Marrow	(50)	(50)	(50)	(50)
Hyperplasia, Reticulum Cell	2 (4%)		1 (2%)	
Lymph Node	(10)	(5)	(10)	(10)
Ectasia		1 (20%)		
Deep Cervical, Hemorrhage				1 (10%)

FISCHER 344 RATS MALE	CONTROL	31 PPM	62.5 PPM	125 PPM
Deep Cervical, Pigmentation				1 (10%)
Pancreatic, Infiltration Cellular, Histiocyte	1 (10%)			
Pancreatic, Pigmentation	1 (10%)			
Lymph Node, Bronchial	(4)	(4)	(3)	(5)
Ectasia				1 (20%)
Hyperplasia, Lymphoid		1 (25%)		
Pigmentation				1 (20%)
Lymph Node, Mandibular	(0)	(0)	(1)	(1)
Ectasia				1 (100%)
Lymph Node, Mediastinal	(30)	(24)	(35)	(29)
Infiltration Cellular, Histiocyte	1 (3%)			1 (3%)
Lymph Node, Mesenteric	(49)	(50)	(50)	(49)
Ectasia		1 (2%)		
Hyperplasia, Lymphoid				1 (2%)
Spleen	(50)	(50)	(50)	(50)
Hematopoietic Cell Proliferation	1 (2%)	1 (2%)	3 (6%)	1 (2%)
Hemorrhage	2 (4%)	2 (4%)	2 (4%)	
Hyperplasia, Lymphoid	1 (2%)			
Necrosis	1 (2%)	3 (6%)	2 (4%)	3 (6%)
Thrombosis	1 (2%)			
Capsule, Fibrosis	1 (2%)			
Thymus	(44)	(43)	(47)	(45)
Hyperplasia, Tubular	1 (2%)			
<b>INTEGUMENTARY SYSTEM</b>				
Mammary Gland	(50)	(50)	(50)	(49)
Galactoceles	1 (2%)	1 (2%)	3 (6%)	2 (4%)
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion		5 (10%)	3 (6%)	1 (2%)
Hyperkeratosis			1 (2%)	
Inflammation, Suppurative		1 (2%)		
Ulcer		2 (4%)	1 (2%)	1 (2%)
Sebaceous Gland, Hyperplasia	1 (2%)			
<b>MUSCULOSKELETAL SYSTEM</b>				
Bone	(50)	(50)	(50)	(50)
Cranium, Fracture				1 (2%)
Skeletal Muscle	(0)	(1)	(1)	(1)
<b>NERVOUS SYSTEM</b>				

FISCHER 344 RATS MALE	CONTROL	31 PPM	62.5 PPM	125 PPM
Brain	(50)	(50)	(50)	(50)
Compression	9 (18%)	11 (22%)	6 (12%)	4 (8%)
Gliosis	2 (4%)			
Hemorrhage	2 (4%)	8 (16%)	5 (10%)	
Hydrocephalus	1 (2%)	1 (2%)	1 (2%)	
Inflammation, Suppurative				1 (2%)
Necrosis				1 (2%)
<b>RESPIRATORY SYSTEM</b>				
Larynx	(50)	(50)	(50)	(50)
Foreign Body	2 (4%)	3 (6%)	3 (6%)	2 (4%)
Inflammation, Suppurative	1 (2%)	1 (2%)	1 (2%)	4 (8%)
Inflammation, Chronic	1 (2%)			
Epiglottis, Hyperplasia			1 (2%)	
Epiglottis, Metaplasia, Squamous		1 (2%)		
Respiratory Epithelium, Metaplasia, Squamous				1 (2%)
Lung	(50)	(50)	(50)	(50)
Edema	1 (2%)			
Hemorrhage	5 (10%)	3 (6%)	4 (8%)	5 (10%)
Inflammation, Suppurative		4 (8%)		2 (4%)
Inflammation, Chronic	8 (16%)	8 (16%)	8 (16%)	10 (20%)
Metaplasia, Osseous		1 (2%)		2 (4%)
Alveolar Epithelium, Hyperplasia	6 (12%)	7 (14%)	6 (12%)	5 (10%)
Alveolar Epithelium, Metaplasia, Squamous				1 (2%)
Alveolus, Infiltration Cellular, Histiocyte	15 (30%)	12 (24%)	19 (38%)	20 (40%)
Alveolus, Metaplasia, Osseous				1 (2%)
Alveolus, Mineralization				1 (2%)
Alveolus, Proteinosis	1 (2%)		2 (4%)	1 (2%)
Artery, Thrombosis		2 (4%)		
Bronchiole, Hyperplasia				2 (4%)
Interstitial, Fibrosis	1 (2%)			3 (6%)
Nose	(49)	(50)	(50)	(50)
Foreign Body	6 (12%)	3 (6%)	4 (8%)	2 (4%)
Hemorrhage		1 (2%)		
Inflammation, Suppurative	5 (10%)	5 (10%)	10 (20%)	29 (58%)
Inflammation, Chronic	1 (2%)			
Thrombosis				1 (2%)
Glands, Olfactory Epithelium, Accumulation, Hyaline Droplet				1 (2%)
Glands, Respiratory Epithelium, Accumulation, Hyaline Droplet	6 (12%)	45 (90%)	42 (84%)	45 (90%)
Glands, Respiratory Epithelium, Hyperplasia	44 (90%)	46 (92%)	46 (92%)	48 (96%)
Goblet Cell, Hyperplasia			2 (4%)	13 (26%)

FISCHER 344 RATS MALE	CONTROL	31 PPM	62.5 PPM	125 PPM
Nasolacrimal Duct, Inflammation, Suppurative			1 (2%)	
Olfactory Epithelium, Accumulation, Hyaline Droplet	8 (16%)	49 (98%)	49 (98%)	42 (84%)
Olfactory Epithelium, Atrophy	2 (4%)	49 (98%)	50 (100%)	50 (100%)
Olfactory Epithelium, Degeneration, Hyaline		1 (2%)		1 (2%)
Olfactory Epithelium, Hyperplasia, Basal Cell			22 (44%)	50 (100%)
Olfactory Epithelium, Metaplasia, Squamous		2 (4%)		1 (2%)
Olfactory Epithelium, Necrosis		1 (2%)		2 (4%)
Olfactory Epithelium, Respiratory Metaplasia	2 (4%)	2 (4%)	2 (4%)	37 (74%)
Olfactory Epithelium, Vacuolization		2 (4%)	8 (16%)	1 (2%)
Cytoplasmic				
Respiratory Epithelium, Accumulation, Hyaline Droplet		29 (58%)	42 (84%)	11 (22%)
Respiratory Epithelium, Hyperplasia	5 (10%)	34 (68%)	35 (70%)	47 (94%)
Respiratory Epithelium, Inflammation, Chronic				1 (2%)
Respiratory Epithelium, Metaplasia, Squamous		2 (4%)	6 (12%)	26 (52%)
Respiratory Epithelium, Necrosis			1 (2%)	4 (8%)
Respiratory Epithelium, Ulcer			2 (4%)	22 (44%)
Respiratory Epithelium, Vacuolization		5 (10%)	8 (16%)	3 (6%)
Cytoplasmic				
Turbinate, Hyperostosis				3 (6%)
Turbinate, Necrosis			1 (2%)	19 (38%)
Pleura	(50)	(50)	(50)	(50)
Fibrosis	1 (2%)			
Hyperplasia		1 (2%)		
Inflammation, Chronic	3 (6%)	4 (8%)	3 (6%)	9 (18%)
Trachea	(50)	(50)	(50)	(50)

## SPECIAL SENSES SYSTEM

Eye	(49)	(50)	(50)	(50)
Anterior Chamber, Inflammation, Suppurative			1 (2%)	2 (4%)
Cornea, Fibrosis	1 (2%)			
Cornea, Hyperplasia				1 (2%)
Cornea, Inflammation, Suppurative			1 (2%)	5 (10%)
Cornea, Inflammation, Chronic				2 (4%)
Cornea, Inflammation, Chronic Active				1 (2%)
Cornea, Mineralization			1 (2%)	1 (2%)
Cornea, Vacuolization Cytoplasmic				3 (6%)
Lens, Cataract	1 (2%)	3 (6%)	1 (2%)	5 (10%)
Retina, Atrophy	1 (2%)	3 (6%)	1 (2%)	3 (6%)
Retina, Dysplasia				1 (2%)
Sclera, Metaplasia, Osseous	11 (22%)	9 (18%)	13 (26%)	6 (12%)
Sclera, Mineralization	1 (2%)	1 (2%)	1 (2%)	

FISCHER 344 RATS MALE	CONTROL	31 PPM	62.5 PPM	125 PPM
Harderian Gland	(50)	(50)	(50)	(50)
Hyperplasia				1 (2%)
Inflammation, Chronic	1 (2%)	1 (2%)		2 (4%)
Zymbal's Gland	(1)	(3)	(0)	(2)
<b>URINARY SYSTEM</b>				
Kidney	(50)	(50)	(50)	(50)
Nephropathy, Chronic	44 (88%)	39 (78%)	40 (80%)	39 (78%)
Cortex, Cyst	1 (2%)			
Cortex, Infarct		2 (4%)	2 (4%)	2 (4%)
Cortex, Renal Tubule, Accumulation, Hyaline Droplet	1 (2%)			
Cortex, Renal Tubule, Casts Granular, Focal	1 (2%)			1 (2%)
Cortex, Renal Tubule, Hyperplasia, Atypical		1 (2%)		
Cortex, Renal Tubule, Mineralization		1 (2%)		
Cortex, Renal Tubule, Necrosis		3 (6%)		
Papilla, Mineralization	2 (4%)	1 (2%)		
Pelvis, Dilatation				1 (2%)
Pelvis, Inflammation, Suppurative				4 (8%)
Pelvis, Transitional Epithelium, Hyperplasia		1 (2%)	2 (4%)	
Pelvis, Transitional Epithelium, Mineralization		1 (2%)	1 (2%)	
Urinary Bladder	(50)	(50)	(49)	(50)
Hemorrhage	1 (2%)	1 (2%)		
Infiltration Cellular, Histiocyte	1 (2%)			
Muscularis, Pigmentation	1 (2%)			
Transitional Epithelium, Hemorrhage			1 (2%)	
Transitional Epithelium, Hyperplasia	1 (2%)			2 (4%)

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



FISCHER 344 RATS FEMALE	CONTROL	31 PPM	62.5 PPM	125 PPM
<b>Disposition Summary</b>				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	17	15	18	15
Natural Death	2	4	2	
Survivors				
Moribund Sacrifice			1	1
Terminal Sacrifice	31	31	29	34
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Intestine Large, Colon	(49)	(47)	(50)	(50)
Epithelium, Hyperplasia, Focal	1 (2%)			
Liver	(50)	(50)	(50)	(50)
Angiectasis	3 (6%)	1 (2%)	3 (6%)	3 (6%)
Basophilic Focus	3 (6%)	1 (2%)	4 (8%)	7 (14%)
Basophilic Focus, Multiple	17 (34%)	13 (26%)	19 (38%)	15 (30%)
Clear Cell Focus	8 (16%)	8 (16%)	6 (12%)	4 (8%)
Clear Cell Focus, Multiple	8 (16%)	1 (2%)	2 (4%)	3 (6%)
Degeneration, Cystic		1 (2%)		
Hemorrhage	1 (2%)		2 (4%)	
Hepatodiaphragmatic Nodule	9 (18%)	6 (12%)	2 (4%)	9 (18%)
Necrosis		1 (2%)	1 (2%)	
Thrombosis	1 (2%)			
Vacuolization Cytoplasmic	3 (6%)	8 (16%)	6 (12%)	2 (4%)
Artery, Inflammation			1 (2%)	
Bile Duct, Hyperplasia			1 (2%)	
Hepatocyte, Regeneration			1 (2%)	
Periportal, Inflammation, Chronic		1 (2%)		
Periportal, Pigmentation			1 (2%)	
Mesentery	(16)	(15)	(18)	(10)
Necrosis	15 (94%)	14 (93%)	17 (94%)	10 (100%)
Artery, Inflammation			1 (6%)	
Pancreas	(50)	(50)	(50)	(50)
Inflammation, Chronic				1 (2%)
Acinus, Atrophy	1 (2%)	1 (2%)	1 (2%)	4 (8%)
Artery, Inflammation		1 (2%)	1 (2%)	
Stomach, Forestomach	(50)	(50)	(50)	(50)
Erosion		1 (2%)		
Hyperplasia, Squamous	1 (2%)			
Inflammation, Suppurative	2 (4%)			

FISCHER 344 RATS FEMALE	CONTROL	31 PPM	62.5 PPM	125 PPM
Ulcer	1 (2%)	3 (6%)	1 (2%)	1 (2%)
Stomach, Glandular	(50)	(50)	(50)	(50)
Ulcer	1 (2%)	1 (2%)		
Tongue	(0)	(2)	(0)	(1)
Epithelium, Hyperplasia		1 (50%)		1 (100%)
<b>CARDIOVASCULAR SYSTEM</b>				
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	16 (32%)	17 (34%)	23 (46%)	16 (32%)
Atrium, Ventricle, Thrombosis	1 (2%)			
<b>ENDOCRINE SYSTEM</b>				
Adrenal Cortex	(50)	(50)	(50)	(50)
Atrophy	1 (2%)			
Hemorrhage	1 (2%)			1 (2%)
Hyperplasia	12 (24%)	6 (12%)	15 (30%)	18 (36%)
Hyperplasia, Focal	1 (2%)	1 (2%)	3 (6%)	
Necrosis	1 (2%)	1 (2%)		
Vacuolization Cytoplasmic	14 (28%)	13 (26%)	13 (26%)	11 (22%)
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia	6 (12%)	1 (2%)	2 (4%)	
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia		1 (2%)		
Parathyroid Gland	(43)	(42)	(48)	(48)
Pituitary Gland	(50)	(50)	(50)	(50)
Cyst		1 (2%)	1 (2%)	1 (2%)
Hemorrhage	2 (4%)	2 (4%)		2 (4%)
Pars Distalis, Hyperplasia	9 (18%)	10 (20%)	7 (14%)	18 (36%)
Thyroid Gland	(50)	(50)	(50)	(50)
Ultimobranchial Cyst	1 (2%)			
C-cell, Hyperplasia	25 (50%)	18 (36%)	25 (50%)	21 (42%)
Follicular Cell, Hyperplasia	1 (2%)			
<b>GENERAL BODY SYSTEM</b>				
Tissue NOS	(1)	(0)	(0)	(0)
<b>GENITAL SYSTEM</b>				
Clitoral Gland	(50)	(50)	(50)	(50)

FISCHER 344 RATS FEMALE	CONTROL	31 PPM	62.5 PPM	125 PPM
Cyst	1 (2%)	1 (2%)	2 (4%)	4 (8%)
Hyperplasia	2 (4%)	5 (10%)	4 (8%)	6 (12%)
Inflammation, Chronic	1 (2%)			
Ovary	(50)	(50)	(50)	(50)
Cyst	7 (14%)	5 (10%)	4 (8%)	4 (8%)
Uterus	(50)	(50)	(50)	(50)
Hemorrhage			2 (4%)	1 (2%)
Thrombosis			1 (2%)	2 (4%)
Endometrium, Hyperplasia	1 (2%)	1 (2%)	1 (2%)	2 (4%)
Vagina	(1)	(0)	(0)	(0)
Cyst	1 (100%)			
<b>HEMATOPOIETIC SYSTEM</b>				
Bone Marrow	(50)	(50)	(50)	(50)
Hyperplasia, Reticulum Cell	2 (4%)	1 (2%)	1 (2%)	3 (6%)
Myelofibrosis	1 (2%)			
Lymph Node	(3)	(0)	(1)	(1)
Lymph Node, Bronchial	(4)	(1)	(5)	(7)
Hemorrhage		1 (100%)		
Hyperplasia, Histiocytic	1 (25%)			
Infiltration Cellular, Histiocyte				1 (14%)
Lymph Node, Mandibular	(2)	(0)	(1)	(2)
Lymph Node, Mediastinal	(33)	(27)	(25)	(29)
Hyperplasia, Lymphoid				1 (3%)
Infiltration Cellular, Histiocyte				1 (3%)
Pigmentation				2 (7%)
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Spleen	(50)	(50)	(50)	(50)
Atrophy	1 (2%)			
Fibrosis				
Hematopoietic Cell Proliferation	7 (14%)	3 (6%)	4 (8%)	3 (6%)
Hemorrhage	1 (2%)			
Hyperplasia, Histiocytic		1 (2%)		1 (2%)
Necrosis	1 (2%)		1 (2%)	
Pigmentation	1 (2%)	1 (2%)		
Stromal Hyperplasia	1 (2%)			
Thymus	(48)	(44)	(40)	(47)
<b>INTEGUMENTARY SYSTEM</b>				
Mammary Gland	(50)	(50)	(50)	(50)
Galactocele	4 (8%)	3 (6%)	5 (10%)	3 (6%)
Skin	(50)	(50)	(50)	(50)

FISCHER 344 RATS FEMALE	CONTROL	31 PPM	62.5 PPM	125 PPM
Cyst Epithelial Inclusion	1 (2%)	1 (2%)	1 (2%)	2 (4%)
Ulcer	6 (12%)	2 (4%)	1 (2%)	3 (6%)
Subcutaneous Tissue, Cyst		1 (2%)		
Subcutaneous Tissue, Fibrosis			1 (2%)	
<b>MUSCULOSKELETAL SYSTEM</b>				
Bone	(50)	(50)	(50)	(50)
Cranium, Inflammation, Suppurative				1 (2%)
<b>NERVOUS SYSTEM</b>				
Brain	(50)	(50)	(50)	(50)
Compression	12 (24%)	11 (22%)	14 (28%)	9 (18%)
Hemorrhage	4 (8%)	1 (2%)	2 (4%)	5 (10%)
Meninges, Hemorrhage	1 (2%)			
Meninges, Inflammation, Chronic			1 (2%)	
Ventricle, Hemorrhage	1 (2%)			
Spinal Cord	(0)	(0)	(1)	(0)
<b>RESPIRATORY SYSTEM</b>				
Larynx	(50)	(50)	(50)	(50)
Foreign Body	4 (8%)	6 (12%)	4 (8%)	1 (2%)
Inflammation, Suppurative	2 (4%)	1 (2%)	2 (4%)	2 (4%)
Epiglottis, Metaplasia, Squamous			2 (4%)	
Respiratory Epithelium, Metaplasia, Squamous		2 (4%)		
Lung	(50)	(50)	(50)	(50)
Hemorrhage	6 (12%)	2 (4%)	1 (2%)	2 (4%)
Inflammation, Chronic	4 (8%)	11 (22%)	7 (14%)	24 (48%)
Metaplasia, Osseous			1 (2%)	
Alveolar Epithelium, Hyperplasia	3 (6%)	6 (12%)	4 (8%)	3 (6%)
Alveolar Epithelium, Metaplasia, Squamous				1 (2%)
Alveolus, Infiltration Cellular, Histiocyte	13 (26%)	24 (48%)	27 (54%)	35 (70%)
Alveolus, Proteinosis			1 (2%)	2 (4%)
Bronchiole, Hyperplasia	1 (2%)	1 (2%)		
Interstitial, Fibrosis	1 (2%)	2 (4%)		2 (4%)
Perivascular, Infiltration Cellular, Lymphocyte			1 (2%)	
Nose	(50)	(49)	(50)	(50)
Foreign Body	6 (12%)	1 (2%)	1 (2%)	2 (4%)
Inflammation, Suppurative	6 (12%)	4 (8%)	15 (30%)	34 (68%)
Glands, Respiratory Epithelium, Accumulation,	9 (18%)	46 (94%)	45 (90%)	44 (88%)

FISCHER 344 RATS FEMALE	CONTROL	31 PPM	62.5 PPM	125 PPM
Hyaline Droplet				
Glands, Respiratory Epithelium, Hyperplasia	45 (90%)	49 (100%)	48 (96%)	49 (98%)
Goblet Cell, Hyperplasia	1 (2%)		4 (8%)	20 (40%)
Nasolacrimal Duct, Inflammation, Suppurative	2 (4%)	2 (4%)		
Olfactory Epithelium, Accumulation, Hyaline Droplet	11 (22%)	49 (100%)	50 (100%)	48 (96%)
Olfactory Epithelium, Atrophy	1 (2%)	47 (96%)	48 (96%)	50 (100%)
Olfactory Epithelium, Hyperplasia				1 (2%)
Olfactory Epithelium, Hyperplasia, Basal Cell		3 (6%)	29 (58%)	48 (96%)
Olfactory Epithelium, Metaplasia, Squamous			1 (2%)	
Olfactory Epithelium, Mineralization				1 (2%)
Olfactory Epithelium, Necrosis		2 (4%)	3 (6%)	
Olfactory Epithelium, Respiratory Metaplasia	3 (6%)	1 (2%)	2 (4%)	19 (38%)
Olfactory Epithelium, Vacuolization		1 (2%)	4 (8%)	3 (6%)
Cytoplasmic				
Respiratory Epithelium, Accumulation, Hyaline Droplet	4 (8%)	48 (98%)	46 (92%)	39 (78%)
Respiratory Epithelium, Hyperplasia	7 (14%)	31 (63%)	41 (82%)	50 (100%)
Respiratory Epithelium, Inflammation, Chronic		1 (2%)		
Respiratory Epithelium, Metaplasia, Squamous	1 (2%)	1 (2%)	5 (10%)	39 (78%)
Respiratory Epithelium, Necrosis			1 (2%)	4 (8%)
Respiratory Epithelium, Ulcer				34 (68%)
Respiratory Epithelium, Vacuolization		1 (2%)	4 (8%)	3 (6%)
Cytoplasmic				
Turbinates, Hyperostosis				2 (4%)
Turbinates, Necrosis				32 (64%)
Pleura	(50)	(50)	(50)	(50)
Inflammation, Chronic	6 (12%)	14 (28%)	12 (24%)	21 (42%)
<b>SPECIAL SENSES SYSTEM</b>				
Eye	(50)	(50)	(50)	(50)
Anterior Chamber, Inflammation, Suppurative				1 (2%)
Bilateral, Lens, Cataract			1 (2%)	
Cornea, Inflammation, Suppurative		2 (4%)	2 (4%)	1 (2%)
Cornea, Mineralization			1 (2%)	
Cornea, Vacuolization Cytoplasmic			1 (2%)	
Lens, Cataract	3 (6%)	2 (4%)	5 (10%)	4 (8%)
Retina, Atrophy	4 (8%)	2 (4%)	8 (16%)	6 (12%)
Sclera, Metaplasia, Osseous	4 (8%)	2 (4%)	2 (4%)	2 (4%)
Harderian Gland	(50)	(50)	(50)	(50)
Inflammation, Chronic			1 (2%)	
Zymbal's Gland	(0)	(2)	(0)	(0)

TDMS No. 99017 - 05

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344/N

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

Diethylamine

CAS Number: 109-89-7

Date Report Requested: 12/30/2008

Time Report Requested: 09:38:54

First Dose M/F: 08/25/03 / 08/25/03

Lab: BNW

FISCHER 344 RATS FEMALE	CONTROL	31 PPM	62.5 PPM	125 PPM
<b>URINARY SYSTEM</b>				
Kidney	(50)	(50)	(50)	(50)
Nephropathy, Chronic	26 (52%)	31 (62%)	30 (60%)	24 (48%)
Cortex, Infarct			1 (2%)	1 (2%)
Cortex, Renal Tubule, Accumulation, Hyaline Droplet				1 (2%)
Cortex, Renal Tubule, Necrosis			1 (2%)	
Papilla, Mineralization	12 (24%)	13 (26%)	9 (18%)	4 (8%)
Pelvis, Transitional Epithelium, Hyperplasia		2 (4%)	2 (4%)	
Pelvis, Transitional Epithelium, Mineralization	2 (4%)			1 (2%)
Renal Tubule, Vacuolization Cytoplasmic		1 (2%)		
Urinary Bladder	(50)	(50)	(50)	(50)
Hemorrhage			1 (2%)	
Transitional Epithelium, Hyperplasia			1 (2%)	1 (2%)

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