

**TDMS No.** 99013 - 05  
**Test Type:** Chronic PN  
**Route:** DOSED FEED  
**Species/Strain:** RATS/F 344/N

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

Styrene-acrylonitrile trimer  
**CAS Number:** SANTRIMER2

**Date Report Requested:** 09/23/2010  
**Time Report Requested:** 12:12:35  
**First Dose M/F:** 05/12/05 / 05/13/05  
**Lab:** BAT

F2\_R2

**C Number:** C99013  
**Lock Date:** 03/27/2008  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 2.2.0

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FISCHER 344 RATS MALE	0 PPM	400 PPM	800 PPM	1600 PPM
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**Disposition Summary**

<b>Animals Initially In Study</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>
<b>Early Deaths</b>				
<b>Moribund Sacrifice</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>4</b>
<b>Natural Death</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>2</b>
<b>Survivors</b>				
<b>Terminal Sacrifice</b>	<b>36</b>	<b>39</b>	<b>39</b>	<b>44</b>
<b>Animals Examined Microscopically</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>

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ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Inflammation	1 (2%)			
Intestine Large, Cecum	(49)	(50)	(50)	(50)
Inflammation	1 (2%)			
Necrosis	1 (2%)			
Intestine Large, Colon	(50)	(50)	(50)	(50)
Mineralization	1 (2%)			
Parasite Metazoan	9 (18%)	9 (18%)	2 (4%)	5 (10%)
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Inflammation	1 (2%)			
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Intestine Small, Ileum	(50)	(50)	(50)	(50)
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Liver	(50)	(50)	(50)	(50)
Angiectasis	1 (2%)	5 (10%)	1 (2%)	9 (18%)
Basophilic Focus	27 (54%)	29 (58%)	25 (50%)	34 (68%)
Clear Cell Focus	25 (50%)	25 (50%)	27 (54%)	33 (66%)
Degeneration, Cystic	7 (14%)	9 (18%)	11 (22%)	9 (18%)
Eosinophilic Focus	17 (34%)	19 (38%)	22 (44%)	33 (66%)
Fatty Change, Diffuse	1 (2%)	6 (12%)	3 (6%)	
Fibrosis	1 (2%)	1 (2%)	1 (2%)	1 (2%)
Hematopoietic Cell Proliferation	2 (4%)	3 (6%)	4 (8%)	1 (2%)
Hepatodiaphragmatic Nodule	4 (8%)	5 (10%)	3 (6%)	2 (4%)
Inflammation, Chronic Active	34 (68%)	40 (80%)	38 (76%)	43 (86%)

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

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FISCHER 344 RATS MALE	0 PPM	400 PPM	800 PPM	1600 PPM
Mixed Cell Focus	6 (12%)	19 (38%)	12 (24%)	20 (40%)
Necrosis	3 (6%)	1 (2%)	5 (10%)	4 (8%)
Pigmentation, Hemosiderin	3 (6%)		1 (2%)	
Regeneration		1 (2%)		
Bile Duct, Cyst	1 (2%)			
Bile Duct, Hyperplasia	41 (82%)	46 (92%)	42 (84%)	48 (96%)
Bile Duct, Inflammation, Suppurative				1 (2%)
Mesentery	(3)	(5)	(7)	(4)
Fat, Necrosis	3 (100%)	4 (80%)	5 (71%)	4 (100%)
Oral Mucosa	(1)	(0)	(0)	(1)
Hyperplasia				1 (100%)
Inflammation, Chronic Active				1 (100%)
Pharyngeal, Hyperplasia, Squamous	1 (100%)			
Pancreas	(50)	(50)	(50)	(50)
Inflammation	2 (4%)		1 (2%)	
Necrosis			1 (2%)	
Acinus, Atrophy	19 (38%)	33 (66%)	26 (52%)	28 (56%)
Acinus, Hyperplasia		2 (4%)	1 (2%)	
Duct, Inflammation			1 (2%)	
Salivary Glands	(50)	(49)	(50)	(50)
Atrophy		1 (2%)		
Fibrosis			1 (2%)	
Duct, Cyst				1 (2%)
Stomach, Forestomach	(50)	(50)	(50)	(50)
Dysplasia	2 (4%)			1 (2%)
Erosion		1 (2%)		
Fibrosis				1 (2%)
Inflammation	6 (12%)	4 (8%)	2 (4%)	2 (4%)
Mineralization	1 (2%)			
Ulcer	6 (12%)	2 (4%)	2 (4%)	1 (2%)
Epithelium, Hyperplasia	7 (14%)	3 (6%)	2 (4%)	2 (4%)
Stomach, Glandular	(50)	(50)	(50)	(50)
Erosion	1 (2%)	1 (2%)	1 (2%)	1 (2%)
Inflammation	1 (2%)	1 (2%)	3 (6%)	
Mineralization	1 (2%)			
Ulcer	4 (8%)			

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FISCHER 344 RATS MALE	0 PPM	400 PPM	800 PPM	1600 PPM
Tooth	(4)	(4)	(1)	(5)
Malformation	3 (75%)	4 (100%)	1 (100%)	5 (100%)
Pulp, Inflammation	1 (25%)			
<b>CARDIOVASCULAR SYSTEM</b>				
Blood Vessel	(50)	(50)	(50)	(50)
Inflammation			2 (4%)	
Mineralization	1 (2%)			
Thrombosis		1 (2%)		
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	50 (100%)	49 (98%)	48 (96%)	49 (98%)
Infiltration Cellular		1 (2%)		
Artery, Hypertrophy		1 (2%)		
Atrium, Thrombosis	1 (2%)		1 (2%)	1 (2%)
Epicardium, Inflammation			1 (2%)	
<b>ENDOCRINE SYSTEM</b>				
Adrenal Cortex	(50)	(50)	(50)	(50)
Degeneration, Cystic			1 (2%)	2 (4%)
Hyperplasia	1 (2%)	2 (4%)	4 (8%)	1 (2%)
Hypertrophy	2 (4%)	1 (2%)	2 (4%)	
Necrosis	2 (4%)		2 (4%)	
Vacuolization Cytoplasmic	2 (4%)	3 (6%)	2 (4%)	1 (2%)
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia	2 (4%)	11 (22%)	3 (6%)	3 (6%)
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	1 (2%)	1 (2%)	1 (2%)	
Parathyroid Gland	(35)	(49)	(49)	(37)
Hyperplasia	2 (6%)			
Pituitary Gland	(50)	(50)	(50)	(50)
Pars Distalis, Angiectasis		1 (2%)		
Pars Distalis, Hyperplasia	17 (34%)	25 (50%)	13 (26%)	13 (26%)
Thyroid Gland	(50)	(50)	(50)	(50)

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FISCHER 344 RATS MALE	0 PPM	400 PPM	800 PPM	1600 PPM
C-cell, Hyperplasia	14 (28%)	14 (28%)	13 (26%)	14 (28%)
Follicle, Cyst	1 (2%)			1 (2%)
Follicular Cell, Hypertrophy		1 (2%)		

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Epididymis	(50)	(50)	(50)	(50)
Inflammation		3 (6%)		
Preputial Gland	(50)	(50)	(50)	(50)
Hyperplasia		1 (2%)		1 (2%)
Inflammation	1 (2%)		1 (2%)	1 (2%)
Duct, Ectasia				1 (2%)
Prostate	(50)	(50)	(50)	(50)
Inflammation	37 (74%)	29 (58%)	22 (44%)	18 (36%)
Epithelium, Hyperplasia	9 (18%)	3 (6%)	9 (18%)	6 (12%)
Seminal Vesicle	(50)	(50)	(50)	(50)
Testes	(50)	(50)	(50)	(50)
Germinal Epithelium, Degeneration	5 (10%)	3 (6%)	4 (8%)	
Interstitial Cell, Hyperplasia	12 (24%)	4 (8%)	8 (16%)	
Rete Testes, Cyst		1 (2%)		

HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)
Fibrosis	1 (2%)			
Hyperplasia	24 (48%)	24 (48%)	24 (48%)	37 (74%)
Inflammation		1 (2%)		
Inflammation, Granulomatous				3 (6%)
Myelofibrosis	1 (2%)	1 (2%)		
Necrosis			2 (4%)	

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FISCHER 344 RATS MALE	0 PPM	400 PPM	800 PPM	1600 PPM
Lymph Node	(7)	(5)	(3)	(3)
Deep Cervical, Ectasia	1 (14%)		1 (33%)	
Mediastinal, Infiltration Cellular, Plasma Cell		1 (20%)	1 (33%)	
Pancreatic, Inflammation	1 (14%)			1 (33%)
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Atrophy				1 (2%)
Ectasia	1 (2%)	1 (2%)		
Hyperplasia, Histiocytic	1 (2%)			
Spleen	(50)	(50)	(50)	(50)
Accessory Spleen				1 (2%)
Hematopoietic Cell Proliferation	4 (8%)	6 (12%)	4 (8%)	3 (6%)
Hyperplasia, Histiocytic	1 (2%)	1 (2%)	6 (12%)	2 (4%)
Hyperplasia, Lymphoid	2 (4%)	1 (2%)	4 (8%)	3 (6%)
Necrosis	1 (2%)		1 (2%)	
Pigmentation, Hemosiderin	8 (16%)	4 (8%)	4 (8%)	5 (10%)
Lymphoid Follicle, Atrophy	3 (6%)	1 (2%)	1 (2%)	1 (2%)
Thymus	(48)	(50)	(50)	(50)
Atrophy	44 (92%)	46 (92%)	47 (94%)	49 (98%)
Hyperplasia, Lymphoid		1 (2%)		
Necrosis	1 (2%)		1 (2%)	1 (2%)

**INTEGUMENTARY SYSTEM**

Mammary Gland	(50)	(50)	(50)	(50)
Fibrosis	2 (4%)	1 (2%)		
Hyperplasia	1 (2%)	1 (2%)	3 (6%)	3 (6%)
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion	1 (2%)		1 (2%)	2 (4%)
Cyst Epithelial Inclusion, Multifocal				1 (2%)
Fibrosis	1 (2%)			
Inflammation	1 (2%)	1 (2%)		
Ulcer	2 (4%)	1 (2%)		
Epidermis, Hyperkeratosis				1 (2%)

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FISCHER 344 RATS MALE	0 PPM	400 PPM	800 PPM	1600 PPM
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MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)
Hypertrophy		1 (2%)		
Osteopetrosis	1 (2%)			
Skeletal Muscle	(1)	(1)	(0)	(0)

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NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
Demyelination	2 (4%)			
Gliosis, Focal				1 (2%)
Hemorrhage	5 (10%)	3 (6%)	3 (6%)	1 (2%)
Infiltration Cellular, Mononuclear Cell				1 (2%)
Mineralization	1 (2%)	1 (2%)		
Necrosis		1 (2%)	1 (2%)	
Spinal Cord	(1)	(0)	(0)	(1)
Meninges, Infiltration Cellular, Mononuclear Cell	1 (100%)			

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RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Atelectasis			1 (2%)	
Fibrosis		1 (2%)		1 (2%)
Inflammation, Chronic Active	7 (14%)	4 (8%)	4 (8%)	2 (4%)
Mineralization	1 (2%)			
Thrombosis		1 (2%)		
Alveolar Epithelium, Hyperplasia	13 (26%)	11 (22%)	5 (10%)	7 (14%)
Alveolar Epithelium, Metaplasia, Squamous				1 (2%)
Alveolus, Infiltration Cellular, Histiocyte	2 (4%)	5 (10%)	4 (8%)	2 (4%)
Nose	(50)	(50)	(50)	(50)
Foreign Body		2 (4%)		
Inflammation	24 (48%)	19 (38%)	20 (40%)	19 (38%)
Olfactory Epithelium, Metaplasia				2 (4%)

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FISCHER 344 RATS MALE	0 PPM	400 PPM	800 PPM	1600 PPM
Olfactory Epithelium, Necrosis		1 (2%)		
Respiratory Epithelium, Hyperplasia	1 (2%)	1 (2%)	1 (2%)	5 (10%)
Respiratory Epithelium, Necrosis		1 (2%)		
<b>SPECIAL SENSES SYSTEM</b>				
Eye	(50)	(50)	(50)	(50)
Cornea, Inflammation	1 (2%)			
Lens, Cataract	1 (2%)	2 (4%)	1 (2%)	
Retina, Degeneration	3 (6%)	3 (6%)	1 (2%)	2 (4%)
Retina, Gliosis	2 (4%)			
Harderian Gland	(50)	(50)	(50)	(50)
Degeneration				1 (2%)
Hyperplasia	1 (2%)	2 (4%)		
Zymbal's Gland	(1)	(0)	(1)	(0)
<b>URINARY SYSTEM</b>				
Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet	3 (6%)	1 (2%)		
Infarct	1 (2%)	2 (4%)		1 (2%)
Mineralization	1 (2%)			
Nephropathy	47 (94%)	50 (100%)	48 (96%)	49 (98%)
Cortex, Cyst			1 (2%)	
Papilla, Necrosis	1 (2%)			
Pelvis, Dilatation	1 (2%)			
Pelvis, Inflammation		1 (2%)	2 (4%)	
Pelvis, Transitional Epithelium, Hyperplasia	1 (2%)		1 (2%)	1 (2%)
Renal Tubule, Dilatation	1 (2%)			
Renal Tubule, Necrosis	1 (2%)			
Urinary Bladder	(50)	(50)	(50)	(50)
Inflammation			2 (4%)	
Necrosis			1 (2%)	
Transitional Epithelium, Hyperplasia		1 (2%)		

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**FISCHER 344 RATS MALE**

**0 PPM**

**400 PPM**

**800 PPM**

**1600 PPM**

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

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<b>FISCHER 344 RATS FEMALE</b>	<b>0 PPM</b>	<b>400 PPM</b>	<b>800 PPM</b>	<b>1600 PPM</b>
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**Disposition Summary**

<b>Animals Initially In Study</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>
<b>Early Deaths</b>				
<b>Moribund Sacrifice</b>	<b>4</b>	<b>10</b>	<b>6</b>	<b>3</b>
<b>Natural Death</b>	<b>5</b>	<b>2</b>	<b>7</b>	<b>1</b>
<b>Survivors</b>				
<b>Terminal Sacrifice</b>	<b>41</b>	<b>38</b>	<b>37</b>	<b>46</b>
<b>Animals Examined Microscopically</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>

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**ALIMENTARY SYSTEM**

Intestine Large, Cecum	(50)	(50)	(50)	(50)
Hemorrhage				1 (2%)
Intestine Large, Colon	(50)	(50)	(50)	(50)
Parasite Metazoan	5 (10%)	5 (10%)	1 (2%)	4 (8%)
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Intestine Small, Ileum	(50)	(50)	(50)	(50)
Liver	(50)	(50)	(50)	(50)
Angiectasis	5 (10%)	5 (10%)	3 (6%)	5 (10%)
Basophilic Focus	45 (90%)	46 (92%)	43 (86%)	45 (90%)
Clear Cell Focus	9 (18%)	5 (10%)	9 (18%)	6 (12%)
Degeneration, Cystic		1 (2%)	1 (2%)	
Eosinophilic Focus	23 (46%)	31 (62%)	30 (60%)	29 (58%)
Fatty Change, Diffuse	3 (6%)	4 (8%)	3 (6%)	1 (2%)
Fibrosis	1 (2%)			
Hematopoietic Cell Proliferation	3 (6%)	3 (6%)	2 (4%)	
Hepatodiaphragmatic Nodule	4 (8%)	5 (10%)	5 (10%)	11 (22%)
Inflammation, Chronic Active	41 (82%)	45 (90%)	43 (86%)	47 (94%)
Mixed Cell Focus	4 (8%)	8 (16%)	7 (14%)	13 (26%)
Necrosis	2 (4%)	1 (2%)	3 (6%)	1 (2%)
Tension Lipidosis		1 (2%)	1 (2%)	
Bile Duct, Cyst				3 (6%)
Bile Duct, Hyperplasia	12 (24%)	19 (38%)	20 (40%)	20 (40%)
Oval Cell, Hyperplasia	1 (2%)			1 (2%)
Mesentery	(11)	(7)	(11)	(4)

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Fat, Necrosis	11 (100%)	6 (86%)	11 (100%)	4 (100%)
Oral Mucosa	(2)	(0)	(0)	(1)
Cyst	1 (50%)			
Hyperplasia				1 (100%)
Inflammation	1 (50%)			
Pancreas	(50)	(50)	(50)	(50)
Inflammation		1 (2%)		
Metaplasia, Hepatocyte		1 (2%)	1 (2%)	
Acinus, Atrophy	16 (32%)	11 (22%)	17 (34%)	23 (46%)
Acinus, Hyperplasia	1 (2%)			
Duct, Cyst			1 (2%)	
Salivary Glands	(50)	(50)	(50)	(50)
Atrophy	1 (2%)			
Stomach, Forestomach	(50)	(50)	(50)	(50)
Inflammation	3 (6%)	2 (4%)	3 (6%)	1 (2%)
Ulcer	2 (4%)	1 (2%)	3 (6%)	
Epithelium, Hyperplasia	3 (6%)	4 (8%)	3 (6%)	
Stomach, Glandular	(50)	(50)	(50)	(50)
Erosion	1 (2%)			
Inflammation	1 (2%)			
Ulcer		1 (2%)		
Tongue	(0)	(0)	(1)	(0)
Inflammation			1 (100%)	
Tooth	(5)	(5)	(3)	(1)
Malformation	5 (100%)	5 (100%)	3 (100%)	1 (100%)

CARDIOVASCULAR SYSTEM

Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	47 (94%)	49 (98%)	46 (92%)	48 (96%)

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(50)
Atrophy			1 (2%)	1 (2%)

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FISCHER 344 RATS FEMALE	0 PPM	400 PPM	800 PPM	1600 PPM
Degeneration, Cystic	6 (12%)	9 (18%)	1 (2%)	1 (2%)
Hyperplasia	14 (28%)	9 (18%)	3 (6%)	3 (6%)
Hypertrophy	1 (2%)		1 (2%)	3 (6%)
Necrosis		1 (2%)		1 (2%)
Thrombosis		1 (2%)		
Vacuolization Cytoplasmic	1 (2%)	3 (6%)	1 (2%)	2 (4%)
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia	3 (6%)		1 (2%)	1 (2%)
Necrosis	1 (2%)			
Islets, Pancreatic	(50)	(50)	(50)	(50)
Pituitary Gland	(50)	(50)	(50)	(50)
Cyst	1 (2%)	2 (4%)	3 (6%)	4 (8%)
Pars Distalis, Angiectasis	1 (2%)	1 (2%)		1 (2%)
Pars Distalis, Hyperplasia	24 (48%)	21 (42%)	21 (42%)	24 (48%)
Thyroid Gland	(50)	(50)	(50)	(50)
C-cell, Hyperplasia	25 (50%)	27 (54%)	26 (52%)	17 (34%)

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Clitoral Gland	(50)	(50)	(50)	(50)
Hyperplasia		4 (8%)	1 (2%)	1 (2%)
Duct, Cyst		1 (2%)		
Ovary	(50)	(50)	(50)	(50)
Atrophy	4 (8%)	2 (4%)	3 (6%)	2 (4%)
Cyst	3 (6%)	6 (12%)	6 (12%)	4 (8%)
Oviduct	(1)	(0)	(0)	(0)
Cyst	1 (100%)			
Uterus	(50)	(50)	(50)	(50)
Decidual Reaction			1 (2%)	
Hemorrhage		1 (2%)		
Inflammation		4 (8%)	1 (2%)	1 (2%)

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

TDMS No. 99013 - 05  
 Test Type: Chronic PN  
 Route: DOSED FEED  
 Species/Strain: RATS/F 344/N

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

Styrene-acrylonitrile trimer  
 CAS Number: SANTRIMER2

Date Report Requested: 09/23/2010  
 Time Report Requested: 12:12:35  
 First Dose M/F: 05/12/05 / 05/13/05  
 Lab: BAT

FISCHER 344 RATS FEMALE	0 PPM	400 PPM	800 PPM	1600 PPM
Metaplasia, Squamous Cervix, Cyst		4 (8%)	1 (2%)	1 (2%)
Endometrium, Hyperplasia, Adenomatous				1 (2%)
Endometrium, Hyperplasia, Cystic Venule, Hyperplasia	2 (4%)	7 (14%)	5 (10%)	3 (6%)

HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)
Atrophy			1 (2%)	
Hyperplasia	16 (32%)	25 (50%)	25 (50%)	38 (76%)
Inflammation				1 (2%)
Inflammation, Granulomatous			6 (12%)	2 (4%)
Myelofibrosis	1 (2%)	2 (4%)		1 (2%)
Lymph Node	(2)	(1)	(1)	(2)
Deep Cervical, Ectasia			1 (100%)	
Deep Cervical, Infiltration Cellular, Histiocyte				1 (50%)
Mediastinal, Hyperplasia, Lymphoid	1 (50%)			1 (50%)
Lymph Node, Mandibular	(0)	(1)	(0)	(0)
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Atrophy		1 (2%)	2 (4%)	
Hyperplasia, Lymphoid			1 (2%)	1 (2%)
Spleen	(50)	(50)	(50)	(50)
Accessory Spleen		1 (2%)		
Hematopoietic Cell Proliferation	1 (2%)	8 (16%)	7 (14%)	3 (6%)
Hyperplasia, Histiocytic	2 (4%)	1 (2%)	1 (2%)	1 (2%)
Hyperplasia, Lymphoid		2 (4%)		
Infarct				1 (2%)
Necrosis		1 (2%)		
Pigmentation, Hemosiderin	43 (86%)	47 (94%)	42 (84%)	38 (76%)
Lymphoid Follicle, Atrophy		1 (2%)	3 (6%)	1 (2%)
Thymus	(50)	(50)	(50)	(50)
Atrophy	46 (92%)	46 (92%)	50 (100%)	49 (98%)
Hyperplasia, Lymphoid		1 (2%)		

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TDMS No. 99013 - 05  
 Test Type: Chronic PN  
 Route: DOSED FEED  
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**P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)**

Styrene-acrylonitrile trimer  
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Date Report Requested: 09/23/2010  
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FISCHER 344 RATS FEMALE	0 PPM	400 PPM	800 PPM	1600 PPM
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INTEGUMENTARY SYSTEM

Mammary Gland	(50)	(50)	(50)	(50)
Galactoceles	1 (2%)			
Hyperplasia	2 (4%)	1 (2%)		
Inflammation	2 (4%)			
Skin	(50)	(50)	(50)	(50)

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MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)
Fracture				1 (2%)
Osteopetrosis	1 (2%)			1 (2%)
Skeletal Muscle	(0)	(0)	(2)	(0)

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NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
Gliosis, Focal	1 (2%)			
Hemorrhage	2 (4%)	1 (2%)	3 (6%)	1 (2%)
Infiltration Cellular, Mononuclear Cell	1 (2%)			
Mineralization	2 (4%)			
Necrosis		2 (4%)	1 (2%)	
Pigmentation, Focal	1 (2%)			
Neuron, Depletion Cellular	1 (2%)			
White Matter, Vacuolization Cytoplasmic	1 (2%)			

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RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Atelectasis	1 (2%)			
Congestion			1 (2%)	
Foreign Body		1 (2%)		
Inflammation, Chronic Active		5 (10%)	3 (6%)	2 (4%)

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TDMS No. 99013 - 05  
 Test Type: Chronic PN  
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 Species/Strain: RATS/F 344/N

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

Styrene-acrylonitrile trimer  
 CAS Number: SANTRIMER2

Date Report Requested: 09/23/2010  
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FISCHER 344 RATS FEMALE	0 PPM	400 PPM	800 PPM	1600 PPM
Necrosis				1 (2%)
Alveolar Epithelium, Hyperplasia	15 (30%)	13 (26%)	9 (18%)	15 (30%)
Alveolar Epithelium, Metaplasia, Squamous				2 (4%)
Alveolus, Infiltration Cellular, Histiocyte	16 (32%)	12 (24%)	11 (22%)	13 (26%)
Nose	(50)	(50)	(50)	(50)
Foreign Body		2 (4%)		
Inflammation	8 (16%)	11 (22%)	6 (12%)	9 (18%)
Thrombosis	1 (2%)			
Glands, Respiratory Epithelium, Hyperplasia				1 (2%)
Respiratory Epithelium, Hyperplasia				1 (2%)

**SPECIAL SENSES SYSTEM**

Eye	(50)	(50)	(50)	(50)
Cornea, Inflammation				1 (2%)
Lens, Cataract	1 (2%)	2 (4%)	2 (4%)	5 (10%)
Retina, Degeneration	2 (4%)	3 (6%)	2 (4%)	3 (6%)
Retina, Gliosis		1 (2%)	1 (2%)	4 (8%)
Zymbal's Gland	(0)	(1)	(0)	(0)

**URINARY SYSTEM**

Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet	1 (2%)	1 (2%)		
Infarct	3 (6%)	2 (4%)	1 (2%)	2 (4%)
Infiltration Cellular, Lymphoid				1 (2%)
Inflammation, Chronic Active				1 (2%)
Nephropathy	41 (82%)	42 (84%)	40 (80%)	45 (90%)
Papilla, Necrosis	1 (2%)	2 (4%)		1 (2%)
Pelvis, Dilatation				1 (2%)
Pelvis, Inflammation	2 (4%)	1 (2%)	2 (4%)	
Pelvis, Transitional Epithelium, Hyperplasia	1 (2%)		2 (4%)	1 (2%)
Renal Tubule, Dilatation	1 (2%)		1 (2%)	
Urinary Bladder	(50)	(50)	(50)	(50)
Infiltration Cellular, Histiocyte				1 (2%)

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**TDMS No.** 99013 - 05  
**Test Type:** Chronic PN  
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**Species/Strain:** RATS/F 344/N

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

Styrene-acrylonitrile trimer  
**CAS Number:** SANTRIMER2

**Date Report Requested:** 09/23/2010  
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<b>FISCHER 344 RATS FEMALE</b>	<b>0 PPM</b>	<b>400 PPM</b>	<b>800 PPM</b>	<b>1600 PPM</b>
Inflammation, Chronic Active	1 (2%)		1 (2%)	
Transitional Epithelium, Hyperplasia	1 (2%)			12 (24%)
Transitional Epithelium, Metaplasia, Squamous				1 (2%)

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