

**Experiment Number:** 20303 - 05

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH  
AVERAGE SEVERITY GRADES[b]**

**Date Report Requested:** 12/12/2011

**Test Type:** CHRONIC

Vinylidene chloride

**Time Report Requested:** 09:47:55

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**CAS Number:** 75-35-4

**First Dose M/F:** 06/06/05 / 06/06/05

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

**Lab:** BNW

F1\_R2

**NTP Study Number:** C20303  
**Lock Date:** 05/09/2008  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 2.5.0.0\_004  
**PWG Approval Date:** NONE

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First Dose M/F: 06/06/05 / 06/06/05

Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS MALE	Control	25 ppm	50 ppm	100 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>21</b>	<b>15</b>	<b>23</b>	<b>27</b>
<b>Natural Death</b>	<b>4</b>	<b>8</b>	<b>5</b>	<b>4</b>
<b>Survivors</b>				
<b>Terminal Sacrifice</b>	<b>25</b>	<b>27</b>	<b>22</b>	<b>19</b>
<b>Animals Examined Microscopically</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>

## ALIMENTARY SYSTEM

Esophagus	(50)	(49)	(49)	(50)
Hyperplasia, Squamous				1 [3.0]
Intestine Large, Cecum	(48)	(44)	(45)	(46)
Inflammation, Acute	1 [4.0]	1 [3.0]		
Necrosis	1 [3.0]			
Arteriole, Inflammation			1 [1.0]	
Intestine Large, Colon	(47)	(46)	(47)	(48)
Arteriole, Inflammation			1 [1.0]	
Intestine Large, Rectum	(46)	(47)	(46)	(49)
Thrombosis			1 [2.0]	
Intestine Small, Duodenum	(47)	(45)	(45)	(49)
Intestine Small, Ileum	(47)	(45)	(45)	(47)
Intestine Small, Jejunum	(47)	(43)	(45)	(47)
Liver	(50)	(50)	(50)	(50)
Angiectasis		2 [2.0]		
Basophilic Focus	15	7	5	5
Clear Cell Focus	22	23	19	15
Cyst			1 [2.0]	
Degeneration, Cystic	2 [2.0]	5 [2.8]	7 [1.9]	12 [2.1]
Eosinophilic Focus	3	6	7	5
Fatty Change, Diffuse	4 [2.0]	19 [1.7]	18 [1.7]	26 [2.0]
Hepatodiaphragmatic Nodule	1	1	1	5
Inflammation, Acute				1 [2.0]
Inflammation, Chronic	28 [1.0]	46 [1.2]	46 [1.3]	44 [1.9]

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

b-Average severity grade(1-minimal;2-mild;3-moderate;4-marked)

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Vinylidene chloride

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Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS MALE	Control	25 ppm	50 ppm	100 ppm
Inflammation, Chronic Active	1 [1.0]			
Mixed Cell Focus	1	1	8	6
Necrosis	2 [2.5]	6 [2.8]	8 [2.6]	6 [2.3]
Bile Duct, Hyperplasia	38 [1.3]	23 [1.1]	16 [1.3]	14 [1.4]
Bile Duct, Inflammation, Suppurative			1 [4.0]	
Mesentery	(16)	(15)	(21)	(23)
Inflammation, Chronic Active	2 [2.0]		1 [2.0]	
Fat, Necrosis	13 [2.0]	10 [2.0]	14 [2.0]	12 [2.0]
Pancreas	(50)	(50)	(50)	(49)
Atrophy	21 [2.0]	16 [2.1]	25 [1.9]	20 [1.6]
Basophilic Focus	1			
Hyperplasia	4 [2.3]	5 [2.0]	2 [2.5]	7 [2.1]
Inflammation, Chronic Active			1 [4.0]	1 [3.0]
Salivary Glands	(50)	(50)	(50)	(50)
Atrophy		1 [2.0]		
Stomach, Forestomach	(50)	(50)	(50)	(50)
Hyperplasia, Squamous		2 [2.0]	2 [2.0]	1 [2.0]
Inflammation, Chronic Active		2 [2.0]		
Mineralization	1 [3.0]			
Ulcer	4 [3.3]	3 [2.3]	1 [2.0]	6 [3.3]
Stomach, Glandular	(49)	(50)	(49)	(50)
Mineralization	1 [3.0]		1 [4.0]	
Necrosis			3 [1.0]	3 [1.3]
Ulcer			1 [3.0]	1 [3.0]
Tongue	(0)	(1)	(0)	(2)
Hyperplasia, Squamous				2 [2.5]
Tooth	(1)	(0)	(0)	(0)
Dysplasia	1 [3.0]			

## CARDIOVASCULAR SYSTEM

Blood Vessel	(1)	(0)	(1)	(0)
Aorta, Mineralization	1 [3.0]		1 [3.0]	
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	42 [1.6]	41 [1.6]	39 [1.6]	35 [1.5]

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Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS MALE	Control	25 ppm	50 ppm	100 ppm
Inflammation, Chronic Active		1 [3.0]		
Mineralization	1 [3.0]			
Thrombosis	3 [2.3]	3 [2.3]	6 [3.0]	8 [2.6]

## ENDOCRINE SYSTEM

Adrenal Cortex	(49)	(50)	(49)	(50)
Hyperplasia	26 [2.0]	27 [2.0]	27 [2.0]	27 [2.0]
Hypertrophy	1 [2.0]	2 [2.0]	2 [2.0]	4 [2.0]
Necrosis		2 [2.5]		
Adrenal Medulla	(49)	(50)	(48)	(50)
Hyperplasia	25 [2.2]	22 [2.2]	17 [1.9]	29 [2.3]
Bilateral, Hyperplasia			1 [3.0]	
Islets, Pancreatic	(50)	(50)	(50)	(49)
Hyperplasia	1 [3.0]	3 [3.0]	3 [2.7]	3 [2.3]
Parathyroid Gland	(50)	(49)	(47)	(45)
Hyperplasia	1 [3.0]	2 [2.5]	1 [2.0]	2 [2.0]
Pituitary Gland	(50)	(49)	(49)	(50)
Angiectasis				1 [2.0]
Pars Distalis, Angiectasis	2 [2.0]			1 [2.0]
Pars Distalis, Hemorrhage		1 [3.0]		
Pars Distalis, Hyperplasia	10 [2.6]	13 [2.4]	14 [2.5]	9 [2.2]
Pars Intermedia, Angiectasis	1 [2.0]			
Pars Intermedia, Hyperplasia	1 [2.0]			
Thyroid Gland	(50)	(49)	(49)	(48)
C-cell, Hyperplasia	15 [1.1]	16 [1.3]	19 [1.3]	19 [1.1]
Follicular Cell, Hyperplasia	2 [2.0]		2 [2.5]	1 [1.0]

## GENERAL BODY SYSTEM

Peritoneum	(0)	(2)	(4)	(3)
Mesothelium, Hyperplasia		1 [1.0]		
Tissue NOS	(0)	(0)	(0)	(1)

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Lab: BNW

FISCHER 344 RATS MALE	Control	25 ppm	50 ppm	100 ppm
<b>GENITAL SYSTEM</b>				
Coagulating Gland	(0)	(0)	(0)	(3)
Hyperplasia				2 [3.0]
Inflammation, Suppurative				1 [3.0]
Epididymis	(50)	(50)	(50)	(50)
Degeneration				1 [2.0]
Granuloma Sperm		1 [3.0]		
Hyperplasia, Mesothelium		3 [1.0]	1 [1.0]	
Penis	(0)	(0)	(1)	(0)
Inflammation, Suppurative			1 [4.0]	
Preputial Gland	(50)	(49)	(49)	(50)
Hyperplasia	1 [2.0]	1 [2.0]		
Prostate	(50)	(50)	(50)	(50)
Hyperplasia	5 [1.8]	4 [2.5]	7 [1.9]	5 [2.0]
Inflammation, Suppurative	4 [2.0]	5 [2.0]	9 [2.3]	8 [3.0]
Seminal Vesicle	(48)	(50)	(48)	(48)
Hyperplasia			1 [2.0]	
Testes	(50)	(50)	(50)	(50)
Atrophy	9 [3.1]	10 [3.7]	13 [3.3]	4 [3.0]
Hemorrhage	1 [2.0]	1 [1.0]		
Hyperplasia, Mesothelium		2 [1.0]		
Arteriole, Inflammation		1 [3.0]	1 [1.0]	
Interstitial Cell, Hyperplasia	4 [1.3]	4 [1.5]	6 [1.3]	3 [1.0]
Tunic, Hyperplasia		2 [1.0]	2 [1.0]	2 [1.0]

**HEMATOPOIETIC SYSTEM**

Bone Marrow	(49)	(49)	(48)	(49)
Hyperplasia, Reticulum Cell	1 [4.0]			
Lymph Node	(6)	(4)	(9)	(7)
Pancreatic, Congestion			1 [2.0]	
Pancreatic, Hyperplasia, Lymphoid	1 [2.0]			1 [1.0]
Pancreatic, Infiltration Cellular, Histiocyte			1 [2.0]	
Lymph Node, Bronchial	(8)	(9)	(9)	(9)

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Lab: BNW

FISCHER 344 RATS MALE	Control	25 ppm	50 ppm	100 ppm
Congestion			1 [2.0]	
Ectasia		1 [3.0]	2 [3.0]	
Hyperplasia, Lymphoid	1 [2.0]			
Infiltration Cellular, Histiocyte				1 [3.0]
Lymph Node, Mandibular	(1)	(1)	(1)	(0)
Lymph Node, Mediastinal	(28)	(21)	(24)	(30)
Congestion			1 [3.0]	
Ectasia	1 [2.0]			
Hyperplasia, Lymphoid	2 [2.5]		2 [2.0]	2 [2.5]
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Congestion			1 [2.0]	
Ectasia				1 [3.0]
Hyperplasia, Lymphoid	1 [2.0]		1 [2.0]	1 [2.0]
Inflammation, Granulomatous				1 [3.0]
Spleen	(50)	(50)	(50)	(50)
Fibrosis	3 [2.3]		2 [2.0]	4 [2.8]
Hematopoietic Cell Proliferation	3 [2.3]	1 [2.0]	1 [4.0]	
Hyperplasia, Lymphoid				1 [2.0]
Hyperplasia, Stromal	1 [3.0]			
Necrosis		1 [2.0]	2 [2.5]	2 [2.5]
Capsule, Hyperplasia			1 [1.0]	
Thymus	(42)	(43)	(41)	(44)
Infiltration Cellular, Polymorphonuclear				1 [3.0]

## INTEGUMENTARY SYSTEM

Mammary Gland	(36)	(29)	(24)	(32)
Hyperplasia		1 [2.0]		
Skin	(50)	(50)	(49)	(50)
Cyst Epithelial Inclusion	4 [3.0]	2	2 [2.0]	
Hyperkeratosis		1 [3.0]		
Hyperplasia, Squamous	1 [1.0]			
Inflammation, Acute			1 [3.0]	
Inflammation, Chronic Active	2 [4.0]		1 [4.0]	

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Lab: BNW

FISCHER 344 RATS MALE	Control	25 ppm	50 ppm	100 ppm
<b>MUSCULOSKELETAL SYSTEM</b>				
Bone	(50)	(50)	(50)	(50)
Skeletal Muscle	(3)	(4)	(7)	(11)
<b>NERVOUS SYSTEM</b>				
Brain	(50)	(50)	(50)	(50)
Hemorrhage	1 [2.0]			
Peripheral Nerve	(2)	(0)	(1)	(0)
Spinal Cord	(2)	(0)	(1)	(0)
<b>RESPIRATORY SYSTEM</b>				
Larynx	(50)	(49)	(49)	(49)
Inflammation, Chronic Active	1 [2.0]	1 [2.0]		1 [3.0]
Metaplasia, Squamous				1 [2.0]
Lung	(50)	(50)	(50)	(50)
Foreign Body	1			
Inflammation, Acute		1 [4.0]		
Inflammation, Chronic Active	2 [2.5]		1 [1.0]	
Metaplasia, Osseous				1 [2.0]
Mineralization	1 [3.0]		1 [2.0]	
Thrombosis	1 [2.0]	1 [3.0]	2 [1.5]	
Alveolar Epithelium, Hyperplasia	7 [1.1]	18 [1.5]	14 [1.6]	14 [2.3]
Alveolar Epithelium, Metaplasia, Squamous			1 [2.0]	
Alveolar Epithelium, Metaplasia, Mucous			1 [2.0]	
Mediastinum, Inflammation, Granulomatous	1 [3.0]			
Nose	(49)	(50)	(50)	(50)
Foreign Body	2	2	2	5
Hyperplasia				1 [2.0]
Inflammation, Acute	2 [2.0]			
Inflammation, Chronic Active	9 [1.2]	36 [2.0]	45 [2.7]	48 [3.2]
Thrombosis	4 [2.3]	4 [3.0]	11 [3.3]	7 [2.7]

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Lab: BNW

FISCHER 344 RATS MALE	Control	25 ppm	50 ppm	100 ppm
Olfactory Epithelium, Metaplasia, Respiratory	3 [1.0]	49 [2.5]	49 [3.2]	48 [3.5]
Olfactory Epithelium, Metaplasia, Squamous			1 [2.0]	5 [1.2]
Respiratory Epithelium, Hyperplasia	5 [1.6]	8 [1.5]	22 [2.5]	31 [2.3]
Respiratory Epithelium, Metaplasia, Squamous			1 [2.0]	3 [2.0]
Turbinates, Atrophy		50 [2.2]	50 [3.2]	50 [3.8]
Turbinates, Hyperostosis		49 [2.1]	50 [2.6]	50 [2.9]
Pleura	(0)	(1)	(0)	(1)
Hyperplasia				1 [2.0]
Infiltration Cellular, Mononuclear Cell				1 [3.0]
Trachea	(50)	(49)	(49)	(48)

## SPECIAL SENSES SYSTEM

Eye	(48)	(48)	(47)	(49)
Cataract	3 [3.0]	1 [2.0]	1 [1.0]	1 [4.0]
Degeneration		1 [4.0]		1 [4.0]
Cornea, Inflammation, Acute	1 [3.0]	1 [2.0]		
Cornea, Inflammation, Chronic Active	1 [3.0]			1 [1.0]
Retina, Atrophy	2 [3.5]		1 [2.0]	1 [4.0]
Harderian Gland	(50)	(49)	(48)	(49)
Degeneration				1 [3.0]
Hyperplasia		2 [1.0]	1 [3.0]	
Zymbal's Gland	(0)	(1)	(0)	(0)

## URINARY SYSTEM

Kidney	(50)	(50)	(49)	(50)
Cyst		1 [2.0]		
Hydronephrosis		1 [3.0]		
Infarct			1 [3.0]	2 [2.0]
Inflammation, Suppurative		2 [2.0]	1 [4.0]	2 [2.5]
Mineralization	1 [3.0]			
Nephropathy	50 [2.2]	47 [2.4]	47 [2.4]	47 [2.2]
Thrombosis		1 [3.0]		
Renal Tubule, Hyperplasia		1 [2.0]	1 [1.0]	1 [4.0]

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Species/Strain: RATS/F 344/N

Lab: BNW

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<b>FISCHER 344 RATS MALE</b>	<b>Control</b>	<b>25 ppm</b>	<b>50 ppm</b>	<b>100 ppm</b>
Renal Tubule, Necrosis			2 [1.5]	
Transitional Epithelium, Hyperplasia			1 [3.0]	2 [1.5]
Urinary Bladder	(49)	(50)	(49)	(50)
Inflammation, Acute				1 [2.0]
Inflammation, Chronic Active			1 [2.0]	
Transitional Epithelium, Hyperplasia			1 [3.0]	2 [2.0]

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

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Lab: BNW

## FISCHER 344 RATS FEMALE

Control

25 ppm

50 ppm

100 ppm

## Disposition Summary

Animals Initially In Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	19	22	18	28
Natural Death	1	2	2	3
Survivors				
Natural Death			1	
Terminal Sacrifice	30	26	29	19
Animals Examined Microscopically	50	50	50	50

## ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Intestine Large, Cecum	(49)	(48)	(48)	(48)
Intestine Large, Colon	(50)	(49)	(48)	(50)
Cyst			1 [3.0]	
Intestine Large, Rectum	(49)	(50)	(49)	(49)
Intestine Small, Duodenum	(50)	(50)	(49)	(50)
Intestine Small, Ileum	(50)	(48)	(49)	(49)
Intestine Small, Jejunum	(50)	(48)	(49)	(49)
Liver	(50)	(50)	(50)	(50)
Angiectasis	2 [1.5]	4 [1.8]	4 [1.8]	5 [2.0]
Basophilic Focus	46	41	32	29
Clear Cell Focus	15	19	22	18
Degeneration, Cystic		2 [3.0]	4 [2.3]	7 [2.7]
Eosinophilic Focus	6	11	7	16
Fatty Change	1 [2.0]			
Fatty Change, Focal	2	1	3	
Fatty Change, Diffuse	19 [1.2]	30 [1.7]	26 [1.7]	30 [2.0]
Fibrosis, Focal		1 [3.0]		
Hepatodiaphragmatic Nodule	3	6	4	5
Inflammation, Chronic	42 [1.0]	48 [1.4]	49 [1.4]	48 [2.1]
Mixed Cell Focus	4	16	12	13
Necrosis		3 [1.7]	5 [2.2]	11 [1.8]
Bile Duct, Hyperplasia	7 [1.1]		1 [2.0]	6 [1.3]

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Lab: BNW

FISCHER 344 RATS FEMALE	Control	25 ppm	50 ppm	100 ppm
Mesentery	(13)	(20)	(23)	(24)
Inflammation, Chronic Active		1 [2.0]		
Fat, Hemorrhage			1 [2.0]	
Fat, Necrosis	13 [2.0]	19 [2.0]	22 [2.0]	23 [2.0]
Oral Mucosa	(0)	(1)	(0)	(1)
Pharyngeal, Hyperplasia, Squamous				1 [3.0]
Pancreas	(50)	(50)	(50)	(50)
Basophilic Focus	1			
Inflammation, Granulomatous			1 [2.0]	
Acinus, Atrophy	9 [1.2]	13 [1.5]	11 [2.1]	11 [1.3]
Acinus, Hyperplasia		1 [1.0]	3 [1.7]	3 [2.0]
Salivary Glands	(50)	(50)	(50)	(50)
Atrophy				1 [2.0]
Basophilic Focus			2	1
Stomach, Forestomach	(50)	(50)	(50)	(50)
Hyperplasia, Squamous		1 [3.0]	2 [1.5]	2 [2.5]
Necrosis		1 [2.0]		
Ulcer	3 [2.0]	1 [2.0]	1 [2.0]	3 [3.3]
Stomach, Glandular	(50)	(50)	(50)	(50)
Mineralization		1 [3.0]		
Necrosis	1 [2.0]	4 [2.0]	1 [2.0]	6 [1.5]
Tongue	(1)	(0)	(0)	(0)

## CARDIOVASCULAR SYSTEM

Blood Vessel	(1)	(1)	(0)	(0)
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	33 [1.2]	34 [1.4]	32 [1.3]	27 [1.3]
Thrombosis		1 [3.0]		1 [3.0]
Pericardium, Fibrosis				1 [2.0]

## ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(50)
Degeneration, Cystic				1 [3.0]

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Vinylidene chloride

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Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 75-35-4

First Dose M/F: 06/06/05 / 06/06/05

Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS FEMALE	Control	25 ppm	50 ppm	100 ppm
Hematopoietic Cell Proliferation		2 [3.0]		
Hyperplasia	30 [2.1]	28 [2.0]	20 [2.0]	25 [2.1]
Hypertrophy	7 [2.3]	3 [2.0]	1 [2.0]	4 [2.0]
Metaplasia, Osseous				1 [2.0]
Necrosis				1 [2.0]
Vacuolization Cytoplasmic	1 [3.0]			
Adrenal Medulla	(50)	(50)	(50)	(49)
Hyperplasia	7 [2.0]	10 [2.0]	9 [1.8]	12 [2.1]
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia		1 [3.0]		
Parathyroid Gland	(49)	(46)	(45)	(47)
Angiectasis			1 [4.0]	
Hyperplasia	1 [3.0]			
Pituitary Gland	(50)	(49)	(49)	(49)
Pars Distalis, Angiectasis	4 [2.0]	4 [2.8]	4 [2.3]	1 [3.0]
Pars Distalis, Hyperplasia	12 [2.5]	6 [2.5]	12 [2.4]	11 [2.4]
Thyroid Gland	(50)	(50)	(48)	(50)
C-cell, Hyperplasia	35 [1.3]	30 [1.7]	32 [1.3]	27 [1.3]
Follicular Cell, Hyperplasia		1 [2.0]		1 [2.0]

## GENERAL BODY SYSTEM

Peritoneum	(0)	(1)	(1)	(1)
Inflammation, Acute		1 [3.0]		
Mesothelium, Hyperplasia				1 [1.0]

## GENITAL SYSTEM

Clitoral Gland	(47)	(48)	(45)	(48)
Hyperplasia		4 [2.0]	1 [2.0]	1 [2.0]
Inflammation, Chronic Active		1 [2.0]		
Ovary	(50)	(50)	(50)	(50)
Cyst			1 [3.0]	1 [3.0]
Bursa, Dilatation	5 [1.8]	11 [3.1]	17 [3.1]	24 [3.2]
Follicle, Cyst			1 [2.0]	

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Interstitial Cell, Hyperplasia	1 [3.0]			
Periovarian Tissue, Cyst			1 [2.0]	
Uterus	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	1 [4.0]			
Endometrium, Hyperplasia, Cystic	1 [1.0]	1 [3.0]	1 [4.0]	1 [3.0]
Vagina	(0)	(2)	(0)	(1)

## HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)
Hyperplasia, Reticulum Cell	1 [4.0]			
Lymph Node	(2)	(2)	(4)	(9)
Deep Cervical, Hemorrhage			1 [3.0]	
Deep Cervical, Hyperplasia, Lymphoid			1 [2.0]	
Lymph Node, Bronchial	(4)	(7)	(4)	(10)
Congestion	1 [3.0]			
Hyperplasia, Lymphoid		1 [2.0]		1 [2.0]
Infiltration Cellular, Histiocyte				1 [2.0]
Lymph Node, Mandibular	(2)	(0)	(1)	(4)
Lymph Node, Mediastinal	(33)	(26)	(29)	(38)
Ectasia	1 [3.0]			1 [1.0]
Hemorrhage	1 [3.0]		1 [2.0]	
Hyperplasia, Lymphoid	1 [2.0]	1 [2.0]		
Hyperplasia, Plasma Cell		1 [2.0]		
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Congestion	1 [3.0]			
Hyperplasia, Lymphoid	1 [2.0]	1 [4.0]		1 [2.0]
Inflammation, Granulomatous				1 [4.0]
Spleen	(50)	(50)	(50)	(50)
Fibrosis	2 [2.5]	1 [2.0]	2 [2.0]	4 [2.8]
Hematopoietic Cell Proliferation			2 [3.0]	1 [4.0]
Hemorrhage		1 [2.0]		
Hyperplasia, Lymphoid		1 [3.0]		
Inflammation, Granulomatous		1 [4.0]		
Inflammation, Acute		1 [2.0]		

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FISCHER 344 RATS FEMALE	Control	25 ppm	50 ppm	100 ppm
Necrosis Thymus	(46)	(45)	(42)	3 [2.7] (42)

## INTEGUMENTARY SYSTEM

Mammary Gland	(50)	(50)	(50)	(50)
Galactocele	1 [2.0]	2 [2.5]	2 [3.0]	
Hyperplasia	1 [2.0]	1 [2.0]		
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion	1 [3.0]			
Hyperkeratosis			1 [2.0]	
Inflammation, Chronic Active		1 [3.0]	1 [3.0]	1 [3.0]

## MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)
Hyperostosis			1 [3.0]	
Skeletal Muscle	(1)	(2)	(3)	(0)
Fibrosis			1 [3.0]	

## NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
Hydrocephalus		1 [2.0]		
Necrosis				1 [2.0]

## RESPIRATORY SYSTEM

Larynx	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	2 [3.0]	2 [3.0]	1 [2.0]	
Metaplasia, Squamous	1 [1.0]	3 [2.3]		
Lung	(50)	(50)	(50)	(50)
Hemorrhage			1 [1.0]	

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FISCHER 344 RATS FEMALE	Control	25 ppm	50 ppm	100 ppm
Inflammation, Chronic Active	1 [1.0]	1 [1.0]	1 [1.0]	
Thrombosis				1 [1.0]
Alveolar Epithelium, Hyperplasia	12 [1.3]	13 [1.3]	13 [1.3]	8 [1.6]
Alveolar Epithelium, Metaplasia, Squamous	1 [1.0]		2 [1.5]	2 [1.5]
Alveolus, Infiltration Cellular, Histiocyte			2 [1.5]	1 [1.0]
Bronchiole, Hyperplasia		2 [2.0]	1 [2.0]	1 [1.0]
Nose	(50)	(50)	(50)	(50)
Foreign Body	2	4		5
Inflammation, Acute	1 [3.0]			
Inflammation, Chronic Active	7 [1.4]	45 [1.8]	46 [2.0]	46 [2.9]
Polyp, Inflammatory				3 [3.0]
Thrombosis		3 [2.3]	2 [2.0]	7 [2.3]
Olfactory Epithelium, Metaplasia, Respiratory	1 [1.0]	50 [2.8]	50 [3.1]	50 [3.6]
Olfactory Epithelium, Metaplasia, Squamous			1 [1.0]	1 [2.0]
Respiratory Epithelium, Hyperplasia	4 [1.3]	12 [1.6]	14 [1.7]	27 [2.1]
Respiratory Epithelium, Metaplasia, Squamous				3 [2.3]
Turbinates, Atrophy		50 [2.8]	50 [3.3]	50 [4.0]
Turbinates, Hyperostosis		50 [1.9]	50 [2.6]	50 [2.8]
Pleura	(0)	(1)	(0)	(1)
Hyperplasia				1 [2.0]
Infiltration Cellular, Mononuclear Cell				1 [3.0]
Trachea	(50)	(50)	(50)	(50)

## SPECIAL SENSES SYSTEM

Eye	(50)	(49)	(50)	(49)
Cataract	1 [2.0]	1 [3.0]	3 [2.3]	1 [2.0]
Degeneration	1 [4.0]	3 [4.0]	1 [4.0]	
Cornea, Inflammation, Chronic Active	1 [2.0]			
Retina, Atrophy	1 [2.0]	4 [2.5]	3 [3.0]	2 [2.5]
Harderian Gland	(50)	(50)	(50)	(50)
Hyperplasia	2 [2.0]		1 [2.0]	
Inflammation, Chronic	1 [2.0]			
Lacrimal Gland	(0)	(0)	(1)	(1)
Cytoplasmic Alteration			1 [2.0]	

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Degeneration Zymbal's Gland	(0)	(0)	(1)	1 [2.0] (0)
<b>URINARY SYSTEM</b>				
Kidney	(50)	(50)	(50)	(50)
Fibrosis		1 [2.0]		
Hydronephrosis	1 [2.0]	1 [3.0]		
Hyperplasia, Oncocytic	1 [3.0]		1 [1.0]	
Infarct	1 [2.0]	1 [2.0]		2 [2.0]
Mineralization		1 [3.0]		
Nephropathy	45 [1.5]	40 [1.8]	43 [1.4]	42 [1.3]
Papilla, Necrosis		1 [2.0]		
Renal Tubule, Hyperplasia	1 [2.0]	2 [2.5]		2 [3.0]
Renal Tubule, Necrosis			1 [2.0]	
Urinary Bladder	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	1 [2.0]			

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

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