

TDMS No. 88123 - 05

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

Date Report Requested: 12/05/2005

Test Type: CHRONIC

FORMAMIDE

Time Report Requested: 14:23:30

Route: GAVAGE

CAS Number: 75-12-7

First Dose M/F: 03/21/01 / 03/20/01

Species/Strain: RATS/F 344

Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

Final 1 Rats

C Number: C88123B
Lock Date: 11/20/2003
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL

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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Species/Strain: RATS/F 344

Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	24	15	22	18
Natural Death		8	2	3
Survivors				
Terminal Sacrifice	26	27	26	29
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Esophagus	(50)	(49)	(50)	(50)
Inflammation	1 [2.0]			1 [1.0]
Intestine Large, Cecum	(49)	(50)	(50)	(50)
Intestine Large, Colon	(50)	(50)	(50)	(50)
Parasite Metazoan	1	2	1	1
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Parasite Metazoan	8	9	11	10
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Intestine Small, Ileum	(50)	(50)	(50)	(50)
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Hemorrhage			1 [2.0]	
Inflammation, Chronic Active			1 [4.0]	
Mineralization			1 [2.0]	
Perforation			1 [2.0]	
Ulcer			1 [3.0]	
Liver	(50)	(50)	(50)	(50)
Angiectasis	3 [1.0]	2 [1.5]	2 [1.5]	1 [2.0]
Basophilic Focus	32 [1.0]	34 [1.0]	33 [1.0]	30 [1.0]
Clear Cell Focus	21	19	24	16
Degeneration, Cystic	7 [1.7]	6 [1.7]	2 [1.0]	5 [2.0]
Eosinophilic Focus	14	16	8	13
Fatty Change, Focal	9 [1.2]	9 [1.1]	12 [1.3]	5 [1.0]
Fatty Change, Diffuse	14 [1.4]	14 [1.5]	13 [1.4]	9 [1.7]
Hematopoietic Cell Proliferation	4 [1.0]	4 [1.0]	5 [1.2]	5 [1.4]
Hepatodiaphragmatic Nodule	4 [2.5]	7	8 [2.0]	6
Hyperplasia, Granulocytic				1 [2.0]

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

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FORMAMIDE

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CAS Number: 75-12-7

First Dose M/F: 03/21/01 / 03/20/01

Species/Strain: RATS/F 344

Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Inflammation	38 [1.3]	36 [1.3]	38 [1.2]	37 [1.4]
Mixed Cell Focus	5	10	22	7
Necrosis	2 [1.0]	4 [1.8]	5 [1.8]	6 [1.5]
Pigmentation		1 [1.0]		
Regeneration	1 [3.0]		1 [2.0]	
Thrombosis	1 [2.0]			
Vacuolization Cytoplasmic, Focal			1 [1.0]	
Vacuolization Cytoplasmic, Diffuse	1 [1.0]			1 [3.0]
Bile Duct, Cyst	1 [2.0]			
Bile Duct, Fibrosis		1 [2.0]		
Bile Duct, Hyperplasia	49 [2.2]	48 [2.0]	47 [2.0]	44 [1.9]
Centrilobular, Degeneration	10 [2.1]	8 [2.5]	8 [2.1]	6 [1.8]
Oval Cell, Hyperplasia	23 [1.3]	15 [1.1]	20 [1.2]	12 [1.3]
Serosa, Cyst	1 [2.0]			
Serosa, Fibrosis	1 [1.0]			
Mesentery	(10)	(12)	(7)	(10)
Hemorrhage			1 [2.0]	
Fat, Necrosis	9 [3.0]	10 [3.0]	6 [2.8]	10 [2.9]
Oral Mucosa	(22)	(27)	(29)	(20)
Gingival, Hyperplasia, Squamous	21 [1.1]	27 [1.2]	29 [1.1]	20 [1.5]
Pancreas	(50)	(50)	(50)	(50)
Atrophy	1 [3.0]			
Basophilic Focus			2 [1.0]	
Cyst	1 [2.0]			
Infiltration Cellular, Mononuclear Cell	4 [2.0]	2 [2.0]	7 [1.7]	3 [2.0]
Inflammation, Chronic Active	23 [1.6]	24 [1.3]	25 [1.5]	27 [1.5]
Vacuolization Cytoplasmic		1 [2.0]		
Acinus, Atrophy	21 [1.9]	21 [2.1]	21 [1.9]	24 [1.8]
Acinus, Hyperplasia	2 [2.0]	3 [2.0]	1 [3.0]	2 [2.0]
Acinus, Hyperplasia, Focal	1 [3.0]			
Duct, Cyst		2 [2.0]	2 [2.0]	1 [2.0]
Salivary Glands	(50)	(50)	(50)	(50)
Vacuolization Cytoplasmic		1 [2.0]		
Stomach, Forestomach	(50)	(50)	(50)	(50)
Edema				2 [2.0]
Erosion				1 [2.0]
Hyperplasia, Squamous				2 [2.0]
Inflammation	1 [2.0]	1 [1.0]	2 [1.5]	3 [2.0]
Ulcer	1 [3.0]	1 [2.0]	1 [2.0]	2 [3.0]
Stomach, Glandular	(50)	(50)	(50)	(50)

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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Route: GAVAGE

CAS Number: 75-12-7

First Dose M/F: 03/21/01 / 03/20/01

Species/Strain: RATS/F 344

Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Cyst		1 [1.0]		
Edema	1 [2.0]	1 [2.0]		
Erosion		3 [2.0]		1 [2.0]
Hyperplasia	1 [2.0]			
Inflammation				1 [2.0]
Mineralization	1 [1.0]	1 [1.0]		
Ulcer			1 [2.0]	
Tongue	(0)	(1)	(0)	(0)
Tooth	(25)	(32)	(30)	(25)
Malformation	1			
Peridontal Tissue, Inflammation	24 [1.2]	32 [1.2]	30 [1.4]	25 [1.6]
CARDIOVASCULAR SYSTEM				
Blood Vessel	(50)	(50)	(50)	(50)
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	48 [2.0]	50 [1.9]	48 [2.0]	45 [1.5]
Thrombosis	3 [2.7]	2 [2.5]	2 [2.0]	1 [1.0]
Atrium, Thrombosis	1 [2.0]			
Endocardium, Hyperplasia				1 [2.0]
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(50)
Angiectasis	9 [1.4]	18 [1.7]	20 [1.6]	11 [1.5]
Degeneration, Cystic	2 [2.5]			1 [2.0]
Hematopoietic Cell Proliferation	1 [1.0]	1 [1.0]	1 [1.0]	
Hyperplasia	12 [1.6]	6 [1.8]	9 [1.4]	13 [1.8]
Hypertrophy	7 [1.4]	8 [2.0]	10 [1.8]	7 [2.3]
Infiltration Cellular, Mononuclear Cell		1 [1.0]	9 [1.1]	9 [1.0]
Vacuolization Cytoplasmic	31 [1.4]	29 [1.4]	33 [1.4]	29 [1.4]
Adrenal Medulla	(50)	(50)	(50)	(50)
Angiectasis		2 [2.5]		
Hyperplasia	12 [2.2]	13 [1.8]	15 [1.9]	21 [2.0]
Infiltration Cellular, Mononuclear Cell	2 [2.5]	2 [1.5]	1 [2.0]	
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	4 [2.0]	4 [1.8]	3 [2.0]	2 [2.0]
Parathyroid Gland	(48)	(49)	(49)	(49)
Hyperplasia			1 [2.0]	

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Species/Strain: RATS/F 344

Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Pituitary Gland	(50)	(50)	(50)	(50)
Angiectasis	13 [2.2]	18 [2.2]	20 [2.5]	19 [2.2]
Cyst	3 [2.3]	2 [2.0]	3 [1.3]	4 [2.0]
Pars Distalis, Hyperplasia	24 [1.8]	23 [2.0]	19 [1.6]	18 [1.9]
Pars Intermedia, Hyperplasia		1 [2.0]		
Pars Nervosa, Rathke's Cleft, Hyperplasia, Tubular				1 [2.0]
Thyroid Gland	(50)	(50)	(50)	(50)
Inflammation	1 [1.0]			
C-cell, Hyperplasia	22 [1.7]	18 [1.3]	17 [1.6]	18 [1.4]
Follicle, Cyst				1 [2.0]
Follicular Cell, Hyperplasia			2 [1.5]	1 [1.0]

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Coagulating Gland	(0)	(1)	(1)	(0)
Inflammation		1 [3.0]		
Epididymis	(50)	(50)	(50)	(50)
Infiltration Cellular, Mononuclear Cell	1 [2.0]			
Inflammation	1 [2.0]		1 [1.0]	
Preputial Gland	(50)	(50)	(50)	(50)
Inflammation	50 [2.1]	47 [2.0]	45 [2.0]	46 [2.0]
Duct, Ectasia	7 [2.1]	14 [1.7]	2 [2.0]	4 [1.8]
Prostate	(50)	(50)	(50)	(50)
Cyst	1 [3.0]	1 [2.0]		
Inflammation	28 [1.6]	29 [2.0]	35 [1.8]	30 [1.6]
Epithelium, Degeneration				1 [2.0]
Epithelium, Hyperplasia	6 [1.7]	7 [2.4]	7 [2.3]	5 [1.8]
Epithelium, Vacuolization Cytoplasmic	1 [2.0]			
Seminal Vesicle	(50)	(50)	(50)	(49)
Dilatation	1 [2.0]			
Inflammation		1 [2.0]		
Testes	(50)	(50)	(50)	(50)
Artery, Inflammation, Chronic Active				1 [2.0]
Germinal Epithelium, Atrophy	2 [3.5]	1 [4.0]	1 [4.0]	1 [4.0]

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Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Germinal Epithelium, Degeneration	1 [2.0]		1 [2.0]	
Interstitial Cell, Hyperplasia	4 [2.8]	1 [2.0]	1 [2.0]	1 [2.0]
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Atrophy	4 [2.0]	5 [2.2]	3 [2.0]	3 [2.3]
Hyperplasia	19 [2.8]	24 [2.7]	22 [3.0]	29 [2.7]
Lymph Node	(7)	(8)	(8)	(5)
Deep Cervical, Ectasia		1 [2.0]		3 [2.0]
Deep Cervical, Hemorrhage		2 [1.5]		
Deep Cervical, Hyperplasia				1 [2.0]
Deep Cervical, Hyperplasia, Plasma Cell				1 [2.0]
Mediastinal, Ectasia		2 [3.0]	1 [3.0]	
Mediastinal, Hemorrhage		1 [1.0]		
Lymph Node, Mandibular	(0)	(1)	(0)	(3)
Ectasia				1 [3.0]
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Ectasia	7 [2.0]	4 [2.0]	3 [2.0]	5 [2.2]
Hemorrhage			1 [2.0]	
Hyperplasia, Histiocytic				1 [2.0]
Spleen	(50)	(50)	(50)	(50)
Accessory Spleen			1	
Fibrosis		1 [3.0]		
Hematopoietic Cell Proliferation	41 [1.1]	34 [1.3]	36 [1.4]	43 [1.2]
Hyperplasia, Granulocytic				1 [2.0]
Hyperplasia, Histiocytic		1 [2.0]	3 [2.7]	
Hyperplasia, Lymphoid, Focal		1 [3.0]		
Hyperplasia, Focal		1 [2.0]		1 [4.0]
Pigmentation	29 [1.1]	31 [1.1]	32 [1.2]	34 [1.1]
Capsule, Fibrosis				1 [3.0]
Capsule, Hemorrhage				1 [3.0]
Lymphoid Follicle, Atrophy		1 [3.0]		1 [3.0]
Lymphoid Follicle, Depletion Cellular		2 [2.0]		
Red Pulp, Atrophy		1 [2.0]		
Thymus	(49)	(45)	(47)	(48)
Atrophy	46 [3.2]	40 [3.1]	41 [3.0]	42 [3.1]

INTEGUMENTARY SYSTEM

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Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Mammary Gland	(50)	(48)	(50)	(50)
Cyst	2 [2.0]	4 [2.0]	2 [2.0]	3 [1.3]
Hyperplasia	3 [1.0]	3 [1.7]	2 [2.5]	3 [1.7]
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion			1	
Edema	1 [3.0]			
Hemorrhage	1 [2.0]			
Inflammation	3 [2.7]			
Ulcer	1 [2.0]			
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Hyperplasia, Granulocytic				1 [2.0]
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Edema				1 [2.0]
Hemorrhage	2 [3.0]	1 [3.0]	2 [2.0]	1 [2.0]
Hydrocephalus			1 [2.0]	1 [2.0]
Mineralization		1 [1.0]	1 [2.0]	1 [1.0]
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Hemorrhage		2 [2.5]		
Inflammation	1 [1.0]	2 [2.0]	4 [1.8]	3 [2.0]
Metaplasia, Squamous		1 [1.0]	1 [2.0]	
Alveolar Epithelium, Hyperplasia	10 [1.6]	12 [1.7]	10 [1.8]	16 [1.9]
Alveolus, Infiltration Cellular, Histiocyte	27 [1.0]	33 [1.0]	31 [1.0]	31 [1.0]
Artery, Thrombosis		1 [3.0]		
Vein, Hemorrhage			1 [3.0]	
Vein, Inflammation				1 [2.0]
Nose	(50)	(50)	(50)	(50)
Glands, Hyperplasia			1 [2.0]	
Lateral Wall, Inflammation	6 [1.2]	4 [1.8]	7 [1.4]	11 [1.4]
Nasolacrimal Duct, Inflammation	2 [2.5]	4 [2.3]	4 [2.5]	5 [2.2]

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Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Nasopharyngeal Duct, Inflammation	1 [2.0]	2 [2.5]	1 [3.0]	1 [2.0]
Nasopharyngeal Duct, Ulcer		1 [2.0]		
Olfactory Epithelium, Metaplasia	1 [2.0]		1 [2.0]	
Respiratory Epithelium, Hyperplasia	19 [1.1]	20 [1.1]	25 [1.4]	24 [1.0]
Septum, Inflammation	15 [1.2]	11 [1.4]	18 [1.3]	17 [1.4]
Turbinate, Inflammation	11 [1.2]	4 [1.3]	18 [1.5]	16 [1.4]
Trachea	(50)	(50)	(50)	(50)
Inflammation	3 [1.7]	1 [1.0]	4 [1.3]	2 [1.5]
SPECIAL SENSES SYSTEM				
Eye	(50)	(50)	(50)	(50)
Choroid, Hyperplasia		1 [2.0]		
Ciliary Body, Iris, Inflammation		1 [3.0]	1 [4.0]	
Cornea, Inflammation		1 [3.0]	1 [4.0]	
Lens, Degeneration	1 [3.0]	2 [3.0]		5 [3.2]
Retina, Atrophy	2 [3.0]	3 [2.7]		3 [3.7]
Retina, Degeneration	2 [2.5]		1 [2.0]	4 [3.3]
Retina, Necrosis	1 [1.0]			
Sclera, Mineralization	27 [1.9]	30 [1.9]	26 [1.8]	22 [1.8]
Harderian Gland	(50)	(50)	(50)	(50)
Hyperplasia		1 [2.0]	2 [2.5]	
Infiltration Cellular, Lymphoid	1 [2.0]			
Infiltration Cellular, Mononuclear Cell	3 [1.0]			
Inflammation	9 [1.1]	8 [1.1]	4 [1.3]	10 [1.1]
Zymbal's Gland	(0)	(0)	(1)	(1)
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet	2 [3.0]	1 [2.0]	3 [2.0]	1 [4.0]
Cyst	1 [3.0]	1 [2.0]	1 [2.0]	
Mineralization	37 [1.0]	43 [1.0]	43 [1.0]	44 [1.0]
Necrosis		1 [2.0]		
Nephropathy	49 [1.7]	48 [1.7]	50 [2.0]	47 [1.8]
Pigmentation	8 [1.6]	7 [1.7]	3 [1.7]	4 [1.8]
Renal Tubule, Degeneration	1 [3.0]			
Transitional Epithelium, Hyperplasia		1 [2.0]	1 [1.0]	
Urinary Bladder	(50)	(50)	(50)	(50)

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WITH AVERAGE SEVERITY GRADES[b]**

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First Dose M/F: 03/21/01 / 03/20/01

Species/Strain: RATS/F 344

Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Hemorrhage		1 [2.0]	1 [2.0]	
Inflammation		1 [1.0]	1 [1.0]	
Ulcer		1 [3.0]		
Transitional Epithelium, Hyperplasia			1 [2.0]	

*** END OF MALE ***

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Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	10	16	14	14
Natural Death	2	4	2	4
Survivors				
Natural Death		1		
Terminal Sacrifice	38	29	34	32
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Esophagus	(50)	(50)	(50)	(50)
Intestine Large, Cecum	(50)	(49)	(50)	(50)
Erosion		1 [2.0]		
Inflammation			1 [1.0]	1 [2.0]
Intestine Large, Colon	(50)	(50)	(50)	(50)
Parasite Metazoan				1
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Parasite Metazoan	4	7	7	3
Intestine Small, Ileum	(50)	(50)	(50)	(49)
Liver	(50)	(50)	(50)	(50)
Angiectasis	4 [1.8]	1 [1.0]	4 [1.8]	2 [1.5]
Basophilic Focus	44 [2.1]	46 [2.0]	47 [2.1]	45 [2.4]
Clear Cell Focus	7	6	5	5
Degeneration, Cystic				1 [1.0]
Eosinophilic Focus	10	8	11	14
Fatty Change, Focal	12 [1.0]	8 [1.3]	10 [1.8]	8 [1.4]
Fatty Change, Diffuse	7 [1.7]	5 [1.8]	7 [2.1]	4 [2.0]
Hematopoietic Cell Proliferation	4 [1.0]	3 [1.0]	6 [1.0]	2 [1.0]
Hepatodiaphragmatic Nodule	3	7	3	5
Inflammation	39 [1.2]	45 [1.4]	46 [1.4]	41 [1.4]
Mixed Cell Focus	19	12	15	18
Necrosis	3 [1.0]	1 [2.0]		4 [1.5]
Regeneration				1 [3.0]
Vacuolization Cytoplasmic, Focal		3 [1.0]	3 [1.3]	2 [2.0]
Vacuolization Cytoplasmic, Diffuse			2 [1.0]	1 [2.0]

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Test Type: CHRONIC

Time Report Requested: 14:23:30

Route: GAVAGE

CAS Number: 75-12-7

First Dose M/F: 03/21/01 / 03/20/01

Species/Strain: RATS/F 344

Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Bile Duct, Cyst		1 [1.0]	2 [1.0]	
Bile Duct, Hyperplasia	27 [1.2]	28 [1.3]	15 [1.0]	16 [1.2]
Centrilobular, Degeneration	8 [2.5]	7 [1.6]	6 [2.2]	5 [2.0]
Oval Cell, Hyperplasia	13 [1.5]	22 [1.2]	16 [1.0]	17 [1.1]
Serosa, Inflammation		1 [2.0]		
Mesentery	(18)	(16)	(12)	(9)
Fat, Necrosis	17 [3.0]	16 [3.0]	12 [3.0]	9 [3.0]
Oral Mucosa	(15)	(9)	(12)	(7)
Gingival, Hyperplasia, Squamous	14 [1.2]	9 [1.1]	12 [1.1]	7 [1.0]
Pancreas	(50)	(50)	(50)	(50)
Basophilic Focus	1 [1.0]	1 [2.0]		
Infiltration Cellular, Mononuclear Cell	9 [1.8]	1 [1.0]	6 [1.5]	6 [2.0]
Inflammation, Chronic Active	8 [1.0]	12 [1.3]	16 [1.4]	14 [1.1]
Vacuolization Cytoplasmic		1 [1.0]		
Acinus, Atrophy	7 [1.6]	9 [1.9]	10 [1.9]	14 [1.5]
Acinus, Hyperplasia	1 [3.0]			
Artery, Inflammation, Chronic Active			1 [3.0]	
Duct, Cyst	3 [1.3]	3 [1.7]	5 [1.4]	1 [1.0]
Salivary Glands	(50)	(50)	(50)	(50)
Atrophy			1 [3.0]	
Inflammation		1 [1.0]	1 [3.0]	
Necrosis				1 [3.0]
Stomach, Forestomach	(50)	(50)	(50)	(50)
Edema		2 [2.0]		
Erosion			1 [1.0]	
Hyperplasia, Squamous		1 [2.0]	1 [3.0]	
Inflammation	1 [3.0]	2 [1.5]	3 [2.3]	
Mineralization				1 [1.0]
Ulcer	1 [3.0]	1 [3.0]	2 [3.0]	
Stomach, Glandular	(50)	(50)	(50)	(50)
Amyloid Deposition				1 [2.0]
Mineralization			1 [1.0]	1 [1.0]
Glands, Cyst	2 [1.0]	1 [1.0]		
Tongue	(0)	(0)	(1)	(0)
Hyperplasia, Squamous			1 [2.0]	
Tooth	(19)	(11)	(11)	(14)
Peridontal Tissue, Inflammation	19 [1.2]	11 [1.3]	11 [1.1]	14 [1.2]

CARDIOVASCULAR SYSTEM

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Test Type: CHRONIC

Time Report Requested: 14:23:30

Route: GAVAGE

CAS Number: 75-12-7

First Dose M/F: 03/21/01 / 03/20/01

Species/Strain: RATS/F 344

Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Blood Vessel	(50)	(50)	(50)	(50)
Aorta, Inflammation, Focal		1 [3.0]		
Heart	(50)	(50)	(50)	(50)
Angiectasis		1 [2.0]		
Cardiomyopathy	44 [1.2]	47 [1.1]	40 [1.1]	37 [1.2]
Degeneration				1 [3.0]
Inflammation	1 [2.0]	1 [2.0]	2 [1.0]	
Thrombosis	1 [2.0]			
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(50)
Angiectasis	39 [1.5]	38 [1.4]	38 [1.6]	43 [1.7]
Degeneration, Cystic	5 [2.0]	7 [1.9]	5 [2.0]	10 [1.8]
Hyperplasia	20 [1.7]	22 [1.5]	8 [1.6]	15 [1.6]
Hypertrophy	11 [1.8]	10 [1.7]	11 [1.8]	13 [1.8]
Infiltration Cellular, Mononuclear Cell	2 [1.0]			
Necrosis				1 [2.0]
Vacuolization Cytoplasmic	30 [1.4]	16 [1.3]	23 [1.4]	19 [1.3]
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia	3 [3.0]	2 [2.0]	4 [2.0]	1 [1.0]
Infiltration Cellular, Mononuclear Cell	3 [2.3]		1 [1.0]	
Necrosis				1 [2.0]
Islets, Pancreatic	(50)	(50)	(50)	(50)
Parathyroid Gland	(46)	(47)	(46)	(47)
Pituitary Gland	(50)	(50)	(50)	(50)
Angiectasis	36 [2.0]	25 [2.3]	23 [2.3]	24 [2.2]
Cyst	9 [1.8]	10 [1.6]	12 [1.3]	5 [1.6]
Cytoplasmic Alteration				1 [2.0]
Hemorrhage		1 [2.0]		
Pars Distalis, Cyst	1 [2.0]			1 [1.0]
Pars Distalis, Hyperplasia	24 [2.3]	21 [1.9]	26 [2.3]	25 [2.3]
Pars Nervosa, Cyst				1 [2.0]
Thyroid Gland	(50)	(50)	(50)	(50)
C-cell, Hyperplasia	24 [1.3]	24 [1.6]	34 [1.3]	27 [1.4]
Follicle, Cyst	1 [1.0]			
Follicular Cell, Hyperplasia	2 [1.0]			

GENERAL BODY SYSTEM

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Test Type: CHRONIC

FORMAMIDE

Time Report Requested: 14:23:30

Route: GAVAGE

CAS Number: 75-12-7

First Dose M/F: 03/21/01 / 03/20/01

Species/Strain: RATS/F 344

Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
None				
GENITAL SYSTEM				
Clitoral Gland	(50)	(50)	(50)	(49)
Cyst	1 [3.0]			1
Hyperplasia	5 [2.4]	7 [1.9]	6 [1.5]	8 [2.4]
Inflammation	36 [1.3]	39 [1.1]	43 [1.3]	37 [1.4]
Duct, Cyst	11 [1.9]	14 [1.9]	23 [1.9]	16 [2.1]
Ovary	(50)	(50)	(50)	(50)
Congestion				1 [3.0]
Cyst	9 [2.1]		9 [2.3]	5 [2.8]
Necrosis			1 [2.0]	
Uterus	(50)	(50)	(50)	(50)
Adenomyosis	1 [1.0]		1 [2.0]	2 [1.5]
Cyst	1 [2.0]		1 [3.0]	
Decidual Reaction			1 [3.0]	
Hemorrhage		1 [2.0]		
Inflammation		1 [1.0]	4 [1.5]	1 [1.0]
Endometrium, Hyperplasia, Cystic	8 [3.0]	7 [2.9]	6 [2.5]	5 [3.2]
Vagina	(0)	(2)	(0)	(0)
Inflammation		1 [1.0]		
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Atrophy	1 [2.0]	2 [2.0]	1 [2.0]	1 [2.0]
Hyperplasia	14 [2.9]	16 [2.8]	18 [2.9]	13 [2.8]
Hyperplasia, Histiocytic	1 [4.0]			
Inflammation, Granulomatous	1 [3.0]			
Myelofibrosis	1 [2.0]	1 [2.0]		1 [2.0]
Lymph Node	(6)	(5)	(3)	(2)
Ectasia			1 [2.0]	
Hyperplasia, Lymphoid	1 [3.0]			
Deep Cervical, Ectasia	1 [2.0]	2 [1.5]		
Deep Cervical, Hyperplasia, Plasma Cell		1 [2.0]		
Mediastinal, Ectasia	1 [3.0]			
Mediastinal, Hyperplasia, Lymphoid		1 [3.0]		
Mediastinal, Inflammation			1 [3.0]	

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Species/Strain: RATS/F 344

Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Lymph Node, Mandibular Ectasia	(1) 1 [3.0]	(0)	(1)	(1) 1 [3.0]
Lymph Node, Mesenteric Ectasia	(50) 2 [2.0]	(50) 1 [2.0]	(50) 4 [2.3]	(50)
Hyperplasia, Histiocytic Hyperplasia, Lymphoid	1 [2.0]	1 [2.0]	1 [2.0]	
Spleen Hematopoietic Cell Proliferation	(50) 40 [1.3]	(50) 32 [1.2]	(50) 40 [1.3]	(50) 40 [1.3]
Hyperplasia, Lymphoid, Focal Pigmentation	39 [1.4]	39 [1.6]	41 [1.6]	38 [1.6]
Capsule, Thrombosis				1 [3.0]
Thymus Atrophy	(48) 45 [2.8]	(47) 44 [3.1]	(47) 43 [3.1]	(46) 45 [2.9]
Pigmentation		1 [2.0]		
INTEGUMENTARY SYSTEM				
Mammary Gland Cyst	(50) 24 [2.2]	(50) 19 [2.1]	(50) 20 [1.8]	(50) 6 [1.8]
Hyperplasia Hyperplasia, Atypical	15 [1.6]	7 [1.3] 1 [4.0]	7 [1.4]	7 [1.3]
Skin Hyperplasia, Squamous	(50)	(50) 1 [3.0]	(50)	(50)
Inflammation Ulcer	1 [3.0]	1 [2.0] 1 [2.0]	1 [4.0]	
MUSCULOSKELETAL SYSTEM				
Bone Osteopetrosis	(50) 1 [3.0]	(50) 1 [3.0]	(50)	(50)
Skeletal Muscle Cyst	(1)	(0)	(1) 1 [3.0]	(0)
NERVOUS SYSTEM				
Brain Gliosis	(50)	(50)	(50) 2 [2.0]	(50)
Hemorrhage		2 [2.0]	1 [2.0]	1 [3.0]

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Species/Strain: RATS/F 344

Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Mineralization	1 [1.0]			
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Inflammation	5 [2.0]	2 [2.0]	5 [1.8]	8 [1.3]
Metaplasia, Squamous	1 [1.0]		1 [1.0]	
Alveolar Epithelium, Hyperplasia	12 [1.8]	6 [1.5]	15 [1.7]	6 [1.7]
Alveolus, Infiltration Cellular, Histiocyte	45 [1.0]	43 [1.0]	46 [1.0]	43 [1.0]
Serosa, Fibrosis			1 [1.0]	
Nose	(50)	(50)	(50)	(50)
Glands, Cyst	1 [2.0]			
Lateral Wall, Inflammation	4 [1.0]	5 [1.2]	3 [1.3]	2 [1.5]
Nasolacrimal Duct, Inflammation	6 [1.5]	6 [1.8]	5 [2.2]	2 [1.5]
Nasopharyngeal Duct, Inflammation		3 [2.3]		
Nerve, Degeneration			1 [2.0]	
Olfactory Epithelium, Metaplasia			1 [2.0]	2 [2.0]
Respiratory Epithelium, Hyperplasia	37 [1.0]	31 [1.1]	25 [1.0]	22 [1.0]
Septum, Inflammation	10 [1.2]	9 [1.4]	12 [1.3]	6 [1.3]
Turbinate, Inflammation	20 [1.3]	11 [1.2]	12 [1.3]	9 [1.6]
Trachea	(50)	(50)	(50)	(50)
Inflammation	7 [1.0]	6 [1.0]	3 [1.0]	7 [1.1]
SPECIAL SENSES SYSTEM				
Eye	(50)	(50)	(50)	(50)
Atrophy		1 [3.0]		
Inflammation		1 [2.0]		
Anterior Chamber, Ciliary Body Iris, Inflammation				1 [3.0]
Cornea, Inflammation			2 [3.5]	1 [1.0]
Iris, Inflammation			1 [2.0]	
Lens, Degeneration		2 [3.0]	1 [3.0]	3 [3.3]
Retina, Atrophy		1 [4.0]	1 [4.0]	2 [4.0]
Retina, Degeneration		1 [3.0]	1 [2.0]	
Sclera, Mineralization	5 [1.6]	2 [1.0]		
Harderian Gland	(50)	(50)	(50)	(50)
Degeneration		1 [2.0]		
Infiltration Cellular, Mononuclear Cell		1 [2.0]		1 [1.0]

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Species/Strain: RATS/F 344

Pathologist: SELLS, D. - KURTZ, F.

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	20 MG/KG	40 MG/KG	80 MG/KG
Inflammation Zymbal's Gland	13 [1.2] (0)	11 [1.2] (0)	17 [1.3] (0)	17 [1.4] (1)
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet Cyst	1 [4.0]		1 [3.0]	
Infarct	3 [3.3]			2 [2.0]
Infiltration Cellular, Mononuclear Cell Inflammation	2 [2.0]	1 [2.0]		
Mineralization	43 [1.0]	42 [1.0]	36 [1.0]	43 [1.0]
Nephropathy	44 [1.0]	45 [1.0]	46 [1.0]	45 [1.0]
Pigmentation	3 [1.7]	6 [1.7]	2 [1.5]	2 [2.0]
Pelvis, Inflammation, Suppurative Transitional Epithelium, Hyperplasia	4 [2.0]		1 [2.0] 1 [1.0]	1 [2.0]
Urinary Bladder	(50)	(50)	(50)	(50)
Infiltration Cellular, Mononuclear Cell Inflammation	1 [1.0]	1 [1.0]	1 [2.0]	1 [1.0]

*** END OF REPORT ***

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