

TDMS No. 20114 - 07
 Test Type: CHRONIC
 Route: DOSED WATER
 Species/Strain: RATS/F 344

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

Sodium dichromate dihydrate (VI)

CAS Number: 7789-12-0

Date Report Requested: 10/04/2007
 Time Report Requested: 10:38:19
 First Dose M/F: 10/02/02 / 10/02/02
 Lab: SRI

FISCHER 344 RATS MALE	0 MG/L	14.3 MG/L	57.3 MG/L	172 MG/L	516 MG/L
Disposition Summary					
Animals Initially in Study	50	50	50	50	50
Early Deaths					
Moribund Sacrifice	16	15	16	9	16
Natural Death	6	5	3	5	4
Survivors					
Terminal Sacrifice	28	30	30	36	29
Animals Examined Microscopically	50	50	49	50	49

ALIMENTARY SYSTEM

Intestine Large, Cecum	(45)	(48)	(46)	(47)	(48)
Edema		1 (2%)	1 (2%)	2 (4%)	2 (4%)
Erosion				1 (2%)	
Ulcer			1 (2%)		1 (2%)
Intestine Large, Colon	(47)	(49)	(49)	(48)	(48)
Edema	1 (2%)				
Infiltration Cellular, Lymphocyte					1 (2%)
Intestine Small, Duodenum	(48)	(48)	(47)	(46)	(48)
Erosion	1 (2%)			1 (2%)	
Infiltration Cellular, Histiocyte			6 (13%)	36 (78%)	47 (98%)
Ulcer		1 (2%)			
Intestine Small, Ileum	(45)	(46)	(46)	(45)	(47)
Hyperplasia	1 (2%)				
Lymphoid Tissue, Hyperplasia	10 (22%)	11 (24%)	9 (20%)	7 (16%)	10 (21%)
Intestine Small, Jejunum	(44)	(47)	(45)	(46)	(46)
Hyperplasia					1 (2%)
Epithelium, Hyperplasia	1 (2%)				
Liver	(50)	(50)	(49)	(50)	(49)
Angiectasis	1 (2%)	1 (2%)			
Basophilic Focus	22 (44%)	28 (56%)	29 (59%)	32 (64%)	30 (61%)
Clear Cell Focus	23 (46%)	19 (38%)	16 (33%)	29 (58%)	25 (51%)
Degeneration, Cystic	7 (14%)	3 (6%)	2 (4%)		2 (4%)
Eosinophilic Focus	10 (20%)	5 (10%)	4 (8%)	8 (16%)	9 (18%)
Fatty Change	12 (24%)	10 (20%)	10 (20%)	8 (16%)	12 (24%)
Hematopoietic Cell Proliferation	1 (2%)		3 (6%)		
Hemorrhage		2 (4%)	1 (2%)	4 (8%)	3 (6%)
Hepatodiaphragmatic Nodule	5 (10%)	6 (12%)	6 (12%)	7 (14%)	10 (20%)
Infiltration Cellular, Histiocyte	1 (2%)		2 (4%)	5 (10%)	34 (69%)
Inflammation, Chronic	19 (38%)	25 (50%)	21 (43%)	28 (56%)	26 (53%)
Mixed Cell Focus	11 (22%)	7 (14%)	5 (10%)	13 (26%)	10 (20%)
Necrosis	3 (6%)	3 (6%)		2 (4%)	1 (2%)

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

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FISCHER 344 RATS MALE	0 MG/L	14.3 MG/L	57.3 MG/L	172 MG/L	516 MG/L
Regeneration	2 (4%)	2 (4%)			
Syncytial Alteration					1 (2%)
Thrombosis	1 (2%)				
Bile Duct, Hyperplasia	47 (94%)	38 (76%)	33 (67%)	22 (44%)	15 (31%)
Centrilobular, Necrosis	8 (16%)	1 (2%)	3 (6%)	2 (4%)	5 (10%)
Hepatocyte, Hyperplasia, Focal		1 (2%)			
Intima, Vein, Hyperplasia					1 (2%)
Kupffer Cell, Pigmentation	2 (4%)		1 (2%)		
Mesentery	(12)	(4)	(15)	(14)	(15)
Accessory Spleen	1 (8%)		1 (7%)	1 (7%)	1 (7%)
Hemorrhage					1 (7%)
Fat, Necrosis	11 (92%)	3 (75%)	10 (67%)	12 (86%)	13 (87%)
Oral Mucosa	(50)	(50)	(49)	(50)	(49)
Pancreas	(50)	(50)	(49)	(50)	(49)
Atrophy	25 (50%)	16 (32%)	24 (49%)	24 (48%)	31 (63%)
Cyst	9 (18%)	7 (14%)	9 (18%)	9 (18%)	12 (24%)
Acinus, Cytoplasmic Alteration			1 (2%)		3 (6%)
Acinus, Hyperplasia, Focal	6 (12%)	10 (20%)	9 (18%)	7 (14%)	9 (18%)
Salivary Glands	(50)	(50)	(49)	(49)	(49)
Atrophy	3 (6%)	1 (2%)	2 (4%)	4 (8%)	3 (6%)
Necrosis			1 (2%)		2 (4%)
Duct, Cyst		1 (2%)			
Stomach, Forestomach	(50)	(50)	(49)	(50)	(49)
Edema	3 (6%)			3 (6%)	3 (6%)
Erosion				1 (2%)	1 (2%)
Inflammation, Chronic Active		1 (2%)		1 (2%)	1 (2%)
Ulcer	1 (2%)	3 (6%)	3 (6%)	2 (4%)	1 (2%)
Epithelium, Hyperplasia	1 (2%)	2 (4%)	2 (4%)	5 (10%)	1 (2%)
Stomach, Glandular	(50)	(50)	(49)	(50)	(49)
Cyst					1 (2%)
Edema		1 (2%)		1 (2%)	
Erosion	8 (16%)	4 (8%)	6 (12%)	5 (10%)	2 (4%)
Hyperplasia	8 (16%)	4 (8%)	9 (18%)	12 (24%)	12 (24%)
Infiltration Cellular, Lymphocyte					1 (2%)
Ulcer	1 (2%)	3 (6%)	1 (2%)	1 (2%)	
Epithelium, Glands, Dilatation				1 (2%)	
Glands, Dilatation	1 (2%)		1 (2%)		1 (2%)
Tongue	(49)	(50)	(47)	(49)	(48)
Fibrosis					1 (2%)
Hemorrhage	1 (2%)				1 (2%)
Hemorrhage, Chronic					1 (2%)
Inflammation, Chronic	2 (4%)	5 (10%)	6 (13%)	6 (12%)	3 (6%)
Epithelium, Hyperplasia	2 (4%)			2 (4%)	1 (2%)
Vein, Thrombosis					1 (2%)
Tooth	(0)	(0)	(0)	(1)	(4)
Malformation					1 (25%)

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FISCHER 344 RATS MALE	0 MG/L	14.3 MG/L	57.3 MG/L	172 MG/L	516 MG/L
CARDIOVASCULAR SYSTEM					
Blood Vessel	(0)	(4)	(0)	(0)	(3)
Dilatation					1 (33%)
Heart	(50)	(50)	(49)	(50)	(49)
Cardiomyopathy	46 (92%)	44 (88%)	44 (90%)	45 (90%)	45 (92%)
Inflammation, Chronic					1 (2%)
Thrombosis	5 (10%)	3 (6%)	1 (2%)	2 (4%)	
ENDOCRINE SYSTEM					
Adrenal Cortex	(50)	(50)	(49)	(50)	(49)
Accessory Adrenal Cortical Nodule	17 (34%)	18 (36%)	13 (27%)	17 (34%)	8 (16%)
Angiectasis	1 (2%)		1 (2%)	1 (2%)	
Degeneration, Fatty	7 (14%)	10 (20%)	9 (18%)	7 (14%)	11 (22%)
Hyperplasia, Focal	2 (4%)	1 (2%)	6 (12%)		3 (6%)
Hyperplasia, Diffuse	1 (2%)		1 (2%)		
Hypertrophy	1 (2%)				
Hypertrophy, Focal		2 (4%)		4 (8%)	4 (8%)
Necrosis		2 (4%)	1 (2%)	1 (2%)	1 (2%)
Adrenal Medulla	(49)	(50)	(49)	(50)	(49)
Hyperplasia	12 (24%)	11 (22%)	17 (35%)	9 (18%)	14 (29%)
Islets, Pancreatic	(50)	(50)	(49)	(50)	(49)
Hyperplasia	2 (4%)			1 (2%)	1 (2%)
Parathyroid Gland	(46)	(46)	(46)	(49)	(48)
Hyperplasia					1 (2%)
Pituitary Gland	(50)	(50)	(49)	(50)	(49)
Pars Distalis, Angiectasis	2 (4%)	3 (6%)	2 (4%)	5 (10%)	3 (6%)
Pars Distalis, Cyst	3 (6%)	4 (8%)	7 (14%)	5 (10%)	5 (10%)
Pars Distalis, Cytoplasmic Alteration, Focal	2 (4%)	2 (4%)	3 (6%)	2 (4%)	2 (4%)
Pars Distalis, Hyperplasia		1 (2%)		1 (2%)	1 (2%)
Pars Distalis, Hyperplasia, Focal	12 (24%)	6 (12%)	12 (24%)	14 (28%)	11 (22%)
Pars Intermedia, Angiectasis	1 (2%)			1 (2%)	2 (4%)
Pars Intermedia, Cyst	1 (2%)	1 (2%)	2 (4%)	1 (2%)	1 (2%)
Pars Intermedia, Metaplasia, Atypical		1 (2%)			
Pars Intermedia, Pars Nervosa, Metaplasia, Atypical				1 (2%)	
Thyroid Gland	(50)	(50)	(49)	(50)	(49)
Ultimobranchial Cyst			1 (2%)		2 (4%)
C-cell, Hyperplasia	11 (22%)	13 (26%)	18 (37%)	14 (28%)	5 (10%)
Follicle, Cyst	1 (2%)	1 (2%)			2 (4%)

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FISCHER 344 RATS MALE	0 MG/L	14.3 MG/L	57.3 MG/L	172 MG/L	516 MG/L
GENERAL BODY SYSTEM					
None					
GENITAL SYSTEM					
Epididymis	(50)	(50)	(49)	(50)	(49)
Granuloma Sperm	2 (4%)				1 (2%)
Inflammation, Chronic	1 (2%)		2 (4%)	2 (4%)	2 (4%)
Preputial Gland	(50)	(50)	(49)	(50)	(49)
Cyst	1 (2%)	1 (2%)			1 (2%)
Hyperplasia	1 (2%)	1 (2%)	2 (4%)		1 (2%)
Inflammation, Chronic	16 (32%)	11 (22%)	13 (27%)	17 (34%)	16 (33%)
Prostate	(50)	(50)	(49)	(50)	(49)
Cyst			1 (2%)		
Inflammation, Chronic	19 (38%)	17 (34%)	14 (29%)	8 (16%)	14 (29%)
Epithelium, Hyperplasia	7 (14%)	11 (22%)	7 (14%)	7 (14%)	8 (16%)
Seminal Vesicle	(50)	(50)	(49)	(50)	(49)
Inflammation, Chronic				1 (2%)	
Testes	(50)	(50)	(49)	(50)	(49)
Germinal Epithelium, Atrophy	5 (10%)	4 (8%)	6 (12%)	4 (8%)	8 (16%)
Interstitial Cell, Hyperplasia	4 (8%)	5 (10%)	3 (6%)	4 (8%)	4 (8%)
HEMATOPOIETIC SYSTEM					
Bone Marrow	(50)	(50)	(49)	(50)	(49)
Hemorrhage	1 (2%)				
Hyperplasia	4 (8%)	12 (24%)	7 (14%)	7 (14%)	6 (12%)
Myelofibrosis	2 (4%)			1 (2%)	2 (4%)
Lymph Node	(14)	(7)	(6)	(11)	(9)
Deep Cervical, Ectasia					2 (22%)
Deep Cervical, Hyperplasia, Lymphoid					2 (22%)
Mediastinal, Ectasia	2 (14%)	1 (14%)		1 (9%)	1 (11%)
Mediastinal, Hemorrhage	1 (7%)	2 (29%)	1 (17%)	1 (9%)	1 (11%)
Mediastinal, Hyperplasia, Lymphoid	1 (7%)	1 (14%)	1 (17%)	3 (27%)	2 (22%)
Mediastinal, Pigmentation			1 (17%)		
Lymph Node, Mandibular	(0)	(0)	(5)	(2)	(2)
Ectasia			1 (20%)	1 (50%)	2 (100%)
Lymph Node, Mesenteric	(49)	(50)	(49)	(50)	(49)
Hemorrhage	2 (4%)	7 (14%)	9 (18%)	8 (16%)	17 (35%)
Hyperplasia, Lymphoid	1 (2%)	6 (12%)	2 (4%)	1 (2%)	
Infiltration Cellular, Histiocyte	13 (27%)	11 (22%)	30 (61%)	39 (78%)	41 (84%)
Lymph Node, Pancreatic	(32)	(34)	(34)	(36)	(33)

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FISCHER 344 RATS MALE	0 MG/L	14.3 MG/L	57.3 MG/L	172 MG/L	516 MG/L
Congestion			1 (3%)		
Ectasia	1 (3%)	1 (3%)	1 (3%)		
Hemorrhage		3 (9%)	4 (12%)	2 (6%)	1 (3%)
Hyperplasia, Lymphoid					1 (3%)
Infiltration Cellular, Histiocyte	17 (53%)	22 (65%)	17 (50%)	17 (47%)	25 (76%)
Pigmentation			1 (3%)	1 (3%)	
Spleen	(50)	(50)	(49)	(50)	(49)
Accessory Spleen	1 (2%)		2 (4%)	1 (2%)	
Fibrosis	2 (4%)	3 (6%)	2 (4%)	1 (2%)	
Hematopoietic Cell Proliferation	18 (36%)	25 (50%)	20 (41%)	20 (40%)	16 (33%)
Hemorrhage			1 (2%)	1 (2%)	1 (2%)
Metaplasia, Lipocyte	1 (2%)				
Necrosis	4 (8%)		4 (8%)	2 (4%)	
Pigmentation	3 (6%)	2 (4%)	1 (2%)		3 (6%)
Lymphoid Follicle, Atrophy	1 (2%)				
Lymphoid Follicle, Hyperplasia		1 (2%)			
Thymus	(48)	(50)	(46)	(49)	(47)
Atrophy		1 (2%)	1 (2%)		1 (2%)
INTEGUMENTARY SYSTEM					
Mammary Gland	(50)	(49)	(48)	(50)	(49)
Hyperplasia	25 (50%)	17 (35%)	19 (40%)	11 (22%)	14 (29%)
Inflammation, Granulomatous				1 (2%)	
Skin	(50)	(50)	(49)	(50)	(49)
Angiectasis				1 (2%)	1 (2%)
Cyst	1 (2%)			1 (2%)	
Cyst Epithelial Inclusion	5 (10%)	3 (6%)	2 (4%)	3 (6%)	6 (12%)
Edema			1 (2%)		
Hyperkeratosis	5 (10%)	2 (4%)	1 (2%)	4 (8%)	1 (2%)
Epidermis, Hyperplasia			1 (2%)	1 (2%)	
MUSCULOSKELETAL SYSTEM					
Bone	(50)	(50)	(49)	(50)	(49)
Cranium, Osteopetrosis	1 (2%)		2 (4%)	1 (2%)	
Femur, Osteopetrosis					1 (2%)
Skeletal Muscle	(3)	(2)	(2)	(0)	(1)
Atrophy					1 (100%)
NERVOUS SYSTEM					
Brain	(50)	(50)	(49)	(50)	(49)

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FISCHER 344 RATS MALE	0 MG/L	14.3 MG/L	57.3 MG/L	172 MG/L	516 MG/L
Compression	7 (14%)	6 (12%)	9 (18%)	3 (6%)	3 (6%)
Hemorrhage	1 (2%)				
Hydrocephalus		1 (2%)			1 (2%)
Peripheral Nerve	(4)	(6)	(5)	(2)	(5)
Atrophy		1 (17%)			
Spinal Cord	(4)	(6)	(5)	(2)	(5)
Vacuolization Cytoplasmic	1 (25%)				
RESPIRATORY SYSTEM					
Lung	(50)	(50)	(49)	(50)	(49)
Edema	1 (2%)				
Foreign Body					1 (2%)
Hemorrhage	10 (20%)	7 (14%)	7 (14%)	6 (12%)	8 (16%)
Infiltration Cellular, Histiocyte	28 (56%)	27 (54%)	32 (65%)	29 (58%)	33 (67%)
Inflammation, Suppurative				1 (2%)	1 (2%)
Inflammation, Granulomatous		1 (2%)			
Inflammation, Chronic	1 (2%)			1 (2%)	1 (2%)
Metaplasia, Osseous		1 (2%)	1 (2%)	1 (2%)	1 (2%)
Thrombosis	1 (2%)	1 (2%)		1 (2%)	
Alveolar Epithelium, Hyperplasia	11 (22%)	6 (12%)	4 (8%)	8 (16%)	5 (10%)
Alveolar Epithelium, Metaplasia, Squamous			1 (2%)		
Nose	(50)	(50)	(49)	(50)	(49)
Foreign Body	9 (18%)	11 (22%)	9 (18%)	15 (30%)	1 (2%)
Hemorrhage		1 (2%)			
Inflammation, Chronic	8 (16%)	11 (22%)	8 (16%)	16 (32%)	7 (14%)
Thrombosis	1 (2%)				
Nasolacrimal Duct, Cyst				2 (4%)	1 (2%)
Respiratory Epithelium, Hyperplasia	5 (10%)	5 (10%)	4 (8%)	11 (22%)	4 (8%)
Respiratory Epithelium, Metaplasia, Squamous		1 (2%)		3 (6%)	1 (2%)
SPECIAL SENSES SYSTEM					
Eye	(50)	(50)	(49)	(50)	(49)
Cataract	1 (2%)	3 (6%)	2 (4%)	1 (2%)	3 (6%)
Hemorrhage					1 (2%)
Inflammation, Chronic		1 (2%)			3 (6%)
Cornea, Hyperplasia					1 (2%)
Retina, Degeneration	2 (4%)	3 (6%)	4 (8%)	2 (4%)	4 (8%)
Harderian Gland	(50)	(50)	(49)	(50)	(49)
Inflammation, Chronic	2 (4%)	1 (2%)			
Pigmentation					1 (2%)

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URINARY SYSTEM					
Kidney	(50)	(50)	(49)	(50)	(49)
Cyst		2 (4%)	1 (2%)	4 (8%)	1 (2%)
Hydronephrosis					1 (2%)
Infarct				1 (2%)	
Infiltration Cellular, Lipocyte			1 (2%)		
Inflammation, Chronic	5 (10%)	9 (18%)	8 (16%)	2 (4%)	2 (4%)
Nephropathy	45 (90%)	43 (86%)	45 (92%)	43 (86%)	41 (84%)
Renal Tubule, Accumulation, Hyaline Droplet			2 (4%)		
Renal Tubule, Dilatation			3 (6%)		1 (2%)
Renal Tubule, Hyperplasia				2 (4%)	
Renal Tubule, Necrosis	2 (4%)	1 (2%)	1 (2%)	1 (2%)	1 (2%)
Renal Tubule, Pigmentation	5 (10%)	1 (2%)	1 (2%)		3 (6%)
Transitional Epithelium, Hyperplasia			1 (2%)		
Urinary Bladder	(50)	(50)	(49)	(50)	(49)
Calculus Micro Observation Only			1 (2%)		
Edema			1 (2%)		
Hemorrhage		1 (2%)	1 (2%)		
Inflammation, Chronic			1 (2%)		
Necrosis		1 (2%)			
Transitional Epithelium, Hyperplasia		1 (2%)			1 (2%)

*** END OF MALE ***

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FISCHER 344 RATS FEMALE	0 MG/L	14.3 MG/L	57.3 MG/L	172 MG/L	516 MG/L
Disposition Summary					
Animals Initially in Study	50	50	50	50	50
Early Deaths					
Moribund Sacrifice	12	15	9	10	18
Natural Death	5	3	9	4	1
Survivors					
Natural Death	1				
Terminal Sacrifice	32	32	32	36	31
Animals Examined Microscopically	50	50	50	50	50

ALIMENTARY SYSTEM

Intestine Large, Cecum	(46)	(47)	(48)	(47)	(50)
Edema	2 (4%)	1 (2%)	1 (2%)		1 (2%)
Hemorrhage			1 (2%)		
Intestine Large, Colon	(49)	(49)	(49)	(48)	(50)
Intestine Small, Duodenum	(46)	(49)	(48)	(46)	(50)
Infiltration Cellular, Histiocyte			1 (2%)	30 (65%)	47 (94%)
Intestine Small, Ileum	(45)	(47)	(44)	(47)	(50)
Lymphatic, Hyperplasia				1 (2%)	
Lymphoid Tissue, Hyperplasia	16 (36%)	10 (21%)	8 (18%)	6 (13%)	12 (24%)
Intestine Small, Jejunum	(46)	(46)	(44)	(45)	(49)
Liver	(50)	(50)	(50)	(50)	(50)
Angiectasis	1 (2%)	4 (8%)	2 (4%)		
Basophilic Focus	45 (90%)	41 (82%)	44 (88%)	47 (94%)	43 (86%)
Clear Cell Focus	7 (14%)	5 (10%)	7 (14%)	20 (40%)	7 (14%)
Eosinophilic Focus	5 (10%)	5 (10%)	5 (10%)	3 (6%)	3 (6%)
Fatty Change	3 (6%)	7 (14%)	10 (20%)	13 (26%)	16 (32%)
Hematopoietic Cell Proliferation	1 (2%)	2 (4%)		3 (6%)	
Hemorrhage		1 (2%)	1 (2%)	1 (2%)	
Hepatodiaphragmatic Nodule	5 (10%)	3 (6%)	9 (18%)	10 (20%)	9 (18%)
Infiltration Cellular, Histiocyte	1 (2%)	5 (10%)	21 (42%)	42 (84%)	47 (94%)
Inflammation, Chronic	12 (24%)	21 (42%)	28 (56%)	35 (70%)	39 (78%)
Mixed Cell Focus	9 (18%)	6 (12%)	10 (20%)	20 (40%)	18 (36%)
Necrosis	5 (10%)	7 (14%)	4 (8%)		1 (2%)
Regeneration		1 (2%)	1 (2%)		
Bile Duct, Hyperplasia	2 (4%)		5 (10%)	3 (6%)	4 (8%)
Centrilobular, Necrosis	4 (8%)	2 (4%)	1 (2%)	2 (4%)	
Hepatocyte, Syncytial Alteration				1 (2%)	1 (2%)
Kupffer Cell, Pigmentation	1 (2%)	1 (2%)			
Lymphatic, Infiltration Cellular				1 (2%)	
Mesentery	(11)	(13)	(12)	(15)	(10)

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

TDMS No. 20114 - 07
 Test Type: CHRONIC
 Route: DOSED WATER
 Species/Strain: RATS/F 344

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

Sodium dichromate dihydrate (VI)

CAS Number: 7789-12-0

Date Report Requested: 10/04/2007
 Time Report Requested: 10:38:19
 First Dose M/F: 10/02/02 / 10/02/02
 Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	14.3 MG/L	57.3 MG/L	172 MG/L	516 MG/L
Accessory Spleen		1 (8%)		1 (7%)	1 (10%)
Fat, Necrosis	11 (100%)	10 (77%)	11 (92%)	12 (80%)	9 (90%)
Oral Mucosa	(50)	(50)	(50)	(50)	(50)
Pancreas	(50)	(50)	(50)	(50)	(50)
Atrophy	6 (12%)	12 (24%)	11 (22%)	9 (18%)	5 (10%)
Cyst	2 (4%)	4 (8%)	3 (6%)	6 (12%)	4 (8%)
Acinus, Cytoplasmic Alteration					3 (6%)
Acinus, Hyperplasia, Focal	1 (2%)		1 (2%)		1 (2%)
Salivary Glands	(50)	(50)	(50)	(50)	(50)
Atrophy	9 (18%)	7 (14%)	10 (20%)	17 (34%)	17 (34%)
Fibrosis		1 (2%)			
Vacuolization Cytoplasmic		1 (2%)			
Stomach, Forestomach	(50)	(50)	(50)	(50)	(50)
Edema	1 (2%)	3 (6%)	1 (2%)	2 (4%)	2 (4%)
Erosion			1 (2%)	1 (2%)	1 (2%)
Inflammation, Chronic Active					1 (2%)
Ulcer	2 (4%)	3 (6%)	2 (4%)	2 (4%)	3 (6%)
Epithelium, Hyperplasia	2 (4%)	3 (6%)	4 (8%)	4 (8%)	4 (8%)
Stomach, Glandular	(50)	(50)	(50)	(50)	(50)
Edema			1 (2%)	1 (2%)	1 (2%)
Erosion	2 (4%)	3 (6%)	2 (4%)	1 (2%)	5 (10%)
Hyperplasia	4 (8%)	6 (12%)	4 (8%)	7 (14%)	4 (8%)
Inflammation					1 (2%)
Ulcer	1 (2%)	2 (4%)	1 (2%)	1 (2%)	2 (4%)
Glands, Dilatation			1 (2%)		
Tongue	(45)	(49)	(48)	(48)	(48)
Granuloma					2 (4%)
Hemorrhage		1 (2%)			1 (2%)
Inflammation, Chronic	8 (18%)	3 (6%)	4 (8%)	14 (29%)	12 (25%)
Ulcer					3 (6%)
Epithelium, Hyperplasia	1 (2%)	1 (2%)	1 (2%)		
CARDIOVASCULAR SYSTEM					
Heart	(50)	(50)	(50)	(50)	(50)
Cardiomyopathy	27 (54%)	32 (64%)	35 (70%)	33 (66%)	28 (56%)
Inflammation, Chronic		1 (2%)			
Necrosis			1 (2%)		
Thrombosis	1 (2%)	1 (2%)	2 (4%)	1 (2%)	
ENDOCRINE SYSTEM					
Adrenal Cortex	(50)	(50)	(50)	(50)	(50)
Accessory Adrenal Cortical Nodule	6 (12%)	9 (18%)	10 (20%)	6 (12%)	8 (16%)

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

TDMS No. 20114 - 07
 Test Type: CHRONIC
 Route: DOSED WATER
 Species/Strain: RATS/F 344

PO3: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Sodium dichromate dihydrate (VI)

CAS Number: 7789-12-0

Date Report Requested: 10/04/2007
 Time Report Requested: 10:38:19
 First Dose M/F: 10/02/02 / 10/02/02
 Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	14.3 MG/L	57.3 MG/L	172 MG/L	516 MG/L
Angiectasis	1 (2%)	1 (2%)			
Degeneration, Fatty	12 (24%)	12 (24%)	17 (34%)	14 (28%)	20 (40%)
Hyperplasia, Focal	2 (4%)	6 (12%)	8 (16%)	12 (24%)	6 (12%)
Hypertrophy	1 (2%)				
Hypertrophy, Focal	4 (8%)	4 (8%)	6 (12%)	1 (2%)	7 (14%)
Necrosis	3 (6%)			2 (4%)	
Adrenal Medulla	(49)	(50)	(49)	(50)	(50)
Hyperplasia	2 (4%)	3 (6%)	1 (2%)	2 (4%)	2 (4%)
Islets, Pancreatic	(50)	(50)	(50)	(50)	(50)
Hyperplasia			1 (2%)		
Parathyroid Gland	(46)	(47)	(47)	(45)	(47)
Hyperplasia		1 (2%)			1 (2%)
Pituitary Gland	(50)	(50)	(50)	(50)	(49)
Pars Distalis, Angiectasis	11 (22%)	6 (12%)	7 (14%)	4 (8%)	3 (6%)
Pars Distalis, Cyst	18 (36%)	18 (36%)	18 (36%)	18 (36%)	27 (55%)
Pars Distalis, Cytoplasmic Alteration, Focal				1 (2%)	
Pars Distalis, Hyperplasia					1 (2%)
Pars Distalis, Hyperplasia, Focal	9 (18%)	8 (16%)	9 (18%)	8 (16%)	10 (20%)
Pars Intermedia, Angiectasis	1 (2%)	2 (4%)			
Pars Intermedia, Cyst	1 (2%)	3 (6%)	1 (2%)	1 (2%)	3 (6%)
Thyroid Gland	(50)	(50)	(50)	(50)	(50)
Ultimobranchial Cyst			2 (4%)		2 (4%)
C-cell, Hyperplasia	28 (56%)	28 (56%)	25 (50%)	23 (46%)	16 (32%)
Follicle, Cyst		1 (2%)			
GENERAL BODY SYSTEM					
Tissue NOS	(0)	(0)	(0)	(0)	(2)
GENITAL SYSTEM					
Clitoral Gland	(50)	(50)	(50)	(50)	(50)
Cyst	2 (4%)		2 (4%)	4 (8%)	1 (2%)
Hyperplasia	4 (8%)	1 (2%)	2 (4%)	3 (6%)	1 (2%)
Inflammation				1 (2%)	
Inflammation, Chronic	3 (6%)	4 (8%)	6 (12%)	8 (16%)	4 (8%)
Ovary	(49)	(50)	(50)	(50)	(50)
Angiectasis		1 (2%)		1 (2%)	
Cyst	9 (18%)	6 (12%)	7 (14%)	10 (20%)	5 (10%)
Uterus	(49)	(50)	(50)	(50)	(50)
Angiectasis					2 (4%)
Dilatation		1 (2%)			
Hemorrhage		1 (2%)			
Hyperplasia, Cystic	5 (10%)	5 (10%)	4 (8%)	9 (18%)	5 (10%)

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

TDMS No. 20114 - 07
 Test Type: CHRONIC
 Route: DOSED WATER
 Species/Strain: RATS/F 344

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

Sodium dichromate dihydrate (VI)

CAS Number: 7789-12-0

Date Report Requested: 10/04/2007
 Time Report Requested: 10:38:19
 First Dose M/F: 10/02/02 / 10/02/02
 Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	14.3 MG/L	57.3 MG/L	172 MG/L	516 MG/L
Inflammation, Chronic				1 (2%)	
Vagina	(8)	(12)	(4)	(4)	(10)
Angiectasis	1 (13%)				
HEMATOPOIETIC SYSTEM					
Bone Marrow	(50)	(50)	(49)	(50)	(50)
Hyperplasia	6 (12%)	8 (16%)	7 (14%)	6 (12%)	9 (18%)
Infiltration Cellular, Histiocyte	1 (2%)		2 (4%)		
Myelofibrosis		1 (2%)		1 (2%)	1 (2%)
Lymph Node	(8)	(11)	(9)	(4)	(11)
Hemorrhage	1 (13%)			1 (25%)	
Hyperplasia, Lymphoid				1 (25%)	
Deep Cervical, Hemorrhage	1 (13%)		1 (11%)		
Mediastinal, Ectasia		1 (9%)			2 (18%)
Mediastinal, Hemorrhage	3 (38%)	4 (36%)	2 (22%)	3 (75%)	4 (36%)
Mediastinal, Hyperplasia, Lymphoid	2 (25%)	5 (45%)	2 (22%)	1 (25%)	6 (55%)
Mediastinal, Pigmentation	1 (13%)	4 (36%)		2 (50%)	1 (9%)
Lymph Node, Mandibular	(4)	(0)	(3)	(2)	(3)
Ectasia					1 (33%)
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)	(50)
Fibrosis			1 (2%)		
Hemorrhage	11 (22%)	13 (26%)	16 (32%)	14 (28%)	21 (42%)
Hyperplasia, Lymphoid			2 (4%)		
Hyperplasia, Reticulum Cell			1 (2%)		1 (2%)
Infiltration Cellular, Histiocyte	21 (42%)	18 (36%)	27 (54%)	36 (72%)	42 (84%)
Lymph Node, Pancreatic	(29)	(36)	(30)	(34)	(33)
Hemorrhage	3 (10%)		2 (7%)		4 (12%)
Hyperplasia, Lymphoid					2 (6%)
Infiltration Cellular, Histiocyte	17 (59%)	20 (56%)	23 (77%)	32 (94%)	27 (82%)
Pigmentation	2 (7%)				1 (3%)
Spleen	(50)	(50)	(50)	(50)	(50)
Accessory Spleen			1 (2%)		1 (2%)
Fibrosis		2 (4%)			
Hematopoietic Cell Proliferation	36 (72%)	28 (56%)	38 (76%)	36 (72%)	33 (66%)
Hemorrhage			1 (2%)		1 (2%)
Infiltration Cellular, Mixed Cell			3 (6%)		
Necrosis		3 (6%)	1 (2%)	1 (2%)	2 (4%)
Pigmentation	26 (52%)	23 (46%)	13 (26%)	6 (12%)	3 (6%)
Lymphoid Follicle, Atrophy				1 (2%)	4 (8%)
Lymphoid Follicle, Hyperplasia			1 (2%)		3 (6%)
Thymus	(50)	(49)	(49)	(48)	(47)
Atrophy					3 (6%)

TDMS No. 20114 - 07
 Test Type: CHRONIC
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P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Sodium dichromate dihydrate (VI)

CAS Number: 7789-12-0

Date Report Requested: 10/04/2007
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FISCHER 344 RATS FEMALE	0 MG/L	14.3 MG/L	57.3 MG/L	172 MG/L	516 MG/L
INTEGUMENTARY SYSTEM					
Mammary Gland	(50)	(50)	(50)	(50)	(50)
Hyperplasia	47 (94%)	50 (100%)	45 (90%)	49 (98%)	44 (88%)
Skin	(50)	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion	1 (2%)			1 (2%)	
Edema		1 (2%)			
Hyperkeratosis			1 (2%)		
Ulcer			1 (2%)		
MUSCULOSKELETAL SYSTEM					
Bone	(50)	(50)	(50)	(50)	(50)
Cranium, Osteopetrosis			1 (2%)	1 (2%)	2 (4%)
NERVOUS SYSTEM					
Brain	(50)	(50)	(50)	(50)	(50)
Compression	8 (16%)	13 (26%)	15 (30%)	11 (22%)	7 (14%)
Gliosis					1 (2%)
Hemorrhage	1 (2%)	3 (6%)		1 (2%)	
Hydrocephalus			2 (4%)	2 (4%)	
Necrosis					1 (2%)
Vacuolization Cytoplasmic					1 (2%)
RESPIRATORY SYSTEM					
Larynx	(0)	(0)	(0)	(1)	(1)
Lung	(50)	(50)	(50)	(50)	(50)
Edema			1 (2%)		
Foreign Body			1 (2%)		1 (2%)
Hemorrhage	2 (4%)	4 (8%)	4 (8%)	1 (2%)	2 (4%)
Infiltration Cellular, Histiocyte	45 (90%)	48 (96%)	42 (84%)	46 (92%)	47 (94%)
Inflammation, Chronic	2 (4%)	1 (2%)	3 (6%)		1 (2%)
Alveolar Epithelium, Hyperplasia	11 (22%)	7 (14%)	12 (24%)	9 (18%)	10 (20%)
Alveolar Epithelium, Metaplasia, Squamous					1 (2%)
Nose	(50)	(50)	(50)	(50)	(50)
Foreign Body	3 (6%)	1 (2%)	1 (2%)	1 (2%)	3 (6%)
Inflammation, Chronic	3 (6%)	2 (4%)		3 (6%)	3 (6%)
Nasolacrimal Duct, Cyst		1 (2%)			
Respiratory Epithelium, Hyperplasia	1 (2%)	1 (2%)	1 (2%)	1 (2%)	2 (4%)

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TDMS No. 20114 - 07
 Test Type: CHRONIC
 Route: DOSED WATER
 Species/Strain: RATS/F 344

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

Sodium dichromate dihydrate (VI)

CAS Number: 7789-12-0

Date Report Requested: 10/04/2007
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FISCHER 344 RATS FEMALE	0 MG/L	14.3 MG/L	57.3 MG/L	172 MG/L	516 MG/L
SPECIAL SENSES SYSTEM					
Eye	(50)	(50)	(50)	(50)	(50)
Cataract	2 (4%)	2 (4%)	4 (8%)	1 (2%)	1 (2%)
Inflammation, Chronic					3 (6%)
Retina, Degeneration	4 (8%)	2 (4%)	3 (6%)	2 (4%)	2 (4%)
Harderian Gland	(50)	(50)	(50)	(50)	(50)
Hemorrhage					1 (2%)
Inflammation, Chronic				1 (2%)	
Zymbal's Gland	(1)	(0)	(0)	(0)	(1)
URINARY SYSTEM					
Kidney	(50)	(50)	(50)	(50)	(50)
Cyst				1 (2%)	2 (4%)
Glomerulosclerosis				1 (2%)	
Hydronephrosis				1 (2%)	
Infarct	3 (6%)	1 (2%)	1 (2%)	1 (2%)	4 (8%)
Inflammation, Chronic	2 (4%)	1 (2%)	1 (2%)		1 (2%)
Nephropathy	33 (66%)	23 (46%)	32 (64%)	37 (74%)	41 (82%)
Renal Tubule, Accumulation, Hyaline Droplet	7 (14%)	4 (8%)	2 (4%)	2 (4%)	
Renal Tubule, Dilatation				1 (2%)	
Renal Tubule, Necrosis	3 (6%)	2 (4%)			
Renal Tubule, Pigmentation	2 (4%)	1 (2%)	1 (2%)		2 (4%)
Transitional Epithelium, Hyperplasia	3 (6%)	2 (4%)	2 (4%)		1 (2%)
Urinary Bladder	(49)	(50)	(50)	(50)	(49)
Hemorrhage			1 (2%)		

*** END OF REPORT ***