Species/Strain: RATS/Wistar Han

Test Type: CHRONIC

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 10/29/2014 **AVERAGE SEVERITY GRADES[b]**

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Lab: BNW

Time Report Requested: 10:15:41

First Dose M/F: 07/20/09 / 07/20/09

F1_RE

C20523 **NTP Study Number:**

06/04/2012 Lock Date:

ALL Cage Range:

Route: RESPIRATORY EXPOSURE WHOLE BODY

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Include ALL **Treatment Groups:**

Study Gender: Both

TDMSE Version: 3.0.2.2_002

PWG Approval Date: NONE

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41 First Dose M/F: 07/20/09 / 07/20/09

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY	1
Species/Strain: RATS/Wistar Han	

Experiment Number: 20523 - 03

Bile Duct, Dilatation

Test Type: CHRONIC

Wistar Han RATS MALE Control 10 mg/m3 30 mg/m3 100 mg/m3 **Disposition Summary** 50 50 **Animals Initially In Study** 50 50 **Early Deaths Moribund Sacrifice** 12 10 14 15 **Natural Death** 2 1 3 1 **Survivors Terminal Sacrifice** 36 39 33 34 50 50 50 50 **Animals Examined Microscopically ALIMENTARY SYSTEM** (50)(50)(50)Esophagus (50)Intestine Large, Cecum (50)(50)(50)(50)Inflammation 1 [3.0] 1 [1.0] Artery, Inflammation 1 [1.0] Lymphoid Tissue, Hyperplasia 1 [1.0] Intestine Large, Colon (50)(50)(50)(50)Lymphoid Tissue, Hyperplasia 1 [2.0] Intestine Large, Rectum (50)(50)(50)(50)(50)Intestine Small, Duodenum (50)(50)(50)Artery, Inflammation 1 [1.0] Intestine Small, Ileum (50)(50)(50)(50)Intestine Small, Jejunum (50)(50)(50)(50)Liver (50)(50)(50)(50)Angiectasis 5 [1.0] 2 [1.0] 4 [1.0] **Basophilic Focus** 5 15 9 10 Clear Cell Focus 23 17 23 14 Eosinophilic Focus 2 2 Fatty Change 1 [2.0] 1 [1.0] 2 Hepatodiaphragmatic Nodule 1 1 [2.0] Infiltration Cellular, Lymphocyte Inflammation, Granulomatous 1 [1.0] 2 [1.0] Mixed Cell Focus 1 2 1 Bile Duct, Cyst 2 [1.5] 1 [2.0]

1 [4.0]

2 [4.0]

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)

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41 First Dose M/F: 07/20/09 / 07/20/09

Lab: BNW

Blood Vessel	Wistar Han RATS MALE	Control	10 mg/m3	30 mg/m3	100 mg/m3
Serosa, Fibrosis	Bile Duct, Hyperplasia	2 [1.0]	2 [1.0]	1 [1.0]	1 [1.0]
Mesentery (2) (2) (3) (5) Fat, Hemorrhage 11(0) 11(0) 11(0) 4 (2.0) Fat, Necrosis 2 [1.0] 2 [2.5] 2 [1.0] 4 (2.0) Pancreas (50) (50) (50) (50) Inflammation 1 [1.0] 1 [2.0] Acinus, Atrophy 7 [1.1] 2 [1.5] 9 [1.4] 2 [1.0] Acinus, Hyperplasia 1 [2.0] 1 [2.0] Artery, Inflammation 1 [1.0] (50) (50) (50) (50) Salivary Glands (50) (50) (50) (50) (50) (50) Cyst 1 [2.0] 1 [2.0] 1 [2.0] Stomach, Glandular (50) (50) (50) (50) (50) Mineralization 1 [1.0] 1 [2.0] Artery, Inflammation 1 [1.0] 1 [2.0] CARDIOVASCULAR SYSTEM 50 (50) (50) (50) (50) Blood Vessel (50) (50) (50) (50) (50) Cardiomyopathy 21 [1.3] 17 [1.2] 22 [1.1] 18 [1.3] ENDOCRINE SYSTEM Adrenal Cortex (50) (50) (50) (50) (50)				1 [1.0]	
Fat, Hemorrhage Fat, Necrosis	Mesentery	(2)	(2)		(5)
Fat, Necrosis 2 [1.0] 2 [2.5] 2 [1.0] 4 [2.0] Pancreas (50) (50) (50) (50) (50) (50) (50) (50)	Fat, Hemorrhage				
Pancreas (50) (50) (50) (50) (50) (50) (50) Inflammation 1 [1.0] 1 [2.0]	Fat, Necrosis	2 [1.0]	2 [2.5]		4 [2.0]
Acinus, Atrophy 7 [1.1] 2 [1.5] 9 [1.4] 2 [1.0] Acinus, Hyperplasia 1 [2.0] Actery, Inflammation 1 [1.0] Salivary Glands (50) (50) (50) (50) (50) Stomach, Forestomach (50) (50) (50) (50) (50) Cyst 1 [2.0] Inflammation 1 [2.0] Stomach, Glandular (50) (50) (50) (50) (50) Mineralization 1 [1.0] CARDIOVASCULAR SYSTEM Blood Vessel (50) (50) (50) (50) (50) Cardiomyopathy 21 [1.3] 17 [1.2] 22 [1.1] 18 [1.3] Endocardium, Hyperplasia (50) (50) (50) (50) Angiectasis 4 [1.0] 1 [1.0] 1 [2.0] ENDOCRINE SYSTEM Adrenal Cortex (50) (50) (50) (50) (50) Angiectasis 4 [1.0] 1 [1.0] 1 [2.0] 3 [1.0] Hypertrophy 13 [1.4] 18 [1.4] 13 [1.2] 15 [1.2] Necrosis 2 [2.0] Thrombosis 1 [2.0] Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (50) (49) (49)	Pancreas				
Acinus, Atrophy 7 [1.1] 2 [1.5] 9 [1.4] 2 [1.0] Acinus, Hyperplasia 1 [2.0] Actery, Inflammation 1 [1.0] Salivary Glands (50) (50) (50) (50) (50) Stomach, Forestomach (50) (50) (50) (50) (50) Cyst 1 [2.0] Inflammation 1 [2.0] Stomach, Glandular (50) (50) (50) (50) (50) Mineralization 1 [1.0] CARDIOVASCULAR SYSTEM Blood Vessel (50) (50) (50) (50) (50) Cardiomyopathy 21 [1.3] 17 [1.2] 22 [1.1] 18 [1.3] Endocardium, Hyperplasia (50) (50) (50) (50) Angiectasis 4 [1.0] 1 [1.0] 1 [2.0] ENDOCRINE SYSTEM Adrenal Cortex (50) (50) (50) (50) (50) Angiectasis 4 [1.0] 1 [1.0] 1 [2.0] 3 [1.0] Hypertrophy 13 [1.4] 18 [1.4] 13 [1.2] 15 [1.2] Necrosis 2 [2.0] Thrombosis 1 [2.0] Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (50) (49) (49)	Inflammation	1 [1.0]	1 [2.0]		
Acinus, Hyperplasia Artery, Inflammation 1 [1.0] Salivary Glands (50) (50) Stomach, Forestomach (50) Cyst 1 [2.0] Inflammation 1 [2.0] Stomach, Glandular (50) Mineralization Artery, Inflammation 1 [1.0] CARDIOVASCULAR SYSTEM Blood Vessel (50) Cardiomyopathy 21 [1.3] Endocardium, Hyperplasia ENDOCRINE SYSTEM Adrenal Cortex (50) Angiectasis 4 [1.0] 1 [1.0] ENDOCRINE SYSTEM Adrenal Cortex (50) Angiectasis 4 [1.0] 1 [1.0] ENDOCRINE SYSTEM Adrenal Cortex (50) Angiectasis 1 [1.0] ENDOCRINE SYSTEM Adrenal Cortex (50) Angiectasis 4 [1.0] 1 [1.0] 1 [1.0] 1 [1.0] 1 [2.0] 3 [1.0] 1 [2.0] 3 [1.0] 1 [2.0] 3 [1.0] 1 [2.0] Artery, Inflammation 1 [2.0] 3 [1.0] 4 [2.0]	Acinus, Atrophy	7 [1.1]		9 [1.4]	2 [1.0]
Artery, Inflammation 1 [1.0] Salivary Glands (50) (50) (50) (50) Stomach, Forestomach (50) (50) (50) (50) Cyst 1 [2.0] Inflammation 1 [2.0] Stomach, Glandular (50) (50) (50) (50) (50) Mineralization 1 [2.0] Artery, Inflammation 1 [1.0] CARDIOVASCULAR SYSTEM Blood Vessel (50) (50) (50) (50) (50) Heart (50) (50) (50) (50) (50) Cardiomyopathy 21 [1.3] 17 [1.2] 22 [1.1] 18 [1.3] ENDOCRINE SYSTEM Adrenal Cortex (50) (50) (50) (50) (50) Angiectasis 4 [1.0] 1 [1.0] 1 [2.0] 3 [1.0] Hypertrophy 13 [1.4] 18 [1.4] 13 [1.2] 15 [1.2] Necrosis 2 [2.0] Thrombosis Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (50) (49) (49)					
Stomach, Forestomach	Artery, Inflammation	1 [1.0]			
Stomach, Forestomach	Salivary Glands		(50)	(50)	(50)
Cyst Inflammation 1 [2.0] Inflammation 1 [2.0] Inflammation (50) (50) (50) (50) (50) (50) (50) (50) Stomach, Glandular Mineralization Artery, Inflammation 1 [1.0] 1 [2.0] 1 [2.0] CARDIOVASCULAR SYSTEM Blood Vessel (50) (50) (50) (50) (50) (50) (50) (50) (50) (50) (50) (50) (50) Cardiomyopathy 21 [1.3] 17 [1.2] 22 [1.1] 18 [1.3] ENDOCRINE SYSTEM Adrenal Cortex (50) (50) (50) (50) (50) (50) (50) (50) (50) (50) (50) Angiectasis 4 [1.0] 1 [1.0] 1 [2.0] 3 [1.0] Hypertrophy 13 [1.4] 18 [1.4] 13 [1.2] 15 [1.2] Necrosis 2 [2.0] Thrombosis 1 [2.0] Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (50) (50) (49) (49) (49)					
Inflammation					• •
Stomach, Glandular (50) (40)					
Mineralization Artery, Inflammation 1 [1.0] CARDIOVASCULAR SYSTEM Blood Vessel (50) (50) (50) (50) Heart (50) (50) (50) (50) Cardiomyopathy 21 [1.3] 17 [1.2] 22 [1.1] 18 [1.3] Endocardium, Hyperplasia ENDOCRINE SYSTEM Adrenal Cortex (50) (50) (50) (50) Angiectasis 4 [1.0] 1 [1.0] 1 [2.0] 3 [1.0] Hypertrophy 13 [1.4] 18 [1.4] 13 [1.2] 15 [1.2] Necrosis 2 [2.0] Thrombosis Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (50) (49) (49)	Stomach, Glandular		(50)	(50)	(50)
Artery, Inflammation 1 [1.0] CARDIOVASCULAR SYSTEM Blood Vessel (50) (50) (50) (50) (50) Heart (50) (50) (50) (50) (50) Cardiomyopathy 21 [1.3] 17 [1.2] 22 [1.1] 18 [1.3] Endocardium, Hyperplasia 2 [2.5] ENDOCRINE SYSTEM Adrenal Cortex (50) (50) (50) (50) Angiectasis 4 [1.0] 1 [1.0] 1 [2.0] 3 [1.0] Hypertrophy 13 [1.4] 18 [1.4] 13 [1.2] 15 [1.2] Necrosis 2 [2.0] Thrombosis 1 [2.0] Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (49) (49)		• •			
Blood Vessel	Artery, Inflammation	1 [1.0]			
Heart	CARDIOVASCULAR SYSTEM				
Heart	Blood Vessel	(50)	(50)	(50)	(50)
Cardiomyopathy Endocardium, Hyperplasia 21 [1.3] 17 [1.2] 22 [1.1] 18 [1.3] 2 [2.5] 22 [2.5] 22 [2.5] 23 [2.5] 24 [2.5] 25 [2.5]	Heart				
ENDOCRINE SYSTEM Adrenal Cortex (50) (50) (50) (50) (50) Angiectasis 4 [1.0] 1 [1.0] 1 [2.0] 3 [1.0] Hypertrophy 13 [1.4] 18 [1.4] 13 [1.2] 15 [1.2] Necrosis 2 [2.0] Thrombosis 1 [2.0] Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (49) (49)					
Adrenal Cortex (50) (50) (50) (50) Angiectasis 4 [1.0] 1 [1.0] 1 [2.0] 3 [1.0] Hypertrophy 13 [1.4] 18 [1.4] 13 [1.2] 15 [1.2] Necrosis 2 [2.0] 1 [2.0] 1 [2.0] Thrombosis 1 [2.0] 21 [1.0] 21 [1.0] Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (49) (49)					-
Angiectasis 4 [1.0] 1 [1.0] 1 [2.0] 3 [1.0] Hypertrophy 13 [1.4] 18 [1.4] 13 [1.2] 15 [1.2] Necrosis 2 [2.0] 1 [2.0] 1 [2.0] Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (49) (49)	ENDOCRINE SYSTEM				
Angiectasis 4 [1.0] 1 [1.0] 1 [2.0] 3 [1.0] Hypertrophy 13 [1.4] 18 [1.4] 13 [1.2] 15 [1.2] Necrosis 2 [2.0] 1 [2.0] 1 [2.0] Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (49) (49)	Adrenal Cortex	(50)	(50)	(50)	(50)
Hypertrophy 13 [1.4] 18 [1.4] 13 [1.2] 15 [1.2] Necrosis 2 [2.0] 1 [2.0] Thrombosis 1 [2.0] 21 [1.0] 21 [1.0] Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (49) (49)		` ,			
Necrosis 2 [2.0] Thrombosis 1 [2.0] Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (49) (49)					
Thrombosis 1 [2.0] Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (49) (49)					
Vacuolization Cytoplasmic 19 [1.1] 23 [1.0] 21 [1.0] 21 [1.0] Adrenal Medulla (50) (50) (49) (49)				1 [2.0]	
Adrenal Medulla (50) (50) (49)		19 [1.1]	23 [1.0]		21 [1.0]
and the second	Hyperplasia	1 [1.0]	1 [1.0]		1 [1.0]

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)

Experiment Number: 20523 - 03

Species/Strain: RATS/Wistar Han

Route: RESPIRATORY EXPOSURE WHOLE BODY

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41 First Dose M/F: 07/20/09 / 07/20/09

Lab: BNW

Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

Experiment Number: 20523 - 03

Vistar Han RATS MALE	Control	10 mg/m3	30 mg/m3	100 mg/m3	
Islets, Pancreatic	(50)	(50)	(50)	(50)	
Parathyroid Gland	(39)	(44)	(46)	(49)	
Fibrosis	1 [1.0]				
Hyperplasia		1 [1.0]	1 [2.0]		
Pituitary Gland	(50)	(50)	(50)	(50)	
Angiectasis	1 [1.0]				
Cyst	2 [1.0]	2 [1.0]	4 [1.3]	1 [1.0]	
Pars Distalis, Hyperplasia	12 [1.1]	15 [1.1]	8 [1.3]	11 [1.5]	
Pars Intermedia, Hyperplasia			3 [1.3]		
Thyroid Gland	(50)	(50)	(50)	(50)	
C-cell, Hyperplasia	36 [1.3]	39 [1.6]	34 [1.4]	40 [1.4]	
Follicle, Hyperplasia	4 [1.5]	7 [2.0]	4 [1.0]	1 [1.0]	

GENERAL BODY SYSTEM

None

Epididymis	(50)	(50)	(50)	(50)
Granuloma Sperm		1 [2.0]		
Preputial Gland	(49)	(50)	(50)	(50)
Cyst	1 [2.0]			
Fibrosis				1 [1.0]
Inflammation	17 [1.2]	13 [1.1]	11 [1.3]	16 [1.3]
Prostate	(50)	(50)	(50)	(50)
Atrophy		1 [1.0]		
Fibrosis		1 [1.0]		
Inflammation	17 [1.4]	12 [1.1]	10 [1.5]	10 [1.0]
Seminal Vesicle	(50)	(50)	(50)	(50)
Atrophy				1 [2.0]
Fibrosis	1 [2.0]			
Inflammation	4 [2.0]		1 [2.0]	
Testes	(50)	(50)	(50)	(50)
Cyst				1 [2.0]

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)

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41 **First Dose M/F:** 07/20/09 / 07/20/09

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: RATS/Wistar Han

Experiment Number: 20523 - 03

Wistar Han RATS MALE	Control	10 mg/m3	30 mg/m3	100 mg/m3	
Edema	3 [2.0]	2 [2.0]	1 [2.0]	2 [3.0]	
Artery, Inflammation, Chronic	3 [2.3]			1 [2.0]	
Germinal Epithelium, Atrophy	3 [2.0]	8 [2.1]		6 [2.2]	
Germinal Epithelium, Hypoplasia			1 [3.0]		
Interstitial Cell, Hyperplasia	2 [2.0]			1 [1.0]	
HEMATOPOIETIC SYSTEM					
Bone Marrow	(50)	(50)	(50)	(50)	
Lymph Node	(11)	(7)	(7)	(8)	
Axillary, Hyperplasia, Plasma Cell		1 [3.0]			
Iliac, Hyperplasia, Plasma Cell	1 [3.0]	2 [3.0]	4 [3.0]	1 [4.0]	
Lumbar, Hyperplasia, Lymphoid				1 [1.0]	
Lumbar, Hyperplasia, Plasma Cell	7 [2.3]	5 [2.4]	3 [3.3]	4 [2.5]	
Renal, Hyperplasia, Plasma Cell	2 [2.5]			2 [2.5]	
Lymph Node, Bronchial	(39)	(43)	(42)	(42)	
Hyperplasia, Lymphohistiocytic		17 [1.4]	29 [1.8]	35 [1.9]	
Lymph Node, Mandibular	(46)	(46)	(46)	(48)	
Hyperplasia, Plasma Cell	1 [1.0]	1 [3.0]			
Lymph Node, Mediastinal	(43)	(48)	(44)	(43)	
Congestion				1 [2.0]	
Hyperplasia, Lymphohistiocytic		20 [1.5]	22 [1.9]	32 [2.5]	
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)	
Hemorrhage			1 [2.0]		
Hyperplasia, Lymphohistiocytic				1 [3.0]	
Spleen	(50)	(50)	(50)	(50)	
Congestion			1 [2.0]		
Cyst		1 [2.0]			
Hematopoietic Cell Proliferation	7 [1.1]	9 [1.0]	8 [1.1]	8 [1.3]	
Hemorrhage		1 [3.0]			
Lymphoid Follicle, Atrophy	3 [2.0]		2 [1.0]		
Thymus	(48)	(49)	(50)	(50)	
Atrophy	35 [1.9]	36 [2.1]	26 [1.7]	26 [1.9]	
Cyst			1 [2.0]	-	

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)

Test Type: CHRONIC

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 10/29/2014 AVERAGE SEVERITY GRADES[b]

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41 **First Dose M/F:** 07/20/09 / 07/20/09

Lab: BNW

Route: RESPIRATORY	EXPOSURE WHOLE BOL
Species/Strain: DAT	S/Mictor Hon

Species/Strain: RATS/Wistar Han

Species/Strain. RATS/Wistar Hall				Lai	D. DINVV
Wistar Han RATS MALE	Control	10 mg/m3	30 mg/m3	100 mg/m3	
INTEGUMENTARY SYSTEM					
Mammary Gland Galactocele Hyperplasia	(4) 1 [3.0] 1 [1.0]	(5)	(1)	(2)	
Skin	(50)	(50)	(50)	(50)	
Cyst Epithelial Inclusion	2	2	1	1	
Hyperkeratosis	1 [4.0]				
Inflammation	2 [2.0]	1 [2.0]		4 [2.0]	
Ulcer	16 [2.0]	14 [2.0]	13 [2.1]	13 [2.0]	
MUSCULOSKELETAL SYSTEM					
Bone Hyperostosis	(50)	(50)	(50)	(50) 1 [1.0]	
Skeletal Muscle	(4)	(4)	(8)	(3)	
NERVOUS SYSTEM					
Brain	(50)	(50)	(50)	(50)	
Compression	8 [2.8]	6 [2.3]	8 [3.6]	7 [3.0]	
Degeneration	1 [2.0]	- []	2 [2.0]	. []	
Gliosis	1 [2.0]				
Hemorrhage	1 [2.0]				
Hydrocephalus	5 [2.6]	3 [2.7]	8 [2.5]	4 [2.5]	
Necrosis			1 [2.0]		
Meninges, Inflammation	1 [1.0]				
Peripheral Nerve	(4)	(2)	(8)	(2)	
Axon, Degeneration		•	2 [1.0]		
Spinal Cord	(4)	(2)	(7)	(2)	
RESPIRATORY SYSTEM					
Larynx	(50)	(50)	(50)	(50)	
a - Number of animals examined microscop	ically at site and number	of animals with lesion	n		

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)

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41 First Dose M/F: 07/20/09 / 07/20/09

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

Experiment Number: 20523 - 03

Vistar Han RATS MALE	Control	10 mg/m3	30 mg/m3	100 mg/m3	
Foreign Body	1		1		
Infiltration Cellular, Mixed Cell	1 [1.0]	9 [1.1]	27 [1.0]	31 [1.1]	
Inflammation, Chronic Active	1 [1.0]	1 [1.0]			
Epiglottis, Hyperplasia, Squamous		26 [1.1]	48 [1.8]	50 [2.4]	
Epiglottis, Metaplasia, Squamous	3 [1.0]	50 [1.4]	50 [2.1]	50 [2.6]	
Lung	(50)	(50)	(50)	(50)	
Fibrosis	4 [1.0]	43 [1.0]	45 [1.4]	49 [1.3]	
Foreign Body			1		
Hyperplasia, Lymphohistiocytic		1 [1.0]	1 [1.0]		
Infiltration Cellular, Histiocyte	14 [1.0]	50 [1.4]	50 [2.0]	50 [2.6]	
Inflammation, Chronic Active	7 [1.0]	46 [1.0]	46 [2.0]	48 [3.0]	
Alveolar/bronchiolar Epithelium, Hyperplasia	4 [1.0]	22 [1.0]	39 [1.2]	46 [1.8]	
Alveolar Epithelium, Hyperplasia	11 [1.2]	43 [1.3]	45 [1.5]	49 [2.1]	
Alveolar Epithelium, Metaplasia, Squamous		- 1 - 1		5 [1.4]	
Alveolus, Proteinosis		1 [1.0]	31 [1.2]	45 [2.2]	
Bronchus-associated Lymphoid Tissue, Hyperplasia, Lymphohistiocytic		1 [1.0]	4 [1.3]	6 [1.0]	
Mediastinum, Inflammation, Chronic		1 [2.0]			
Nose	(50)	(50)	(50)	(50)	
Foreign Body	1		1	1	
Inflammation, Suppurative	7 [1.1]	46 [1.2]	47 [1.3]	46 [1.1]	
Glands, Olfactory Epithelium, Hyperplasia		43 [1.5]	41 [1.6]	49 [1.9]	
Goblet Cell, Hyperplasia	5 [1.4]	36 [1.0]	37 [1.1]	42 [1.2]	
Goblet Cell, Nasolacrimal Duct, Metaplasia		1 [2.0]			
Goblet Cell, Olfactory Epithelium, Hyperplasia			1 [2.0]		
Nasolacrimal Duct, Inflammation, Chronic		1 [1.0]			
Nasolacrimal Duct, Metaplasia, Squamous		1 [2.0]			
Olfactory Epithelium, Accumulation, Hyaline Droplet	20 [1.4]	50 [2.8]	50 [2.9]	50 [3.2]	
Olfactory Epithelium, Atrophy		1 [1.0]	1 [1.0]		
Olfactory Epithelium, Metaplasia, Squamous		1 [2.0]		1 [1.0]	
Respiratory Epithelium, Accumulation, Hyaline Droplet	10 [1.2]	50 [1.4]	48 [1.4]	50 [1.6]	
Respiratory Epithelium, Hyperplasia	2 [1.0]	7 [1.0]	7 [1.0]	19 [1.1]	
Transitional Epithelium, Hyperplasia	7 [1.3]	7 [1.0]	8 [1.4]	13 [1.5]	
Transitional Epithelium, Metaplasia, Squamous	2 [1.0]	2 [1.0]	3 [1.0]	6 [1.0]	
Trachea	(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)

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41 First Dose M/F: 07/20/09 / 07/20/09

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY Species/Strain: RATS/Wistar Han

Experiment Number: 20523 - 03

Wistar Han RATS MALE	Control	10 mg/m3	30 mg/m3	100 mg/m3	
SPECIAL SENSES SYSTEM					
Eye	(50)	(50)	(50)	(50)	
Cataract			1 [3.0]	1 [2.0]	
Inflammation			1 [3.0]		
Retina, Atrophy	5 [2.0]	5 [2.0]	1 [3.0]	3 [2.0]	
Harderian Gland	(50)	(50)	(50)	(50)	
Cyst	,	1 [1.0]	,	,	
Hyperplasia	1 [1.0]	1 [1.0]		1 [1.0]	
Inflammation	1 [1.0]	1 [1.0]	1 [1.0]	2 [1.0]	
Lacrimal Gland	(1)	(0)	(0)	(1)	
Atrophy	1 [2.0]	()	()	1 [2.0]	
Zymbal's Gland	(1)	(0)	(0)	(0)	
URINARY SYSTEM					
Kidney	(50)	(50)	(50)	(50)	
Cyst	(,	1 [1.0]	,	
Hydronephrosis	1 [2.0]		1 [2.0]	3 [2.0]	
Infarct	,	1 [2.0]	2 [1.0]	- 1	
Inflammation, Granulomatous		1	1	1 [3.0]	
Metaplasia, Lipocyte			1 [1.0]	1 [1.0]	
Necrosis		1 [1.0]	1	1	
Nephropathy	27 [1.7]	31 [1.3]	27 [1.4]	28 [1.3]	
Pelvis, Inflammation	19 [1.2]	17 [1.2]	5 [1.2]	9 [1.4]	
Renal Tubule, Cyst		1 [1.0]	1 [1.0]	- []	
Renal Tubule, Hyperplasia		. [•]	1 [3.0]		
Urinary Bladder	(50)	(50)	(50)	(50)	
Hemorrhage	(00)	(30)	1 [2.0]	(55)	
Inflammation		1 [2.0]	1 [1.0]		
Transitional Epithelium, Hyperplasia		, [2.0]	1 [1.0]		

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)

Species/Strain: RATS/Wistar Han

Route: RESPIRATORY EXPOSURE WHOLE BODY

Test Type: CHRONIC

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 10/29/2014 **AVERAGE SEVERITY GRADES[b]**

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41 First Dose M/F: 07/20/09 / 07/20/09

Lab: BNW

Wistar Han RATS MALE Control 10 mg/m3 30 mg/m3 100 mg/m3

*** END OF MALE ***

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41 **First Dose M/F:** 07/20/09 / 07/20/09

Lab: BNW

Rou	ute:	RES	PIRA	ATOR'	Y EXPC	SURE	WHOLE E	BODY
_	_		_					

Species/Strain: RATS/Wistar Han

Experiment Number: 20523 - 03

Wistar Han RATS FEMALE	Control	10 mg/m3	30 mg/m3	100 mg/m3	
Disposition Summary					
Animals Initially In Study	50	50	50	50	
Early Deaths					
Moribund Sacrifice	19	15	15	16	
Natural Death	1	2	2	4	
Survivors					
Moribund Sacrifice	1	1			
Terminal Sacrifice	29	32	33	30	
Animals Examined Microscopically	50	50	50	50	
ALIMENTARY SYSTEM					
Esophagus	(50)	(50)	(50)	(50)	
Intestine Large, Cecum	(50)	(50)	(50)	(50)	
Intestine Large, Colon	(50)	(50)	(50)	(50)	
Intestine Large, Rectum	(50)	(50)	(50)	(50)	
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		4 [1.0]	1 [1.0]		
Basophilic Focus	21	30	24	25	
Clear Cell Focus	6	16	4	8	
Eosinophilic Focus	2	3		2	
Fatty Change	2 [1.5]		3 [2.0]		
Fibrosis		1 [1.0]			
Hematopoietic Cell Proliferation	1 [3.0]				
Hepatodiaphragmatic Nodule			1	1 [2.0]	
Inflammation, Granulomatous	1 [1.0]	3 [1.0]		2 [1.0]	
Mixed Cell Focus	3	5		- ·	
Necrosis			1 [4.0]		
Bile Duct, Cyst			2 [2.0]	1 [2.0]	
Bile Duct, Dilatation		1 [4.0]	1 [3.0]	- ·	
Bile Duct, Hyperplasia	2 [1.0]	8 [1.1]	6 [1.0]	4 [1.0]	
Centrilobular, Degeneration	1 [2.0]				

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)

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41 **First Dose M/F:** 07/20/09 / 07/20/09

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

Experiment Number: 20523 - 03

	•			
Control	10 mg/m3	30 mg/m3	100 mg/m3	
			1 [1.0]	
1 [2.0]				
(4)	(5)	(9)	(4)	
4 [2.0]	4 [1.3]	7 [1.4]	4 [1.3]	
(50)	(50)	(50)	(50)	
1 [2.0]	,	, ,	, ,	
	2 [1.0]	2 [1.5]	1 [2.0]	
,		,	,	
(50)		(50)	(50)	
	()	(/	()	
	(50)	(50)	(50)	
(0)	(0)	(0)		
(50)	(50)	(50)	(50)	
(50)	(50)	(50)	(50)	
7 [1.0]	7 [1.0]	8 [1.4]	1 [2.0]	
(50)	(50)	(50)	(50)	
r -1	1 [1.0]		1 [1.0]	
10 [1.4]		15 [1.5]		
	- []			
9 [1.3]	8 [1.4]			
0 [0]		[]	[5]	
(50)		(50)	(49)	
3 [1.0]	1 [1.0]	(00)	1 [2.0]	
	1 [2.0] (4) 4 [2.0] (50) 1 [2.0] 4 [1.5] (50) (50) 2 [1.0] 2 [2.0] (50) (0) (50) 7 [1.0] (50) 28 [1.4] 3 [2.0] 10 [1.4] 9 [1.3] (50)	1 [2.0] (4) (5) 4 [2.0] 4 [1.3] (50) (50) 1 [2.0] 4 [1.5] 2 [1.0] (50) (50) 1 [2.0] (50) (50) 2 [1.0] 2 [2.0] (50) (50) (0) (0) (50) (50) (50) 7 [1.0] 7 [1.0] (50) (50) 28 [1.4] 3 [2.0] 1 [1.0] 10 [1.4] 5 [1.6] 9 [1.3] 8 [1.4] 1 [2.0] (50) (50)	1 [2.0] (4) (5) (9) 4 [2.0] 4 [1.3] 7 [1.4] (50) (50) (50) (50) 1 [2.0] 4 [1.5] 2 [1.0] 2 [1.5] (50) (50) (50) (50) (50) 2 [1.0] 2 [2.0] (50) (50) (50) (50) (0) (0) (0) (50) 28 [1.4] 25 [1.4] 28 [1.3] 3 [2.0] 1 [1.0] 10 [1.4] 5 [1.6] 15 [1.5] 2 [3.0] 9 [1.3] 8 [1.4] 14 [1.1] 1 [2.0] (50) (50) (50) (50)	1 [2.0] (4) (5) (9) (4) 4 [2.0] 4 [1.3] 7 [1.4] 4 [1.3] (50) (50) (50) (50) (50) 1 [2.0] 4 [1.5] 2 [1.0] 2 [1.5] 1 [2.0] (50) (50) (50) (50) (50) 1 [2.0] (50) (50) (50) (50) (50) 2 [1.0] 2 [2.0] (50) (50) (50) (50) (50) (0) (0) (0) (1) (50) 1 [1.0] 1 [1.0] 1 [1.0] 1 [1.0] 1 [1.0] 1 [1.0] 1 [1.0] 1 [1.0] 1 [1.0] (50) (50) (50) (49)

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)

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41 First Dose M/F: 07/20/09 / 07/20/09

Lab: BNW

-	=
D 4 .	DECDUDATED X 5 Y 5 Y 5 Y 5 Y 5 Y 5 Y 5 Y 5 Y 5 Y 5
KULITE:	RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

Experiment Number: 20523 - 03

Test Type: CHRONIC

Wistar Han RATS FEMALE	Control	10 mg/m3	30 mg/m3	100 mg/m3	
Hyperplasia	1 [4.0]				
Parathyroid Gland	(42)	(43)	(47)	(47)	
Fibrosis	, ,	2 [1.5]	1 [1.0]	. ,	
Hyperplasia	1 [2.0]				
Pituitary Gland	(50)	(50)	(50)	(50)	
Angiectasis				1 [1.0]	
Cyst		1 [1.0]			
Pars Distalis, Hyperplasia	4 [2.3]	13 [1.7]	12 [1.8]	16 [1.6]	
Pars Intermedia, Hyperplasia		1 [1.0]			
Thyroid Gland	(49)	(50)	(50)	(50)	
C-cell, Hyperplasia	40 [1.4]	44 [1.8]	45 [1.7]	42 [1.5]	
Follicle, Hyperplasia	2 [1.0]	4 [1.8]	7 [1.1]	3 [2.7]	

GENERAL BODY SYSTEM

None

Clitoral Gland	(50)	(48)	(49)	(50)
Cyst				2 [1.5]
Fibrosis	1 [2.0]			
Inflammation	11 [1.2]	12 [1.3]	13 [1.4]	12 [1.3]
Ovary	(50)	(50)	(50)	(50)
Cyst	9 [2.0]	10 [1.4]	12 [1.5]	10 [1.4]
Uterus	(50)	(50)	(50)	(50)
Inflammation, Suppurative	1 [3.0]			
Thrombosis				1 [3.0]
Cervix, Hyperplasia		1 [1.0]		
Endometrium, Hyperplasia, Cystic	12 [1.5]	11 [1.5]	12 [1.3]	10 [1.3]
Epithelium, Metaplasia, Squamous				1 [4.0]
Vagina	(1)	(0)	(0)	(0)

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)

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41 First Dose M/F: 07/20/09 / 07/20/09

Lab: BNW

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

Experiment Number: 20523 - 03

Wistar Han RATS FEMALE	Control	10 mg/m3	30 mg/m3	100 mg/m3
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Lymph Node	(4)	(1)	(2)	(1)
Lumbar, Hyperplasia, Plasma Cell	3 [2.7]			. ,
Popliteal, Hyperplasia, Plasma Cell	1 [4.0]			
Renal, Hyperplasia, Plasma Cell	1 [3.0]			
Lymph Node, Bronchial	(37)	(37)	(44)	(36)
Hematopoietic Cell Proliferation	1 [3.0]	,	,	,
Hyperplasia, Lymphohistiocytic	1 [1.0]	18 [1.3]	37 [1.6]	31 [1.8]
Hyperplasia, Plasma Cell	1 [2.0]			
Lymph Node, Mandibular	(40)	(46)	(47)	(50)
Hematopoietic Cell Proliferation	1 [2.0]	,	,	()
Hyperplasia, Plasma Cell	• •			1 [3.0]
Lymph Node, Mediastinal	(46)	(49)	(46)	(45)
Hematopoietic Cell Proliferation	1 [3.0]		, ,	, ,
Hyperplasia, Lymphohistiocytic		11 [1.3]	14 [1.6]	28 [2.2]
Hyperplasia, Plasma Cell	5 [2.2]		1 [2.0]	1 [4.0]
Pigmentation, Hemosiderin				1 [2.0]
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Hyperplasia, Plasma Cell	,	, ,	, ,	1 [3.0]
Spleen	(50)	(50)	(50)	(50)
Cyst	, ,	•	, ,	1 [1.0]
Hematopoietic Cell Proliferation	13 [1.7]	7 [1.3]	11 [1.2]	9 [1.2]
Lymphoid Follicle, Atrophy	2 [2.0]	2 [1.0]	6 [1.3]	7 [2.1]
Thymus	(48)	(49)	(49)	(49)
Atrophy	14 [2.2]	12 [2.3]	21 [2.3]	15 [1.9]
Cyst		1 [1.0]	2 [2.0]	-
Ectopic Thyroid	1 [1.0]	-	-	
Hyperplasia, Lymphohistiocytic			1 [2.0]	
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(50)	(50)
Hyperplasia	3 [1.7]	(00)	4 [1.5]	3 [2.0]

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)

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41
First Dose M/F: 07/20/09 / 07/20/09

Lab: BNW

Wistar Han RATS FEMALE	Control	10 mg/m3	30 mg/m3	100 mg/m3
Duct, Cyst	4 [2.0]	7 [1.1]	6 [1.7]	2 [2.0]
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion	1		1 [2.0]	
Inflammation		1 [1.0]	1 [2.0]	1 [2.0]
Ulcer	6 [2.0]		3 [2.3]	2 [2.0]
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Osteopetrosis	1 [4.0]			
Joint, Inflammation	1 [2.0]			
Skeletal Muscle	(4)	(3)	(3)	(4)
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Compression	17 [2.8]	16 [3.4]	21 [2.6]	17 [2.9]
Degeneration	1 [1.0]			
Hydrocephalus	6 [2.5]	9 [2.3]	4 [3.0]	8 [2.4]
Peripheral Nerve	(4)	(3)	(2)	(3)
Spinal Cord	(4)	(3)	(2)	(3)
RESPIRATORY SYSTEM				
Larynx	(50)	(50)	(50)	(50)
Infiltration Cellular, Mixed Cell		9 [1.0]	18 [1.1]	22 [1.1]
Inflammation, Chronic Active		2 [1.5]		1 [1.0]
Epiglottis, Hyperplasia, Squamous	1 [1.0]	24 [1.6]	41 [1.4]	50 [2.3]
Epiglottis, Metaplasia, Squamous		49 [1.4]	50 [2.2]	50 [2.7]
Lung	(50)	(50)	(50)	(50)
Fibrosis	5 [1.0]	35 [1.1]	49 [1.5]	50 [1.8]
Hyperplasia, Lymphohistiocytic				1 [2.0]
Infiltration Cellular, Histiocyte	16 [1.1]	48 [1.3]	50 [1.8]	50 [2.8]
Inflammation, Chronic	1 [1.0]			

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)

Experiment Number: 20523 - 03

Species/Strain: RATS/Wistar Han

Route: RESPIRATORY EXPOSURE WHOLE BODY

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41 **First Dose M/F:** 07/20/09 / 07/20/09

Lab: BNW

Nistar Han RATS FEMALE	Control	10 mg/m3	30 mg/m3	100 mg/m3	
Inflammation, Chronic Active	5 [1.0]	46 [1.0]	50 [2.0]	50 [3.2]	
Alveolar/bronchiolar Epithelium, Hyperplasia	2 [1.0]	9 [1.1]	31 [1.4]	50 [2.8]	
Alveolar Epithelium, Hyperplasia	8 [1.3]	43 [1.1]	49 [2.0]	50 [2.4]	
Alveolar Epithelium, Metaplasia, Squamous		3 [1.3]	9 [1.3]	21 [1.9]	
Alveolus, Proteinosis	1 [1.0]	15 [1.0]	41 [1.4]	48 [2.8]	
Bronchus-associated Lymphoid Tissue, Hyperplasia, Lymphohistiocytic		2 [1.0]	7 [1.0]	10 [1.4]	
Nose	(50)	(50)	(49)	(50)	
Inflammation, Suppurative	1 [1.0]	46 [1.2]	47 [1.2]	48 [1.3]	
Glands, Olfactory Epithelium, Hyperplasia		32 [1.1]	43 [1.1]	46 [1.5]	
Glands, Olfactory Epithelium, Hyperplasia, Squamous			1 [1.0]		
Goblet Cell, Hyperplasia	3 [1.0]	36 [1.0]	40 [1.1]	47 [1.1]	
Olfactory Epithelium, Accumulation, Hyaline Droplet	14 [1.2]	50 [2.8]	49 [2.9]	50 [3.0]	
Olfactory Epithelium, Metaplasia, Respiratory	1 [1.0]				
Olfactory Epithelium, Metaplasia, Squamous				2 [1.5]	
Respiratory Epithelium, Accumulation, Hyaline Droplet	5 [1.2]	50 [1.5]	48 [1.5]	50 [1.5]	
Respiratory Epithelium, Hyperplasia		7 [1.0]	8 [1.0]	25 [1.0]	
Transitional Epithelium, Hyperplasia	5 [1.2]	11 [1.1]	4 [1.0]	21 [1.3]	
Transitional Epithelium, Metaplasia, Squamous	1 [1.0]	5 [1.2]	1 [1.0]	2 [1.0]	
Trachea	(49)	(50)	(50)	(50)	
SPECIAL SENSES SYSTEM					
Eye	(50)	(50)	(50)	(50)	
Cataract			1 [3.0]	1 [3.0]	
Retina, Atrophy	3 [2.3]	2 [2.0]	1 [2.0]	2 [2.0]	
Harderian Gland	(50)	(50)	(50)	(50)	
Atrophy	1 [1.0]				

URINARY SYSTEM

Inflammation Zymbal's Gland

Experiment Number: 20523 - 03

Species/Strain: RATS/Wistar Han

Route: RESPIRATORY EXPOSURE WHOLE BODY

Test Type: CHRONIC

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)

1 [1.0]

(0)

3 [1.0]

(1)

2 [1.0]

(1)

3 [1.0]

(2)

Species/Strain: RATS/Wistar Han

Route: RESPIRATORY EXPOSURE WHOLE BODY

Test Type: CHRONIC

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH Date Report Requested: 10/29/2014 AVERAGE SEVERITY GRADES[b]

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Time Report Requested: 10:15:41

First Dose M/F: 07/20/09 / 07/20/09

Lab: BNW

Wistar Han RATS FEMALE	Control	10 mg/m3	30 mg/m3	100 mg/m3
Kidney	(50)	(50)	(50)	(50)
Hydronephrosis		2 [2.0]		1 [4.0]
Infarct	1 [1.0]	2 [1.5]		
Metaplasia, Lipocyte		1 [2.0]		
Nephropathy	4 [1.0]	5 [1.4]	5 [1.4]	7 [1.0]
Pelvis, Inflammation	28 [1.3]	32 [1.2]	41 [1.1]	30 [1.1]
Renal Tubule, Cyst		1 [2.0]	1 [1.0]	3 [1.7]
Renal Tubule, Hyperplasia		1 [1.0]		
Ureter	(0)	(0)	(0)	(1)
Cyst				1 [2.0]
Urinary Bladder	(50)	(50)	(50)	(50)

^{***} END OF REPORT ***

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)