

Experiment Number: 10188 - 02

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

Date Report Requested: 06/02/2020

Test Type: CHRONIC

Di(2-ethylhexyl) Phthalate

Time Report Requested: 13:48:37

Route: DOSED FEED

CAS Number: 117-81-7

First Dose M/F: 06/27/11 / 06/28/11

Species/Strain: RATS/HSD

Lab: BAT

Final 4

NTP Study Number: C10188
Lock Date: 07/15/2015
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL
Study Gender: Both
TDMSE Version: 3.0.2.3_002
PWG Approval Date: NONE

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Lab: BAT

Harlan Sprague Dawley RATS MALE

0 ppm Male

300 ppm Male

1000 ppm Male

3000 ppm Male

10000 ppm Male

Disposition Summary

	0 ppm Male	300 ppm Male	1000 ppm Male	3000 ppm Male	10000 ppm Male
Animals Initially In Study	50	50	50	50	50
Early Deaths					
Moribund Sacrifice	12	9	4	8	7
Natural Death	13	7	6	7	14
Survivors					
Natural Death	1		1		1
Terminal Sacrifice	24	33	39	35	28
Animals Examined Microscopically	50	49	50	50	50

ALIMENTARY SYSTEM

Esophagus	(50)	(49)	(50)	(50)	(50)
Intestine Large, Cecum	(49)	(49)	(50)	(50)	(48)
Hyperplasia, Lymphocyte Inflammation, Chronic		1 [1.0]		1 [2.0]	
Polyarteritis Nodosa	2 [1.5]				
Intestine Large, Colon	(50)	(49)	(50)	(50)	(49)
Hyperplasia, Lymphocyte	1 [2.0]	1 [2.0]			
Parasite Metazoan			1	2	
Intestine Large, Rectum	(50)	(49)	(50)	(50)	(49)
Hyperplasia, Lymphocyte	2 [1.5]	1 [1.0]			
Parasite Metazoan	4	6	9	10	7
Polyarteritis Nodosa	1 [2.0]			1 [2.0]	
Intestine Small, Duodenum	(50)	(49)	(50)	(49)	(49)
Artery, Mineral	1 [2.0]				
Intestine Small, Ileum	(50)	(49)	(50)	(50)	(49)
Artery, Mineral	1 [2.0]				
Intestine Small, Jejunum	(49)	(49)	(50)	(50)	(49)
Hyperplasia, Lymphocyte				1 [2.0]	
Artery, Mineral	1 [2.0]				
Liver	(50)	(49)	(50)	(50)	(49)
Angiectasis				1 [1.0]	
Basophilic Focus	1	1	4	4	17
Cholangiofibrosis				1 [2.0]	

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Harlan Sprague Dawley RATS MALE	0 ppm Male	300 ppm Male	1000 ppm Male	3000 ppm Male	10000 ppm Male
Clear Cell Focus	24	31	32	36	28
Degeneration, Cystic	1 [1.0]	1 [1.0]	1 [1.0]	1 [1.0]	2 [1.0]
Eosinophilic Focus	4	1	7	2	11
Extramedullary Hematopoiesis		4 [1.0]	3 [1.0]	1 [1.0]	
Fatty Change, Focal			1 [4.0]		
Hepatodiaphragmatic Nodule			1		
Hypertrophy					1 [3.0]
Mixed Cell Focus		1	1	3	
Necrosis	3 [1.3]	4 [2.0]	1 [1.0]	6 [1.8]	13 [1.3]
Pigment		1 [1.0]	5 [1.2]	40 [1.7]	38 [2.5]
Regeneration					1 [2.0]
Bile Duct, Dilation	1 [2.0]		1 [3.0]	1 [2.0]	1 [3.0]
Bile Duct, Hyperplasia	13 [1.2]	18 [1.1]	13 [1.2]	21 [1.0]	15 [1.1]
Hepatocyte, Cytoplasmic Alteration			1 [1.0]	28 [1.3]	37 [2.6]
Hepatocyte, Hyperplasia					1 [3.0]
Hepatocyte, Hypertrophy				3 [1.3]	17 [1.6]
Mesentery	(4)	(2)	(2)	(1)	(1)
Polyarteritis Nodosa	1 [4.0]				
Artery, Mineral	3 [2.0]	1 [2.0]	2 [2.0]	1 [1.0]	1 [2.0]
Oral Mucosa	(0)	(1)	(0)	(0)	(0)
Pancreas	(50)	(49)	(50)	(50)	(49)
Basophilic Focus	2	2			
Hemorrhage					1 [2.0]
Hyperplasia					1 [1.0]
Inflammation, Chronic Active			1 [2.0]	1 [3.0]	
Polyarteritis Nodosa	10 [1.3]	5 [1.6]	3 [1.3]	6 [1.3]	2 [2.5]
Acinus, Atrophy	1 [1.0]	1 [3.0]	6 [1.0]	3 [1.3]	1 [2.0]
Acinus, Hyperplasia	13 [3.1]	9 [2.6]	16 [3.3]	25 [3.5]	15 [3.3]
Artery, Mineral	1 [1.0]				
Artery, Necrosis	1 [2.0]				
Duct, Inflammation, Chronic					1 [4.0]
Salivary Glands	(50)	(48)	(50)	(50)	(49)
Polyarteritis Nodosa	1 [2.0]				
Artery, Mineral	2 [2.0]		2 [1.5]		
Stomach, Forestomach	(50)	(49)	(50)	(50)	(49)
Hyperplasia, Squamous			1 [3.0]		

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Harlan Sprague Dawley RATS MALE	0 ppm Male	300 ppm Male	1000 ppm Male	3000 ppm Male	10000 ppm Male
Inflammation, Chronic	2 [1.0]	1 [3.0]	1 [2.0]		
Inflammation, Chronic Active	3 [1.3]	1 [1.0]	3 [2.3]	1 [2.0]	1 [2.0]
Mineral	2 [1.5]	1 [1.0]	1 [2.0]	1 [2.0]	
Polyarteritis Nodosa	1 [2.0]		1 [1.0]	1 [1.0]	
Ulcer	1 [1.0]	1 [2.0]	2 [2.5]	1 [2.0]	1 [1.0]
Artery, Mineral	1 [1.0]		1 [2.0]		
Epithelium, Hyperplasia	3 [2.0]	3 [1.7]	3 [1.7]	3 [2.7]	6 [2.0]
Stomach, Glandular	(50)	(49)	(50)	(50)	(49)
Cyst, Squamous					1
Erosion		1 [2.0]			
Inflammation, Acute		1 [2.0]			
Inflammation, Chronic					1 [1.0]
Inflammation, Chronic Active	1 [2.0]				
Mineral	6 [2.8]	3 [2.0]	4 [2.0]	1 [1.0]	1 [2.0]
Polyarteritis Nodosa			1 [1.0]		
Artery, Mineral	1 [1.0]		1 [4.0]		
Tongue	(0)	(0)	(2)	(0)	(0)
Inflammation, Suppurative			1 [3.0]		
Inflammation, Acute			1 [1.0]		
Polyarteritis Nodosa			1 [1.0]		

CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(49)	(50)	(50)	(49)
Aneurysm			1 [4.0]	1 [1.0]	
Degeneration				1 [1.0]	
Dilation		1 [3.0]			
Mineral	7 [2.4]	2 [2.0]	3 [2.3]	3 [1.0]	2 [3.0]
Thrombus			1 [4.0]		
Heart	(50)	(49)	(50)	(50)	(49)
Cardiomyopathy	27 [1.6]	27 [1.2]	26 [1.3]	34 [1.1]	21 [1.2]
Inflammation, Acute		1 [4.0]			
Inflammation, Chronic Active					1 [2.0]
Mineral	5 [2.0]	1 [2.0]	2 [2.5]		1 [3.0]
Necrosis		1 [2.0]			3 [1.7]

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Necrosis, Focal					1 [2.0]
Polyarteritis Nodosa	2 [1.5]	2 [1.0]	2 [1.0]	2 [1.0]	1 [1.0]
Artery, Mineral	4 [2.5]	2 [1.5]	2 [2.0]		1 [1.0]
Atrium, Thrombus	1 [1.0]				1 [2.0]
Schwann Cell, Hyperplasia	1 [2.0]				
Valve, Degeneration	1 [1.0]				
Valve, Fibrosis		2 [1.0]	1 [2.0]	3 [1.3]	11 [1.7]
Valve, Inflammation, Chronic	1 [1.0]				
Valve, Thrombus					6 [1.8]

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(49)	(50)	(50)	(49)
Cytoplasmic Alteration					1 [3.0]
Degeneration, Cystic	1 [1.0]		1 [1.0]	1 [1.0]	3 [1.0]
Hemorrhage				1 [2.0]	
Hyperplasia, Focal	4 [1.3]	5 [1.4]	5 [3.0]	4 [2.0]	
Hypertrophy			1 [3.0]		
Hypertrophy, Focal	6 [1.2]	3 [1.3]	6 [2.0]	6 [1.3]	3 [1.3]
Metaplasia, Osseous				1 [2.0]	
Necrosis	3 [1.3]			1 [1.0]	
Thrombus				1 [3.0]	
Bilateral, Hyperplasia, Focal	1 [1.0]				
Bilateral, Hypertrophy, Focal	1 [1.0]		2 [2.5]		
Adrenal Medulla	(50)	(49)	(50)	(50)	(49)
Hyperplasia		1 [4.0]	1 [4.0]		
Hyperplasia, Focal	8 [1.6]	14 [1.6]	9 [1.6]	8 [1.9]	2 [1.5]
Bilateral, Hyperplasia, Focal	2 [1.5]				
Islets, Pancreatic	(50)	(49)	(50)	(50)	(49)
Atrophy				1 [2.0]	
Hyperplasia	4 [2.0]	4 [1.8]	7 [2.9]	3 [1.7]	1 [1.0]
Parathyroid Gland	(42)	(32)	(31)	(43)	(38)
Hyperplasia, Focal			1 [3.0]		
Hyperplasia, Diffuse	2 [2.5]			1 [3.0]	
Hypertrophy, Focal	1 [1.0]				

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Bilateral, Hyperplasia, Diffuse Pituitary Gland	(50)	1 [3.0] (49)	(50)	(50)	(49)
Hemorrhage Infiltration Cellular, Lymphocyte			1 [2.0]		1 [2.0]
Pars Distalis, Hyperplasia	19 [1.8]	26 [2.1]	22 [2.0]	21 [1.9]	14 [1.4]
Pars Distalis, Hypertrophy	3 [1.0]	7 [1.1]	5 [1.0]	15 [1.3]	37 [2.4]
Thyroid Gland	(50)	(49)	(50)	(50)	(50)
C-cell, Hyperplasia	5 [2.4]	8 [2.1]	14 [2.6]	8 [2.0]	2 [1.5]
Follicular Cell, Hyperplasia				1 [1.0]	1 [2.0]

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Epididymis	(49)	(49)	(50)	(50)	(49)
Hypospermia			6 [2.5]	3 [1.7]	
Inflammation, Chronic Active	1 [1.0]		1 [1.0]		
Bilateral, Hypospermia	4 [2.3]	5 [3.4]	6 [3.0]	5 [2.8]	43 [4.0]
Bilateral, Inflammation, Suppurative					1 [4.0]
Bilateral, Polyarteritis Nodosa	2 [1.5]	1 [1.0]			1 [1.0]
Bilateral, Duct, Exfoliated Germ Cell	6 [2.5]	5 [2.0]	4 [2.3]		2 [3.0]
Duct, Exfoliated Germ Cell			2 [2.0]		
Duct, Mineral					1 [1.0]
Preputial Gland	(50)	(49)	(50)	(50)	(48)
Inflammation, Suppurative	1 [4.0]	1 [4.0]			
Inflammation, Chronic Active	1 [4.0]			1 [4.0]	
Prostate	(50)	(49)	(50)	(50)	(49)
Artery, Mineral	1 [2.0]		1 [2.0]		
Dorsal, Epithelium, Lateral, Hyperplasia		2 [2.0]		1 [1.0]	
Dorsal, Lateral, Inflammation, Suppurative		1 [4.0]			1 [4.0]
Dorsal, Lateral, Inflammation, Acute	1 [1.0]				2 [1.0]
Dorsal, Lateral, Inflammation, Chronic					1 [1.0]
Dorsal, Lateral, Inflammation, Chronic Active	1 [4.0]	2 [2.0]			

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Epithelium, Ventral, Hyperplasia	4 [2.3]	2 [1.0]	3 [1.0]	3 [1.0]	3 [1.0]
Ventral, Hemorrhage	1 [4.0]				
Ventral, Inflammation, Suppurative		2 [3.0]			
Ventral, Inflammation, Granulomatous				1 [4.0]	
Ventral, Inflammation, Acute	3 [2.3]				1 [1.0]
Ventral, Inflammation, Chronic	1 [1.0]				1 [3.0]
Ventral, Inflammation, Chronic Active	3 [2.0]	3 [2.7]	1 [1.0]	2 [1.5]	2 [2.5]
Seminal Vesicle	(50)	(49)	(50)	(50)	(49)
Atrophy				1 [2.0]	
Inflammation, Suppurative		1 [2.0]			
Inflammation, Acute		1 [1.0]			
Artery, Mineral			1 [2.0]		
Bilateral, Inflammation, Suppurative		1 [2.0]			1 [1.0]
Bilateral, Inflammation, Acute	2 [2.0]			1 [2.0]	2 [1.0]
Bilateral, Inflammation, Chronic Active	1 [2.0]				3 [2.0]
Testis	(49)	(49)	(50)	(50)	(49)
Degeneration	1 [3.0]				
Edema	8 [1.6]	7 [1.7]	9 [1.7]	9 [1.1]	5 [1.8]
Inflammation, Granulomatous		1 [2.0]			
Inflammation, Chronic Active			1 [1.0]		
Polyarteritis Nodosa	1 [1.0]				
Bilateral, Edema	12 [1.0]	16 [1.4]	17 [1.2]	14 [1.2]	18 [2.1]
Bilateral, Polyarteritis Nodosa	18 [1.9]	15 [1.3]	10 [1.7]	9 [1.9]	6 [2.2]
Bilateral, Germinal Epithelium, Degeneration	10 [1.6]	10 [2.0]	7 [2.7]	9 [2.1]	37 [4.0]
Bilateral, Interstitial Cell, Hyperplasia, Focal					7 [2.4]
Bilateral, Seminiferous Tubule, Dysgenesis					2 [2.5]
Bilateral, Seminiferous Tubule, Mineral		4 [1.3]	1 [1.0]		2 [3.0]
Germinal Epithelium, Degeneration	6 [1.7]	15 [1.3]	14 [1.6]	12 [1.1]	7 [3.9]
Interstitial Cell, Hyperplasia, Focal	4 [2.0]	3 [2.0]	6 [2.0]	5 [1.4]	23 [2.2]
Seminiferous Tubule, Dysgenesis					8 [1.4]
Tunic, Edema					1 [3.0]
Tunic, Hyperplasia, Mesothelium	1 [1.0]				

HEMATOPOIETIC SYSTEM

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Bone Marrow	(50)	(49)	(50)	(50)	(50)
Congestion		1 [2.0]	2 [3.0]	2 [1.0]	1 [4.0]
Hypercellularity	21 [2.2]	17 [1.9]	29 [1.9]	34 [1.9]	36 [2.1]
Hypocellularity					5 [2.6]
Increased Bone			1 [2.0]		
Necrosis			1 [3.0]		
Thrombus			1 [1.0]		
Lymph Node	(2)	(1)	(6)	(1)	(1)
Deep Cervical, Hemorrhage		1 [3.0]			
Deep Cervical, Infiltration Cellular, Histiocyte				1 [2.0]	
Deep Cervical, Pigment				1 [2.0]	
Lumbar, Dilation			1 [4.0]		
Lumbar, Infiltration Cellular, Histiocyte				1 [3.0]	
Lumbar, Infiltration Cellular, Plasma Cell	1 [1.0]				
Lumbar, Pigment				1 [3.0]	
Mediastinal, Hemorrhage	1 [3.0]		1 [2.0]		
Mediastinal, Hyperplasia, Lymphocyte			1 [2.0]		1 [2.0]
Pancreatic, Hyperplasia, Lymphocyte	1 [2.0]				
Lymph Node, Mandibular	(50)	(47)	(49)	(50)	(49)
Atrophy	1 [2.0]	1 [3.0]	1 [3.0]		5 [3.0]
Infiltration Cellular, Histiocyte				1 [2.0]	
Infiltration Cellular, Plasma Cell	1 [2.0]		1 [3.0]		
Inflammation, Suppurative		1 [4.0]			
Inflammation, Chronic Active				1 [3.0]	
Pigment				1 [2.0]	
Lymph Node, Mesenteric	(49)	(49)	(49)	(50)	(48)
Atrophy	3 [2.0]	2 [1.5]	1 [3.0]		6 [2.3]
Hemorrhage				1 [2.0]	
Hyperplasia, Lymphocyte				1 [2.0]	
Spleen	(50)	(49)	(50)	(50)	(49)
Extramedullary Hematopoiesis	42 [1.8]	42 [1.8]	42 [2.0]	47 [1.8]	36 [1.8]
Hemorrhage			2 [3.5]		
Hyperplasia, Histiocytic	1 [2.0]				
Pigment	41 [1.8]	43 [1.6]	42 [1.5]	46 [1.6]	38 [1.3]
White Pulp, Atrophy	13 [2.4]	8 [2.8]	6 [3.2]	5 [2.8]	9 [2.7]
White Pulp, Hyperplasia	1 [2.0]				1 [2.0]

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Thymus	(47)	(46)	(49)	(47)	(47)
Atrophy	45 [2.4]	45 [2.5]	43 [2.3]	45 [2.1]	36 [2.1]
Atrophy, Lymphocyte					5 [2.8]
Ectopic Thyroid		1 [1.0]			
Polyarteritis Nodosa	1 [1.0]				
INTEGUMENTARY SYSTEM					
Mammary Gland	(49)	(48)	(50)	(50)	(48)
Galactocele			1 [3.0]		
Hyperplasia	1 [1.0]			1 [4.0]	
Artery, Mineral	1 [2.0]				
Skin	(50)	(48)	(50)	(50)	(50)
Cyst Epithelial Inclusion	3	1	3		
Inflammation, Suppurative	1 [4.0]	1 [4.0]			
Inflammation, Acute				1 [2.0]	
Inflammation, Chronic		1 [4.0]			
Inflammation, Chronic Active	3 [3.3]	2 [3.5]	1 [4.0]	1 [4.0]	
Ulcer	1 [2.0]	1 [3.0]		2 [2.5]	
Epidermis, Hyperplasia	1 [2.0]			1 [2.0]	
MUSCULOSKELETAL SYSTEM					
Bone	(50)	(49)	(50)	(50)	(50)
Osteopetrosis			2 [2.0]		
Cartilage, Joint, Degeneration	1 [1.0]				2 [1.0]
Skeletal Muscle	(2)	(0)	(0)	(1)	(0)
Artery, Mineral	1 [2.0]				
NERVOUS SYSTEM					
Brain	(50)	(49)	(50)	(50)	(49)
Edema			1 [1.0]		
Gliosis		1 [2.0]			1 [2.0]

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Hemorrhage		2 [1.5]	3 [1.7]		
Inflammation, Acute		1 [2.0]		1 [1.0]	1 [2.0]
Necrosis	1 [2.0]	2 [3.5]		2 [3.5]	4 [3.5]
Nerve Trigeminal	(0)	(0)	(0)	(1)	(0)
Peripheral Nerve	(3)	(0)	(1)	(1)	(0)
Axon, Degeneration	1 [2.0]				
Axon, Sciatic, Degeneration				1 [1.0]	
Ganglion, Vacuolization Cytoplasmic	2 [1.0]		1 [1.0]		
Spinal Cord	(1)	(0)	(0)	(1)	(0)
Axon, Degeneration				1 [1.0]	
Nerve, Degeneration	1 [1.0]				

RESPIRATORY SYSTEM

Lung	(50)	(49)	(50)	(50)	(49)
Fibrosis	1 [2.0]				
Hemorrhage	1 [2.0]				
Infiltration Cellular, Histiocyte	34 [1.6]	30 [1.4]	33 [1.4]	32 [1.8]	32 [1.6]
Inflammation, Granulomatous	4 [1.0]	8 [1.0]	9 [1.0]	10 [1.1]	9 [1.1]
Inflammation, Acute	1 [3.0]	2 [1.0]		1 [1.0]	
Inflammation, Chronic Active	7 [1.3]	1 [1.0]	3 [1.0]	2 [1.0]	4 [1.8]
Metaplasia, Osseous	1 [2.0]				
Mineral	2 [1.0]	1 [2.0]	1 [1.0]		
Polyarteritis Nodosa		1 [4.0]			
Thrombus		1 [4.0]			
Alveolar Epithelium, Hyperplasia		1 [2.0]	5 [1.2]	4 [1.8]	3 [1.3]
Artery, Mineral	4 [2.3]	1 [1.0]	2 [2.0]	1 [1.0]	1 [1.0]
Nose	(50)	(49)	(50)	(50)	(50)
Accumulation, Hyaline Droplet				1 [3.0]	
Foreign Body	1		1		1
Inflammation, Suppurative	4 [2.5]	6 [1.5]			2 [1.5]
Inflammation, Acute	7 [1.0]		10 [1.0]	4 [1.0]	5 [1.2]
Inflammation, Chronic Active			2 [1.0]		
Glands, Respiratory Epithelium, Dilation	1 [1.0]				1 [2.0]

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

Test Type: CHRONIC

Di(2-ethylhexyl) Phthalate

Time Report Requested: 13:48:37

Route: DOSED FEED

CAS Number: 117-81-7

First Dose M/F: 06/27/11 / 06/28/11

Species/Strain: RATS/HSD

Lab: BAT

Harlan Sprague Dawley RATS MALE	0 ppm Male	300 ppm Male	1000 ppm Male	3000 ppm Male	10000 ppm Male
Olfactory Epithelium, Accumulation, Hyaline Droplet	33 [1.8]	38 [1.8]	38 [1.9]	44 [2.2]	33 [2.0]
Olfactory Epithelium, Metaplasia, Respiratory	3 [1.3]	1 [2.0]	2 [1.0]		1 [1.0]
Respiratory Epithelium, Accumulation, Hyaline Droplet	2 [1.0]	1 [1.0]	3 [1.0]	4 [1.0]	
Respiratory Epithelium, Hyperplasia	1 [1.0]				1 [1.0]
Respiratory Epithelium, Squamous Metaplasia				1 [1.0]	
Trachea	(50)	(49)	(50)	(50)	(50)
Inflammation, Chronic Active					1 [3.0]

SPECIAL SENSES SYSTEM

Eye	(50)	(49)	(50)	(50)	(49)
Anterior Chamber, Inflammation, Acute		1 [1.0]	1 [1.0]		
Anterior Chamber, Bilateral, Inflammation, Acute		1 [2.0]	1 [1.0]		
Bilateral, Cornea, Inflammation, Acute	4 [1.0]	2 [2.5]	2 [2.0]	1 [2.0]	1 [2.0]
Choroid, Hyperplasia	1 [2.0]			1 [2.0]	
Cornea, Inflammation, Acute	5 [1.6]	2 [1.5]	1 [1.0]	2 [1.0]	1 [1.0]
Iris, Inflammation, Acute	1 [1.0]	2 [1.0]			
Lens, Cataract	1 [4.0]		1 [2.0]		
Lens, Inflammation, Acute		1 [1.0]			
Retina, Degeneration	1 [4.0]	1 [2.0]			2 [1.5]
Retina, Dysplasia		1 [2.0]		1 [1.0]	
Retina, Hyperplasia		1 [2.0]			
Harderian Gland	(50)	(49)	(50)	(50)	(50)
Degeneration	1 [1.0]				
Inflammation, Chronic			1 [1.0]		
Inflammation, Chronic Active					1 [3.0]
Zymbal's Gland	(1)	(0)	(0)	(0)	(0)

URINARY SYSTEM

Kidney	(50)	(49)	(50)	(50)	(49)
Developmental Malformation		1			

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Lab: BAT

Harlan Sprague Dawley RATS MALE	0 ppm Male	300 ppm Male	1000 ppm Male	3000 ppm Male	10000 ppm Male
Infarct	2 [1.0]	10 [1.0]	9 [1.0]	7 [1.0]	17 [1.1]
Inflammation, Suppurative			1 [3.0]		
Inflammation, Acute	1 [2.0]	1 [1.0]			1 [3.0]
Inflammation, Chronic Active					1 [3.0]
Mineral	1 [3.0]	2 [2.0]			3 [1.3]
Nephropathy, Chronic Progressive	49 [2.7]	49 [2.2]	49 [2.3]	50 [2.4]	41 [1.9]
Artery, Mineral	3 [2.0]				1 [1.0]
Bilateral, Pelvis, Dilation	1 [2.0]				
Cortex, Hemorrhage					1 [2.0]
Epithelium, Papilla, Hyperplasia	9 [1.3]	4 [1.3]	4 [1.8]	3 [1.0]	17 [1.2]
Papilla, Edema					39 [2.2]
Papilla, Hemorrhage		1 [2.0]		2 [1.0]	12 [1.7]
Pelvis, Dilation				2 [1.0]	3 [1.3]
Pelvis, Inflammation, Suppurative	1 [2.0]				
Pelvis, Inflammation, Acute	1 [1.0]	1 [2.0]			1 [3.0]
Pelvis, Inflammation, Chronic Active					1 [2.0]
Renal Tubule, Accumulation, Hyaline Droplet		2 [1.0]	2 [2.0]		
Renal Tubule, Cyst	9	2	4	7	5
Renal Tubule, Dilation				2 [2.5]	
Renal Tubule, Hyperplasia		1 [1.0]		1 [2.0]	
Renal Tubule, Hyperplasia, Atypical			1 [1.0]	1 [2.0]	
Urinary Bladder	(50)	(49)	(50)	(50)	(48)
Hemorrhage		1 [1.0]			
Inflammation, Acute	1 [1.0]				
Inflammation, Chronic					1 [1.0]
Inflammation, Chronic Active	1 [1.0]			1 [2.0]	
Polyarteritis Nodosa			1 [1.0]		
Artery, Mineral	1 [2.0]	1 [2.0]			

*** END OF MALE ***

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First Dose M/F: 06/27/11 / 06/28/11

Species/Strain: RATS/HSD

Lab: BAT

Harlan Sprague Dawley RATS FEMALE	0 ppm Female	300 ppm Female	1000 ppm Female	3000 ppm Female	10000 ppm Female
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Disposition Summary

Animals Initially In Study	50	50	50	50	50
Early Deaths					
Moribund Sacrifice	13	9	9	7	12
Natural Death	5	9	7	9	11
Survivors					
Moribund Sacrifice				1	
Natural Death	1			1	
Terminal Sacrifice	31	32	34	32	27
Animals Examined Microscopically	50	50	50	50	50

ALIMENTARY SYSTEM

Esophagus	(49)	(50)	(50)	(49)	(49)
Intestine Large, Cecum	(50)	(50)	(49)	(50)	(48)
Inflammation, Chronic Active			1 [3.0]		
Parasite Metazoan		1			
Polyarteritis Nodosa			1 [1.0]		
Ulcer			1 [3.0]		
Artery, Polyarteritis Nodosa				1 [1.0]	
Intestine Large, Colon	(50)	(50)	(50)	(50)	(48)
Parasite Metazoan	2	4		2	
Polyarteritis Nodosa				2 [2.0]	
Intestine Large, Rectum	(50)	(50)	(50)	(50)	(48)
Parasite Metazoan	8	6	8	4	3
Polyarteritis Nodosa		1 [3.0]	1 [1.0]	1 [1.0]	
Intestine Small, Duodenum	(49)	(50)	(50)	(49)	(48)
Inflammation, Chronic Active		1 [2.0]			
Intestine Small, Ileum	(50)	(50)	(49)	(49)	(48)
Parasite Metazoan					1
Intestine Small, Jejunum	(50)	(50)	(50)	(50)	(48)
Hyperplasia, Lymphocyte	1 [3.0]				
Liver	(49)	(50)	(50)	(50)	(48)
Angiectasis	1 [1.0]				2 [2.5]
Basophilic Focus	4	5	3	2	10

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Lab: BAT

Harlan Sprague Dawley RATS FEMALE	0 ppm Female	300 ppm Female	1000 ppm Female	3000 ppm Female	10000 ppm Female
Cholangiofibrosis	1 [1.0]				
Clear Cell Focus	14	18	15	11	8
Degeneration, Cystic				1 [1.0]	1 [1.0]
Eosinophilic Focus	3	4	4	7	12
Extramedullary Hematopoiesis	7 [1.0]	6 [1.0]	3 [1.0]	4 [1.0]	4 [1.0]
Fibrosis				1 [2.0]	
Hepatodiaphragmatic Nodule	2	3	3		
Hyperplasia, Nodular					1 [2.0]
Mixed Cell Focus		2	1		
Necrosis	3 [2.0]	9 [2.3]	3 [2.3]	7 [1.9]	8 [2.3]
Pigment		6 [1.0]	14 [1.1]	36 [1.6]	40 [2.6]
Regeneration				1 [2.0]	
Bile Duct, Cyst		1	1	2	
Bile Duct, Dilation			1 [3.0]	3 [3.0]	
Bile Duct, Hyperplasia	9 [1.2]	13 [1.0]	13 [1.2]	21 [1.1]	8 [1.1]
Endothelial Cell, Hypertrophy		1 [3.0]			
Hepatocyte, Cytoplasmic Alteration		4 [1.0]	7 [1.1]	39 [1.6]	39 [3.4]
Hepatocyte, Hypertrophy		2 [2.0]	5 [1.6]	9 [1.6]	34 [2.4]
Mesentery	(1)	(1)	(1)	(2)	(1)
Polyarteritis Nodosa				2 [2.0]	
Artery, Thrombus				1	
Fat, Necrosis		1 [1.0]	1 [1.0]		
Pancreas	(49)	(50)	(50)	(50)	(48)
Basophilic Focus	1			1	
Inflammation, Acute				1 [1.0]	
Polyarteritis Nodosa	1 [1.0]	1 [2.0]		2 [2.0]	1 [1.0]
Acinus, Atrophy	1 [1.0]	2 [1.5]	3 [1.3]	3 [1.0]	1 [1.0]
Acinus, Hyperplasia				2 [1.5]	3 [2.0]
Acinus, Metaplasia, Hepatocyte					1 [1.0]
Salivary Glands	(49)	(50)	(50)	(46)	(45)
Stomach, Forestomach	(50)	(50)	(50)	(50)	(48)
Inflammation, Acute		1 [1.0]			
Inflammation, Chronic					1 [1.0]
Inflammation, Chronic Active	2 [1.5]		2 [1.5]	5 [1.2]	2 [1.5]
Mineral				1 [1.0]	
Polyarteritis Nodosa			1 [1.0]		

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Di(2-ethylhexyl) Phthalate

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Species/Strain: RATS/HSD

Lab: BAT

Harlan Sprague Dawley RATS FEMALE	0 ppm Female	300 ppm Female	1000 ppm Female	3000 ppm Female	10000 ppm Female
Ulcer	1 [2.0]		1 [1.0]	1 [1.0]	1 [1.0]
Epithelium, Hyperplasia	4 [1.5]	1 [3.0]	3 [1.0]	3 [2.7]	3 [1.7]
Epithelium, Hyperplasia, Atypical		1 [4.0]			
Stomach, Glandular	(50)	(50)	(50)	(50)	(48)
Inflammation, Chronic Active		1 [4.0]			
Mineral	6 [1.0]	3 [1.0]	4 [1.3]	5 [1.2]	3 [1.0]
Ulcer		1 [4.0]			
Glands, Dysplasia	1 [1.0]				
CARDIOVASCULAR SYSTEM					
Blood Vessel	(49)	(50)	(50)	(50)	(48)
Aneurysm				2 [2.0]	
Mineral					2 [1.5]
Thrombus				1 [3.0]	
Heart	(49)	(50)	(50)	(49)	(48)
Cardiomyopathy	10 [1.0]	12 [1.0]	8 [1.0]	13 [1.1]	9 [1.0]
Mineral					2 [1.5]
Atrium, Thrombus				1 [3.0]	
Endocardium, Hyperplasia			1 [2.0]		
Epicardium, Inflammation, Chronic					1 [2.0]
ENDOCRINE SYSTEM					
Adrenal Cortex	(50)	(50)	(50)	(50)	(48)
Accessory Adrenal Cortical Nodule		1			
Angiectasis	1 [2.0]	1 [2.0]	2 [1.5]	1 [2.0]	
Degeneration, Cystic	12 [1.1]	8 [1.3]	9 [1.0]	6 [1.3]	12 [1.1]
Extramedullary Hematopoiesis	1 [1.0]		1 [1.0]		
Hemorrhage		1 [4.0]			
Hyperplasia	1 [2.0]		1 [1.0]	1 [2.0]	3 [1.7]
Metaplasia, Osseous		1 [3.0]			
Mineral			1 [1.0]		
Necrosis		1 [2.0]	2 [2.0]		
Thrombus	2 [2.0]	2 [2.0]			1 [1.0]

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Lab: BAT

Harlan Sprague Dawley RATS FEMALE	0 ppm Female	300 ppm Female	1000 ppm Female	3000 ppm Female	10000 ppm Female
Adrenal Medulla	(50)	(50)	(50)	(50)	(47)
Hyperplasia	1 [2.0]	2 [2.5]	1 [1.0]		
Islets, Pancreatic	(49)	(50)	(50)	(50)	(48)
Hyperplasia	3 [1.7]	2 [1.5]	7 [2.1]	4 [1.3]	
Parathyroid Gland	(42)	(43)	(42)	(37)	(38)
Hyperplasia			1 [2.0]	1 [2.0]	1 [3.0]
Pituitary Gland	(49)	(50)	(49)	(49)	(49)
Angiectasis			1 [1.0]		
Cyst				1	
Pars Distalis, Hyperplasia	19 [2.3]	18 [1.9]	13 [1.9]	20 [1.7]	12 [1.3]
Thyroid Gland	(49)	(50)	(50)	(47)	(48)
Inflammation, Acute		1 [1.0]	1 [1.0]		
Polyarteritis Nodosa		1 [1.0]			
Bilateral, C-cell, Hyperplasia		3 [2.3]			
C-cell, Hyperplasia	14 [1.9]	8 [1.8]	13 [1.6]	6 [1.8]	2 [2.0]
Follicular Cell, Hyperplasia					2 [1.5]

GENERAL BODY SYSTEM

Peritoneum	(0)	(0)	(2)	(0)	(0)
Inflammation, Chronic			2 [3.0]		

GENITAL SYSTEM

Clitoral Gland	(50)	(49)	(49)	(50)	(46)
Inflammation, Chronic Active	1 [4.0]				
Ovary	(50)	(50)	(50)	(50)	(48)
Cyst		1			1
Pigment		1 [3.0]			
Bilateral, Atrophy	40 [2.6]	35 [2.5]	30 [2.6]	28 [2.4]	19 [2.4]
Bilateral, Polyarteritis Nodosa				1 [1.0]	
Bilateral, Follicle, Cyst	1			3	4
Bursa, Cyst	4	5	1	2	1
Corpus Luteum, Cyst				1	
Follicle, Cyst	9	9	6	8	5

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Harlan Sprague Dawley RATS FEMALE	0 ppm Female	300 ppm Female	1000 ppm Female	3000 ppm Female	10000 ppm Female
Germinal Epithelium, Cyst		1		1	3
Interstitial Cell, Hyperplasia		1 [3.0]			
Paraovarian Tissue, Cyst	1		2		1
Paraovarian Tissue, Inflammation, Chronic		1 [2.0]			
Rete Ovarii, Hyperplasia		1 [2.0]			
Oviduct	(0)	(0)	(0)	(1)	(0)
Inflammation, Chronic				1 [2.0]	
Uterus	(50)	(50)	(50)	(50)	(48)
Adenomyosis	1 [1.0]	1 [2.0]			
Cyst, Squamous	2		1		
Dilation	3 [3.7]	1 [4.0]	1 [3.0]	1 [2.0]	3 [3.0]
Hemorrhage		2 [2.5]	1 [2.0]	1 [3.0]	2 [2.0]
Hyperplasia, Stromal	1 [3.0]				
Inflammation, Suppurative	4 [2.5]				
Inflammation, Acute			6 [1.8]	2 [2.5]	
Inflammation, Chronic Active	2 [2.0]		1 [4.0]		1 [4.0]
Perforation			1		
Polyarteritis Nodosa				1 [2.0]	
Thrombus	1 [2.0]	1 [3.0]			1 [2.0]
Cervix, Hyperplasia, Squamous			1 [3.0]		
Endometrium, Atypical Hyperplasia					1 [3.0]
Endometrium, Hyperplasia, Atypical	1 [4.0]	1 [1.0]			
Endometrium, Hyperplasia, Cystic	27 [1.7]	24 [1.5]	28 [1.4]	23 [1.3]	16 [1.5]
Endometrium, Squamous Metaplasia	25 [1.9]	17 [1.8]	20 [1.7]	17 [1.3]	7 [1.4]
Vagina	(49)	(50)	(50)	(50)	(49)
Inflammation, Chronic Active		1 [2.0]			
Necrosis		1 [2.0]			
Prolapse	1				

HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)	(50)
Congestion	1 [2.0]				
Hypercellularity	39 [2.8]	37 [2.8]	40 [2.9]	47 [2.6]	38 [2.7]
Hypocellularity					7 [3.1]

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Harlan Sprague Dawley RATS FEMALE	0 ppm Female	300 ppm Female	1000 ppm Female	3000 ppm Female	10000 ppm Female
Myelofibrosis	1 [2.0]				
Lymph Node	(0)	(4)	(4)	(2)	(2)
Axillary, Hemorrhage		1 [2.0]			
Inguinal, Infiltration Cellular, Histiocyte			1 [2.0]		
Lumbar, Hemorrhage		1 [2.0]			
Lumbar, Hyperplasia, Lymphocyte				1 [2.0]	
Lumbar, Infiltration Cellular, Plasma Cell			2 [3.0]		
Mediastinal, Hemorrhage				1 [3.0]	
Mediastinal, Hyperplasia, Plasma Cell		1 [3.0]			
Pancreatic, Inflammation		1 [4.0]			
Renal, Sinusoid, Dilation		1 [3.0]			
Lymph Node, Mandibular	(49)	(49)	(50)	(46)	(42)
Atrophy					3 [3.7]
Infiltration Cellular, Plasma Cell		1 [2.0]	1 [2.0]		
Lymph Node, Mesenteric	(49)	(50)	(50)	(49)	(47)
Atrophy	1 [2.0]				4 [3.0]
Hemorrhage	1 [3.0]				
Hyperplasia, Lymphocyte			1 [3.0]		
Infiltration Cellular, Plasma Cell		1 [2.0]			
Spleen	(49)	(50)	(50)	(50)	(47)
Extramedullary Hematopoiesis	44 [2.3]	46 [2.4]	47 [2.2]	45 [2.2]	39 [1.8]
Hemorrhage	1 [4.0]	1 [2.0]		1 [4.0]	
Pigment	37 [1.5]	39 [1.5]	41 [1.6]	43 [1.7]	38 [1.4]
White Pulp, Atrophy	7 [2.3]	4 [2.5]	2 [3.5]	9 [1.9]	11 [2.6]
Thymus	(46)	(50)	(48)	(48)	(45)
Atrophy	45 [2.0]	46 [2.4]	45 [2.2]	44 [2.2]	42 [2.3]
Cyst			1		
Ectopic Parathyroid Gland				1 [1.0]	1 [2.0]
Hyperplasia, Tubular		1 [3.0]			
Necrosis					1 [2.0]

INTEGUMENTARY SYSTEM

Mammary Gland	(50)	(50)	(50)	(50)	(47)
Galactocele	2 [4.0]	2 [2.0]	1	3 [3.0]	1 [2.0]

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Harlan Sprague Dawley RATS FEMALE	0 ppm Female	300 ppm Female	1000 ppm Female	3000 ppm Female	10000 ppm Female
Hyperplasia	16 [1.6]	20 [1.9]	15 [1.7]	23 [1.7]	10 [1.4]
Hyperplasia, Atypical		1 [1.0]			
Infiltration Cellular, Mononuclear Cell	1 [3.0]				
Inflammation, Chronic	1 [2.0]				
Skin	(50)	(50)	(50)	(50)	(49)
Inflammation, Chronic Active		1 [4.0]	1 [4.0]		
Ulcer			1 [3.0]		

MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)	(50)
Inflammation, Chronic		1 [2.0]			
Necrosis		1 [1.0]			
Osteopetrosis	1 [4.0]				
Skeletal Muscle	(2)	(1)	(0)	(0)	(2)
Hemorrhage	1 [4.0]				

NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)	(49)
Degeneration				1 [1.0]	
Gliosis		1 [2.0]	1 [3.0]		
Hemorrhage	1 [4.0]	1 [2.0]			
Necrosis	2 [2.5]			2 [4.0]	1 [2.0]
Medulla, Demyelination		1 [1.0]			
Meninges, Hyperplasia					1 [1.0]
Nerve Trigeminal	(0)	(1)	(0)	(0)	(0)
Peripheral Nerve	(0)	(1)	(1)	(0)	(0)
Spinal Cord	(0)	(1)	(0)	(0)	(0)
Demyelination		1 [1.0]			
Axon, Degeneration		1 [2.0]			
Nerve, Gliosis		1 [3.0]			

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

Di(2-ethylhexyl) Phthalate

Time Report Requested: 13:48:37

Route: DOSED FEED

CAS Number: 117-81-7

First Dose M/F: 06/27/11 / 06/28/11

Species/Strain: RATS/HSD

Lab: BAT

Harlan Sprague Dawley RATS FEMALE	0 ppm Female	300 ppm Female	1000 ppm Female	3000 ppm Female	10000 ppm Female
RESPIRATORY SYSTEM					
Lung	(49)	(50)	(50)	(49)	(48)
Hyperplasia, Lymphocyte	1 [2.0]				
Infiltration Cellular, Histiocyte	45 [2.3]	48 [2.0]	49 [2.3]	47 [2.4]	42 [2.4]
Inflammation, Granulomatous	8 [1.1]	7 [1.0]	8 [1.0]	10 [1.1]	7 [1.0]
Inflammation, Chronic Active	1 [1.0]	2 [1.0]	1 [1.0]		
Thrombus		2 [1.5]	1 [2.0]		1 [1.0]
Alveolar Epithelium, Hyperplasia	2 [1.5]				
Bronchiole, Hyperplasia	1 [1.0]				
Nose	(50)	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	1 [2.0]	6 [1.0]	2 [1.0]	3 [1.0]	
Thrombus		1 [1.0]			
Olfactory Epithelium, Accumulation, Hyaline Droplet	50 [2.9]	48 [2.6]	49 [2.9]	49 [2.8]	41 [2.2]
Respiratory Epithelium, Accumulation, Hyaline Droplet	11 [1.0]	6 [1.2]	10 [1.1]	3 [1.0]	1 [1.0]
Respiratory Epithelium, Hyperplasia		1 [1.0]			
Respiratory Epithelium, Squamous Metaplasia				1 [1.0]	
Trachea	(49)	(50)	(50)	(49)	(49)
SPECIAL SENSES SYSTEM					
Eye	(50)	(50)	(50)	(50)	(49)
Choroid, Hyperplasia				2 [1.5]	
Cornea, Inflammation, Acute					2 [1.5]
Lens, Cataract	1 [2.0]				1 [2.0]
Retina, Degeneration	1 [1.0]	1 [1.0]	1 [2.0]		2 [2.0]
Retina, Dysplasia	1 [1.0]				
Retina, Hyperplasia			1 [1.0]	1 [1.0]	
Harderian Gland	(50)	(50)	(50)	(50)	(49)
Atrophy	1 [2.0]	1 [1.0]	1 [1.0]	1 [1.0]	
Lacrimal Gland	(1)	(0)	(0)	(0)	(0)

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Harlan Sprague Dawley RATS FEMALE	0 ppm Female	300 ppm Female	1000 ppm Female	3000 ppm Female	10000 ppm Female
URINARY SYSTEM					
Kidney	(50)	(50)	(50)	(50)	(48)
Calculus Micro Observation Only		1			
Cyst		1			
Infarct		3 [2.0]	7 [1.1]	5 [1.0]	12 [1.5]
Nephropathy, Chronic Progressive	42 [1.2]	36 [1.4]	41 [1.3]	45 [1.3]	37 [1.2]
Polyarteritis Nodosa				1 [1.0]	
Epithelium, Papilla, Hyperplasia	2 [1.0]	1 [3.0]	2 [1.0]	4 [1.3]	15 [1.3]
Papilla, Edema			2 [1.5]		38 [1.6]
Papilla, Hemorrhage					2 [1.0]
Papilla, Necrosis	1 [1.0]				
Pelvis, Dilation					1 [1.0]
Pelvis, Inflammation, Acute			1 [1.0]		
Renal Tubule, Accumulation, Hyaline Droplet	2 [2.0]	1 [1.0]			1 [1.0]
Renal Tubule, Cyst			2		7
Renal Tubule, Dilation					3 [2.7]
Renal Tubule, Hyperplasia, Atypical		1 [1.0]			
Urethra	(0)	(0)	(0)	(0)	(1)
Urinary Bladder	(50)	(50)	(50)	(48)	(48)
Inflammation, Acute			1 [1.0]		
Polyarteritis Nodosa				1 [1.0]	

*** END OF REPORT ***

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