

Experiment Number: 10987 - 01
Test Type: Chronic PN
Route: DOSED FEED
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Dibutyl Phthalate
CAS Number: 84-74-2

Date Report Requested: 08/20/2019
Time Report Requested: 12:03:41
First Dose M/F: 08/30/10 / 08/31/10
Lab: BAT

NTP Study Number: C10987
Lock Date: 01/15/2015
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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		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	males (cont...)
DAY ON TEST		7	7	7	5	6	6	7	1	6	7	3	7	6	7	7	7	7	7	7	7	7	6	6	7	7		
HARLAN SPRAGUE DAWLEY RATS MALE 0 ppm		3	3	0	0	0	1	0	6	0	3	7	2	8	2	2	1	2	2	2	3	3	3	6	5	3		
ANIMAL ID		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	
		1	2	3	4	5	6	7	8	0	1	2	3	4	5	6	7	8	9	0	1	2	2	3	4	5	6	

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Colon Parasite Metazoan	+	+	+	+	+	+	+	+	+	+	+	+	+	X	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Rectum Parasite Metazoan Polyarteritis Nodosa	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	X																									2
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Angiectasis, Focal														1											1	
Basophilic Focus																										X
Cholangiofibrosis																										X
Clear Cell Focus	X	X									X	X		X							X	X				X
Congestion														3												
Degeneration, Cystic																										
Fatty Change																										1
Fatty Change, Focal																										1
Mixed Cell Focus																										X
Polyarteritis Nodosa																										X

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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HARLAN SPRAGUE DAWLEY RATS MALE 0 ppm	DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	ANIMAL ID		7	7	7	5	6	6	7	1	6	7	3	7	6	7	7	7	7	7	7	7	2	7	3	3	3	6	6	7
			3	3	0	0	0	1	0	6	0	3	7	2	8	2	2	1	2	2	2	3	3	3	6	5	3	1	4	1
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
		1	2	3	4	5	6	7	8	0	1	2	3	4	5	6	7	8	9	0	1	2	2	3	4	5	6	6	7	

males
(cont...)

Bile Duct, Cyst																															
Bile Duct, Hyperplasia			1	1				1	1					1							1										
Oral Mucosa																															+
Pancreas			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Basophilic Focus														X										X	X						
Polyarteritis Nodosa																1															
Acinus, Atrophy			2				1																								
Acinus, Hyperplasia			4	4	2										1	3				1	2	3	1	2							
Duct, Cyst												X																			
Salivary Glands			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Basophilic Focus																															
Infiltration Cellular, Mononuclear Cell																															
Stomach, Forestomach			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Inflammation, Chronic																															
Inflammation, Chronic Active																2															
Ulcer																3															
Epithelium, Hyperplasia								3	2							2	2														
Stomach, Glandular			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Mineral																															

CARDIOVASCULAR SYSTEM

Blood Vessel			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Mineral																															

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+ .. Tissue examined microscopically M .. Missing tissue
X .. Lesion present A .. Autolysis precludes evaluation
I .. Insufficient tissue BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
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HARLAN SPRAGUE DAWLEY RATS MALE 0 ppm	DAY ON TEST																								males (cont...)
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	7	7	7	5	6	6	7	1	6	7	3	7	6	7	7	7	7	7	7	7	6	6	7	7	
	3	3	0	0	0	1	0	6	0	3	7	2	8	2	2	1	2	2	2	3	3	3	6	5	
	0	0	1	6	3	1	1	9	3	0	5	9	6	9	2	6	9	9	9	0	0	0	1	4	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	2	3	4	5	6	7	8	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	

Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Cardiomyopathy	1	1	2	2	2	1	1	2	3	2	2	2		2	2	2	1		2	1	1	1	1	2	1
Polyarteritis Nodosa																									
Aortic Valve, Endothelium, Hyperplasia																				1					
Artery, Hyperplasia																									
Atrium, Thrombus				4					4																
Endocardium, Hyperplasia, Schwann Cell																				2					
Myocardium, Fibrosis, Focal				2																					
Myocardium, Inflammation, Acute																									
Myocardium, Necrosis, Multifocal																									

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia, Focal		4	3	2		2	2			2			2	1		1	2		2	2	2	2	2	
Hypertrophy, Focal				2					3		2			1		1	1	1	1	1	1	2	1	1
Vacuolization Cytoplasmic, Focal		1					1					1			2							1		
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia	1		2		1			2						2				2		4				
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia																								
Parathyroid Gland	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia																						3		
Hyperplasia, Focal																								1
Pituitary Gland	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pars Distalis, Cyst, Multiple																								

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HARLAN SPRAGUE DAWLEY RATS MALE 0 ppm	DAY ON TEST																								males (cont...)	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
ANIMAL ID	7	7	7	5	6	6	7	1	6	7	3	7	6	7	7	7	7	7	7	7	7	6	6	7		
	3	3	0	0	0	1	0	6	0	3	7	2	8	2	2	1	2	2	2	3	3	3	6	5	3	
	0	0	1	6	3	1	1	9	3	0	5	9	6	9	2	6	9	9	9	0	0	0	1	4	1	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	
	1	2	3	4	5	6	7	8	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	

Pars Distalis, Hyperplasia				1						1							1	2		1	1			3	
Pars Intermedia, Hyperplasia	3																		2						
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
C-cell, Hyperplasia	4									4	1														
Follicle, Dilation																									
Follicular Cell, Hyperplasia																									

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Hypospermia												4	3											3		
Bilateral, Hypospermia																										
Bilateral, Duct, Exfoliated Germ Cell				1																						
Duct, Exfoliated Germ Cell							1			1														2		
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Inflammation, Chronic				1			1					1	2			1										
Inflammation, Chronic Active	1	2		1											1	1		1		2	1	1	1	1	2	
Bilateral, Duct, Dilation	2	2	1	3			3	3		2	2		4	2	2	2	4		2	4	1	1	1	4		
Duct, Hyperplasia, Focal			3																							
Duct, Inflammation, Suppurative							1			2	1															
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Decreased Secretory Fluid										X					X											
Acinus, Inflammation, Suppurative, Focal																										

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HARLAN SPRAGUE DAWLEY RATS MALE 0 ppm	DAY ON TEST																				males (cont...)					
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	
	7	7	7	5	6	6	7	1	6	7	3	7	6	7	7	7	7	7	7	7		6	6	7	7	
	3	3	0	0	0	1	0	6	0	3	7	2	8	2	2	1	2	2	2	3	3	6	5	3		
	0	0	1	6	3	1	1	9	3	0	5	9	6	9	2	6	9	9	9	0	0	1	4	1		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2		
	1	2	3	4	5	6	7	8	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7

Hyperplasia, Lymphoid
Hyperplasia, Plasma Cell

4 3 3 2

Lymph Node, Mesenteric
Hemorrhage
Hyperplasia, Lymphoid
Infiltration Cellular, Histiocyte

+
1

Spleen
Extramedullary Hematopoiesis
Hyperplasia, Lymphoid
Inflammation, Chronic Active
Pigment
Lymphoid Follicle, Atrophy

+
2 2 1 1 3 3 2 3 2 2 3 1 1 1 1 2 2 2 1 2 1 1
2
3 1 2 3 4 1 3 3 1 2 2 2 2 2 3 2 3 2 3 2 1 3 3
3 3

Thymus
Atrophy
Ectopic Parathyroid Gland
Hemorrhage
Epithelial Cell, Hyperplasia

+ + + + + M + + + + + + + + + + + + + + + + + +
3 3 3 4 3 2
1

INTEGUMENTARY SYSTEM

Mammary Gland

+ +

Skin
Cyst Epithelial Inclusion
Inflammation, Chronic Active
Ulcer

+
X
3 X

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 Lab: BAT

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARLAN SPRAGUE DAWLEY RATS | 7 | 7 | 7 | 5 | 6 | 6 | 7 | 1 | 6 | 7 | 3 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | 3 | 3 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 3 | 7 | 2 | 8 | 2 | 2 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 6 | 5 | 3 | 1 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 1 | 6 | 3 | 1 | 1 | 9 | 3 | 0 | 5 | 9 | 6 | 9 | 2 | 6 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 | 0 | 0 | 0 |
| 0 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

males
(cont...)

Subcutaneous Tissue, Inflammation, Chronic Active 4

MUSCULOSKELETAL SYSTEM

Bone +

NERVOUS SYSTEM

Brain +

Peripheral Nerve +

RESPIRATORY SYSTEM

Lung +

Granuloma Mineral 1 1
 Alveolus, Infiltration Cellular, Histiocyte 1 4 2 1 4 1 1 1 1 1 1
 Alveolus, Inflammation, Chronic 1 1 1
 Alveolus, Inflammation, Chronic Active 1 3 1 2
 Artery, Hyperplasia 3
 Interstitium, Inflammation, Chronic Active 2

Nose +

Foreign Body Inflammation, Suppurative 1
 Inflammation, Acute
 Goblet Cell, Hyperplasia 1
 Respiratory Epithelium, Hyperplasia

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 + .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
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 I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

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| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|---|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARLAN SPRAGUE DAWLEY RATS
MALE
0 ppm | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 7 | 7 | 7 | 5 | 6 | 6 | 7 | 1 | 6 | 7 | 3 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 6 | 6 | 7 | 6 | 7 |
| | | 3 | 3 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 3 | 7 | 2 | 8 | 2 | 2 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 6 | 5 | 3 | 6 | 5 | 3 | 1 | |
| | | 0 | 0 | 1 | 6 | 3 | 1 | 1 | 9 | 3 | 0 | 5 | 9 | 6 | 9 | 2 | 6 | 9 | 9 | 9 | 0 | 0 | 0 | 1 | 4 | 1 | 4 | 2 | 2 | 1 | |

males (cont...)

Submucosa, Inflammation, Chronic

Trachea

+ +

SPECIAL SENSES SYSTEM

Eye

+ +

Harderian Gland

+ +

Hyperplasia

2

Infiltration Cellular, Mast Cell

Zymbal's Gland

URINARY SYSTEM

Kidney

+ +

Inflammation, Suppurative

3

Nephropathy, Chronic Progressive

2 3 4 2 3 3 2 1 4 4 2 2 2 2 4 3 3 2 3 3 3 3 2 3 2

Bilateral, Renal Tubule, Inflammation, Acute

2

Pelvis, Dilation

2

Renal Tubule, Inflammation, Acute

1

2

Renal Tubule, Inflammation, Chronic Active

1

Urinary Bladder

+ +

Hemorrhage

Urothelium, Inflammation, Acute

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
0 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 07 | 07 | 07 | 07 | 05 | 07 | 05 | 06 | 07 | 07 | 06 | 07 | 04 | 06 | 07 | 07 | 07 | 07 | 07 | 06 | 07 | 07 | 07 | |
| ANIMAL ID | 00027 | 00028 | 00029 | 00030 | 00031 | 00032 | 00033 | 00034 | 00035 | 00036 | 00037 | 00038 | 00039 | 00040 | 00041 | 00042 | 00043 | 00044 | 00045 | 00046 | 00047 | 00048 | 00049 | 00050 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Colon
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | + | 49
2 |
| Intestine Large, Rectum
Parasite Metazoan
Polyarteritis Nodosa | + | + | + | + | + | X | X | | | X | + | + | + | + | + | + | + | + | + | + | + | + | + | 49
4
1 2.0 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Angiectasis, Focal | | | | | | | | | | | | | | | | | | | | | | | | 2 1.0 |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Cholangiofibrosis | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Clear Cell Focus | X | | | X | X | | | X | X | | X | X | | X | X | | X | X | | X | X | X | | 24 |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Degeneration, Cystic | | | | | | | | | | | | 1 | | | | | | | | | | | | 1 1.0 |
| Fatty Change | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Fatty Change, Focal | | | | | | | | | | | | | | | | | 1 | | | | | | | 2 1.0 |
| Mixed Cell Focus | | | | | X | | | | | | | | | | | | | | | | X | | | 5 |
| Polyarteritis Nodosa | | | | 1 | | | | | | | | | | | | | | | | | | | | 1 1.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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MALE
0 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 07 | 07 | 07 | 07 | 05 | 07 | 05 | 06 | 07 | 07 | 06 | 07 | 04 | 06 | 07 | 07 | 07 | 07 | 07 | 06 | 07 | 07 | 07 | 05 | |
| ANIMAL ID | 00027 | 00028 | 00029 | 00030 | 00031 | 00032 | 00033 | 00034 | 00035 | 00036 | 00037 | 00038 | 00039 | 00040 | 00041 | 00042 | 00043 | 00044 | 00045 | 00046 | 00047 | 00048 | 00049 | 00050 | |
| Bile Duct, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Hyperplasia | 2 | | 4 | | | 2 | | | | | | 2 | 1 | | 4 | | | | | | | 1 | 2 | | |
| Duct, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Mononuclear Cell | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | |
| CARDIOVASCULAR SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
0 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 7 | 7 | 7 | 7 | 5 | 7 | 5 | 6 | 7 | 7 | 6 | 7 | 4 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 5 | |
| | 2 | 2 | 3 | 3 | 9 | 2 | 9 | 9 | 2 | 3 | 3 | 3 | 0 | 7 | 3 | 3 | 2 | 2 | 3 | 7 | 3 | 3 | 3 | 6 | | |
| | 9 | 9 | 1 | 1 | 8 | 9 | 2 | 4 | 5 | 0 | 0 | 0 | 9 | 6 | 1 | 1 | 9 | 9 | 1 | 4 | 0 | 0 | 1 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | | |
| | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|----|-----|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | | |
| Cardiomyopathy | 2 | 2 | 2 | 1 | 1 | 1 | 1 | | | 2 | 1 | 3 | 1 | | 1 | 1 | 1 | | 1 | 2 | 2 | 1 | 1 | 1 | 2 | | 44 | 1.5 |
| Polyarteritis Nodosa | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Aortic Valve, Endothelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Artery, Hyperplasia | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Atrium, Thrombus | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 4.0 |
| Endocardium, Hyperplasia, Schwann Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Myocardium, Fibrosis, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Myocardium, Inflammation, Acute | | | | | | | | | | | | | | | | | | | | 3 | | | | | | | 1 | 3.0 |
| Myocardium, Necrosis, Multifocal | | | | | | | | | | | | | | | | | | | | 3 | | | | | | | 1 | 3.0 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Hyperplasia, Focal | | | 1 | 1 | 2 | | 1 | 1 | 2 | 2 | 1 | 2 | 1 | | 2 | 2 | | | | | | 2 | 1 | 1 | | 30 | 1.8 |
| Hypertrophy, Focal | 1 | | | | | | | | | | | | 1 | | 2 | | | | | | 1 | 1 | 2 | | | 18 | 1.4 |
| Vacuolization Cytoplasmic, Focal | | | 1 | | 1 | | | | | | | | | | | | | | | | | 1 | | | | 8 | 1.1 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Hyperplasia | | | 1 | | 4 | | | | | | | | | | 3 | | | | | | 2 | | | | | 11 | 2.2 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 3 | | | 1 | 3.0 |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Hyperplasia | | | | | | | | | | | | | | | 2 | | | | | | | 2 | | 2 | | 4 | 2.3 |
| Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Pars Distalis, Cyst, Multiple | | | | | X | | | | | | | | | | | | | | | | | | | | | 1 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS MALE | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|------------------------------|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 0729 | 0729 | 0731 | 0731 | 0758 | 0759 | 0759 | 0759 | 0759 | 0764 | 0765 | 0767 | 0767 | 0767 | 0767 | 0767 | 0767 | 0767 | 0767 | 0767 | 0767 | 0767 | 0767 | 0767 | |
| ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 ppm | 00027 | 00028 | 00029 | 00030 | 00031 | 00032 | 00033 | 00034 | 00035 | 00036 | 00037 | 00038 | 00039 | 00040 | 00041 | 00042 | 00043 | 00044 | 00045 | 00046 | 00047 | 00048 | 00049 | 00050 | |
| Pars Distalis, Hyperplasia | 1 | | | | | | | 2 | | | | | 1 | | | 4 | 3 | | | 1 | 4 | | 1 | | 15 1.8 |
| Pars Intermedia, Hyperplasia | 1 | | | | | | | | | | | | | | | | | | | | | | | | 3 2.0 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 49 |
| C-cell, Hyperplasia | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | 5 2.4 |
| Follicle, Dilation | | | | | | | | | | | | | | | | | | | | 2 | | | | | 1 2.0 |
| Follicular Cell, Hyperplasia | | 1 | | | | | | | | | | | | | | | | | | | 1 | | | | 2 1.0 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|-------|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 49 |
| Hypospermia | | | | | | | | | | | | | | | | | | | | | | | | | 3 3.3 |
| Bilateral, Hypospermia | | | | | | | | | | | | | 4 | | | | | | | | | | | | 1 4.0 |
| Bilateral, Duct, Exfoliated Germ Cell | | | | | | | | | | | 1 | | | | | | | | | 1 | | | | | 3 1.0 |
| Duct, Exfoliated Germ Cell | | | | | | | | | | | | | | | 1 | | | | | | | | | | 4 1.3 |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 49 |
| Inflammation, Chronic | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | 7 1.1 |
| Inflammation, Chronic Active | 1 | 3 | 1 | 1 | | 2 | | | | | 2 | | | 2 | 1 | 1 | 1 | 1 | | 2 | 1 | | 1 | 27 1.3 | |
| Bilateral, Duct, Dilation | 1 | 3 | | | 4 | 1 | 1 | | | | 2 | 2 | | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 4 | | 1 | 35 2.1 | |
| Duct, Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Duct, Inflammation, Suppurative | | | | | | | | | | | | 1 | | | | | | | | | | | | | 4 1.3 |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 49 |
| Decreased Secretory Fluid | | | | | | | X | | | | | X | X | | | | | | | | | | | | 5 |
| Acinus, Inflammation, Suppurative, Focal | | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 1.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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|-------------|---------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------|----------|
| | 07 | 07 | 07 | 07 | 05 | 07 | 05 | 06 | 07 | 07 | 06 | 07 | 04 | 06 | 07 | 07 | 07 | 07 | 07 | 06 | 07 | 07 | 07 | 05 | | |
| 29 | 2 | 2 | 3 | 3 | 9 | 2 | 9 | 9 | 2 | 3 | 3 | 3 | 0 | 7 | 3 | 3 | 2 | 2 | 3 | 7 | 3 | 3 | 3 | 6 | | |
| 07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 08 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 08 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|-----|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Epithelium, Hyperplasia, Regenerative, Focal | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1.0 | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Ventral, Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3 | 2 | 5 | 1.6 | | | | | | | | | | | | | | | | | | | |
| Seminal Vesicle | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Decreased Secretory Fluid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | X | | | | | X | | | | | | |
| Testis | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Edema | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Sperm Granuloma | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Bilateral, Edema | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Bilateral, Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Bilateral, Germinal Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Bilateral, Germinal Epithelium, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Germinal Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Interstitial Cell, Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Seminiferous Tubule, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hypercellularity | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| Mediastinal, Hyperplasia, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pancreatic, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Popliteal, Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Renal, Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Lymph Node, Mandibular | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 49 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
0 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 07 | 07 | 07 | 07 | 05 | 07 | 05 | 06 | 07 | 07 | 06 | 07 | 04 | 06 | 07 | 07 | 07 | 07 | 07 | 06 | 07 | 07 | 07 | |
| ANIMAL ID | 00027 | 00028 | 00029 | 00030 | 00031 | 00032 | 00033 | 00034 | 00035 | 00036 | 00037 | 00038 | 00039 | 00040 | 00041 | 00042 | 00043 | 00044 | 00045 | 00046 | 00047 | 00048 | 00049 | 00050 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|-----|-----|
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 | 3.0 | | |
| Hyperplasia, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 5 | 3.0 | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 | 3.0 |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Extramedullary Hematopoiesis | 2 | 2 | 2 | 1 | | 1 | 2 | | | | 1 | 1 | 2 | | | 2 | 1 | 2 | 1 | 2 | | 2 | 2 | 2 | 1 | 38 | 1.7 | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2.0 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Pigment | 2 | 3 | 3 | 2 | 3 | 3 | | 2 | 4 | 1 | 4 | 2 | | 2 | 2 | 2 | 2 | 1 | 2 | 4 | 2 | 2 | 2 | | 45 | 2.3 | | | |
| Lymphoid Follicle, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | 2.6 | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 3.0 | |
| Ectopic Parathyroid Gland | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Epithelial Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

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Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| HARLAN SPRAGUE DAWLEY RATS
MALE
0 ppm | DAY ON TEST | 07 | 07 | 07 | 07 | 05 | 07 | 05 | 06 | 07 | 07 | 06 | 07 | 04 | 06 | 07 | 07 | 07 | 07 | 07 | 06 | 07 | 07 | 07 | 05 | * TOTALS |
| | ANIMAL ID | 00027 | 00028 | 00029 | 00030 | 00031 | 00032 | 00033 | 00034 | 00035 | 00036 | 00037 | 00038 | 00039 | 00040 | 00041 | 00042 | 00043 | 00044 | 00045 | 00046 | 00047 | 00048 | 00049 | 00050 | |

Subcutaneous Tissue, Inflammation, Chronic Active

1 4.0

MUSCULOSKELETAL SYSTEM

Bone

+ 49

NERVOUS SYSTEM

Brain

+ 49

Peripheral Nerve

+ 2

RESPIRATORY SYSTEM

Lung

+ 49

Granuloma

1 1 2 1.0

Mineral

2 1.0

Alveolus, Infiltration Cellular, Histiocyte

22 1.5

Alveolus, Inflammation, Chronic

7 1.1

Alveolus, Inflammation, Chronic Active

6 1.5

Artery, Hyperplasia

1 3.0

Interstitial, Inflammation, Chronic Active

1 2.0

Nose

+ 49

Foreign Body

X 1

Inflammation, Suppurative

3 2 2.0

Inflammation, Acute

2 1 2.0

Goblet Cell, Hyperplasia

2 1.5

Respiratory Epithelium, Hyperplasia

1 1.0

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

M .. Missing tissue

1-4 .. Lesion qualified as:

X .. Lesion present

A .. Autolysis precludes evaluation

1) Minimal 3) Moderate

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Lab: BAT

| DAY ON TEST
HARLAN SPRAGUE DAWLEY RATS
MALE
0 ppm | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----------|
| | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | | |
| Submucosa, Inflammation, Chronic | 1 | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Trachea | + | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Harderian Gland | + | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Infiltration Cellular, Mast Cell | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Zymbal's Gland | + | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Nephropathy, Chronic Progressive | 3 | 3 | 4 | 4 | 1 | 2 | 2 | 4 | 4 | 2 | 3 | 2 | | 4 | 3 | 2 | 4 | 2 | | 4 | 2 | 3 | 3 | 3 | 47 2.8 |
| Bilateral, Renal Tubule, Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Pelvis, Dilation | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Renal Tubule, Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Renal Tubule, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Urinary Bladder | + | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Urothelium, Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|
| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | 0730 | 0603 | 0731 | 0679 | 0770 | 0770 | 0770 | 0770 | 0479 | 0770 | 0770 | 0770 | 0770 | 0679 | 0770 | 0770 | 0770 | 0770 | 0770 | 0575 | 0779 | 0779 | 0779 | males
(cont...) |
| | ANIMAL ID | 00051 | 00052 | 00053 | 00054 | 00055 | 00056 | 00057 | 00058 | 00059 | 00060 | 00061 | 00062 | 00063 | 00064 | 00065 | 00066 | 00067 | 00068 | 00069 | 00070 | 00071 | 00072 | 00073 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis, Focal | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | X | X | | | |
| Cholangiofibrosis | | | | | 2 | | | | | | | | | | | | | | | | | | | | |
| Clear Cell Focus | | | X | | X | X | X | X | X | | X | X | X | X | X | | | | | | X | | | X | X |
| Fatty Change | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Fatty Change, Focal | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| Hepatodiaphragmatic Nodule | | | | | X | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | | | | | | | | | X | | | | | X | | | | | | | | | | | |
| Polyarteritis Nodosa | | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | |
| Bile Duct, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | 1 | | | 2 | | | | | | | | 1 | | | | | | | 1 | 1 | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males
(cont...) |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|-----------|--------------------|
| | 0730 | 0603 | 0731 | 0619 | 0770 | 0770 | 0777 | 0777 | 0777 | 0777 | 0477 | 0777 | 0777 | 0777 | 0777 | 0676 | 0770 | 0777 | 0777 | 0777 | 0575 | 0777 | 0777 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 000051 | | |

Hepatocyte, Necrosis

1

Mesentery
Fat, Necrosis

+
3

Pancreas
Fibrosis
Polyarteritis Nodosa
Acinus, Atrophy
Acinus, Hyperplasia

+
1
4 2 2 1 2 2 2 2 1 2

Salivary Glands

+ +

Stomach, Forestomach
Epithelium, Hyperplasia

+ +

Stomach, Glandular
Mineral

+
2

CARDIOVASCULAR SYSTEM

Blood Vessel
Mineral

+
3

Heart
Cardiomyopathy
Artery, Mineral

+
3 3 1 3 1 1 1 1 2 1 1 1 2 3 2 3 2 1 2 2 2 1 1 1
2

ENDOCRINE SYSTEM

Adrenal Cortex

+ +

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | |
| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | 3 | 0 | 3 | 1 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 0 | 2 | 3 | 3 | 2 | 2 | 5 | 2 | 2 | |
| | 0 | 3 | 1 | 9 | 0 | 0 | 0 | 0 | 9 | 4 | 0 | 0 | 0 | 0 | 9 | 2 | 6 | 9 | 1 | 1 | 9 | 9 | 5 | 9 | 9 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

males (cont...)

Hemorrhage

3

Hyperplasia, Focal

1 1 2 2 3 1 4 1 1 1 3 2 1 1 1 1 2

Hypertrophy, Focal

1 2 1 2 1 1 1 3 2 1 1 1 1 2

Metaplasia, Osseous

2 1 1 1 3 2 1 1 1 3 2 1 1 1 1 2

Nuclear Alteration

2 1 1 1 3 2 1 1 1 3 2 1 1 1 1 2

Vacuolization Cytoplasmic, Focal

1 1 1 1 3 2 1 1 1 3 2 1 1 1 1 2

Adrenal Medulla

+ +

Atypia Cellular

1

Hyperplasia

4 1 1 4 2 4 4 1 4

Islets, Pancreatic

+ +

Parathyroid Gland

+ +

Hyperplasia

2 2

Pituitary Gland

+ +

Pars Distalis, Hyperplasia

2 1 1 4 4 1

Pars Intermedia, Hyperplasia

1

Rathke's Cleft, Cyst

X

Thyroid Gland

+ +

C-cell, Hyperplasia

1

Follicular Cell, Hyperplasia

4

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | males
(cont...) |
|------------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------|
| HARLAN SPRAGUE DAWLEY RATS
MALE | | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | | |
| 300 ppm | | 3 | 0 | 3 | 1 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 0 | 2 | 3 | 3 | 2 | 2 | 5 | 2 | 2 | 2 | | |
| ANIMAL ID | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |

Coagulating Gland
Inflammation, Chronic Active

Epididymis
Granuloma Sperm
Bilateral, Hypospermia
Bilateral, Polyarteritis Nodosa
Bilateral, Duct, Exfoliated Germ Cell
Duct, Exfoliated Germ Cell

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | 4 | | | | | | | | 4 | | | | |
| | | 3 | | | | | | | | | | 3 | | | | 4 | | | | | 2 | | | | |
| | | 1 | 2 | | | | | | | | | | | 1 | | | | | | | | | 3 | | |

Preputial Gland
Inflammation, Chronic
Inflammation, Chronic Active
Bilateral, Duct, Dilation

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| 1 | | | | | | | | | 1 | | 2 | | | | 1 | | 1 | | 1 | | 1 | | | 1 |
| | | | 1 | | | 1 | | 2 | | | | | | 1 | | | | | | | | | 2 | |
| | | 3 | | | 2 | 2 | 3 | 3 | 4 | 1 | 1 | | | 3 | | | | 2 | 1 | | 2 | 1 | | 2 |

Prostate
Decreased Secretory Fluid
Polyarteritis Nodosa
Acinus, Dilation

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| X | X | | | | | | | | | | | X | | | | | | | | | X | | X | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 3 | | | | | | | | | | | | | | | | |

Seminal Vesicle
Decreased Secretory Fluid
Inflammation, Chronic Active

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| X | X | | | | | | | | | | | X | | | | X | | | | | X | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

Testis
Edema
Bilateral, Edema
Bilateral, Polyarteritis Nodosa
Bilateral, Germinal Epithelium, Atrophy
Bilateral, Germinal Epithelium, Degeneration

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | | | | | | | | | 2 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 2 | | 2 | 1 | | | | | | | | 2 | | 2 | 1 | | | 1 | 1 | 1 | 1 | | | |
| 2 | | | | | | | | | 1 | 1 | | 3 | | 3 | 1 | | 4 | 1 | | | | | | |
| | | 4 | | | | | | | | | 1 | | | | | | | | | | 3 | | 2 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

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Experiment Number: 10987 - 01

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Date Report Requested: 08/20/2019

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Dibutyl Phthalate

Time Report Requested: 12:03:41

Route: DOSED FEED

CAS Number: 84-74-2

First Dose M/F: 08/30/10 / 08/31/10

Species/Strain: RATS/HSD

Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------|
| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | 0
7
3
0 | 0
6
0
3 | 0
7
3
1 | 0
6
1
3 | 0
7
3
3 | 0
7
3
3 | 0
7
3
3 | 0
7
2
2 | 0
7
3
3 | 0
7
3
3 | 0
7
3
3 | 0
7
3
3 | 0
7
2
2 | 0
6
3
0 | 0
7
2
3 | 0
7
3
3 | 0
7
2
2 | 0
7
5
5 | 0
7
2
2 | 0
7
5
5 | 0
7
2
2 | 0
7
2
2 | males
(cont...) |
| | ANIMAL ID | 0
0
0
5
1 | 0
0
0
5
2 | 0
0
0
5
3 | 0
0
0
5
4 | 0
0
0
5
5 | 0
0
0
5
6 | 0
0
0
5
7 | 0
0
0
5
8 | 0
0
0
5
9 | 0
0
0
6
6 | 0
0
0
6
1 | 0
0
0
6
2 | 0
0
0
6
3 | 0
0
0
6
4 | 0
0
0
6
5 | 0
0
0
6
6 | 0
0
0
6
7 | 0
0
0
6
8 | 0
0
0
6
9 | 0
0
0
7
0 | 0
0
0
7
1 | 0
0
0
7
2 | |

Bilateral, Interstitial Cell, Hyperplasia, Focal
 Interstitial Cell, Hyperplasia, Focal
 Rete Testis, Dilation
 Seminiferous Tubule, Dilation

3
1
2
2

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow
Hypercellularity | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | 3 | 3 | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mandibular
Degeneration, Cystic
Hyperplasia, Lymphoid
Hyperplasia, Plasma Cell
Inflammation, Chronic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + |
| | 3 | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen
Extramedullary Hematopoiesis
Hyperplasia, Lymphoid
Pigment
Lymphoid Follicle, Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | 2 | | 3 | 3 | 1 | 2 | 1 | 1 | 1 | | 2 | 2 | 2 | 2 | 3 | | 2 | 2 | 2 | 2 | 2 | 2 | 1 |
| | | | | 2 | | | | | | | | | | | | | | | | | | | |
| | | 3 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | 2 | 1 | 2 | 3 | | 2 |
| | | 2 | | | | | | | | | | | | | | | | | | | | | 2 |
| Thymus | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
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Experiment Number: 10987 - 01

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Species/Strain: RATS/HSD

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Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|
| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | 0730 | 0603 | 0731 | 0679 | 0770 | 0770 | 0770 | 0770 | 0770 | 0472 | 0773 | 0773 | 0773 | 0773 | 0672 | 0773 | 0773 | 0772 | 0772 | 0555 | 0772 | 0772 | males
(cont...) |
| | ANIMAL ID | 00051 | 00052 | 00053 | 00054 | 00055 | 00056 | 00057 | 00058 | 00059 | 00060 | 00061 | 00062 | 00063 | 00064 | 00065 | 00066 | 00067 | 00068 | 00069 | 00070 | 00071 | 00072 | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|--|--|---|--|--|--|--|--|---|--|---|--|---|---|---|---|--|---|--|--|--|--|
| Cyst Epithelial Inclusion | | | | | | | | | | X | | X | | X | | X | X | | | | | | |
| Ulcer | 4 | | | 3 | | | | | | | | | | | 4 | | | | | | | | |
| Epidermis, Hyperplasia | | | | | | | | | | | | | | | | | 4 | | 2 | | | | |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Alveolar Epithelium, Hyperplasia | | 2 | | | | | | | | | | | | | | | | | | | | | |
| Alveolus, Infiltration Cellular, Histiocyte | | 2 | | 2 | | 1 | 1 | | | 2 | 1 | | | | 1 | | 1 | | 2 | | | 1 | 1 |
| Alveolus, Inflammation, Chronic | | | | | | | | | | | 1 | 1 | | 1 | | | | | | | | | |
| Alveolus, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Nose Foreign Body | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | |
| Submucosa, Granuloma | | | | | | | | | | | | | | | | | | | | | | | |
| Submucosa, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|-------|-------|
| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | 07 | 06 | 07 | 06 | 07 | 07 | 07 | 07 | 07 | 04 | 07 | 07 | 07 | 07 | 07 | 06 | 07 | 07 | 07 | 07 | 05 | 07 | 07 | males
(cont...) | | |
| | ANIMAL ID | 00051 | 00052 | 00053 | 00054 | 00055 | 00056 | 00057 | 00058 | 00059 | 00060 | 00061 | 00062 | 00063 | 00064 | 00065 | 00066 | 00067 | 00068 | 00069 | 00070 | 00071 | 00072 | 00073 | | 00074 | 00075 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Nephropathy, Chronic Progressive | 4 | 3 | 2 | 4 | 3 | 3 | 2 | 2 | 2 | | 3 | 3 | 2 | 3 | 4 | 2 | 3 | 4 | 2 | 4 | 4 | 1 | | 3 | 2 |
| Renal Tubule, Cyst | | | | X | | | | | | | | | | | | | | | | | X | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lumen, Calculus Micro Observation Only | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|------|
| | 0729 | 0730 | 0735 | 0736 | 0737 | 0738 | 0739 | 0740 | 0741 | 0742 | 0743 | 0744 | 0745 | 0746 | 0747 | 0748 | 0749 | 0750 | 0751 | 0752 | 0753 | 0754 | 0755 | 0756 | | 0757 |
| ANIMAL ID | 00076 | 00077 | 00078 | 00079 | 00080 | 00081 | 00082 | 00083 | 00084 | 00085 | 00086 | 00087 | 00088 | 00089 | 00090 | 00091 | 00092 | 00093 | 00094 | 00095 | 00096 | 00097 | 00098 | 00099 | 00100 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Colon
Parasite Metazoan | + | + | + | + | + | + | + | + | + | X | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
1 |
| Intestine Large, Rectum
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | X | + | + | + | + | X | + | + | + | + | + | X | + | + | + | 50
6 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis, Focal | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Cholangiofibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Clear Cell Focus | | X | | | | X | X | X | X | X | X | | X | | | X | X | X | | X | | | X | X | | 29 |
| Fatty Change | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Fatty Change, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | X | | | | | | | | | | 2 |
| Mixed Cell Focus | | X | | | | | | | | | | | | X | X | X | X | | | | | | | | | 8 |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 3 1.0 |
| Bile Duct, Cyst | | | | | | | | | | | | | X | | | | | | | | | | | | | 1 |
| Bile Duct, Hyperplasia | | | | 1 | 1 | | | | | | 1 | | 1 | | | | 1 | 1 | | 1 | | 1 | | 1 | | 14 1.1 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

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BLANK .. Not examined microscopically

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Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|----------|
| | 079 | 073 | 073 | 056 | 073 | 072 | 072 | 073 | 073 | 033 | 033 | 066 | 073 | 072 | 072 | 033 | 033 | 022 | 045 | 072 | 072 | 077 | 066 | 066 | |
| ANIMAL ID | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |
| Hepatocyte, Necrosis | | | | 2 | | | | | | | | | | | | | | | | | | | | 2 1.5 | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Fibrosis | | | | | | | | | | | | | | | | | | | 3 | | | | | 1 3.0 | |
| Polyarteritis Nodosa | | | | 1 | | | | | | | | | | | | | | | 3 | | | | | 3 1.7 | |
| Acinus, Atrophy | | | | 1 | | | | | | | | | | | | | | | 3 | | 1 | | | 3 1.7 | |
| Acinus, Hyperplasia | 2 | 1 | 4 | | 2 | | | 2 | | 2 | | | | | | | 3 | | 2 | | 2 | 2 | | 21 2.1 | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Epithelium, Hyperplasia | | | | | | | | 1 | | | | | | | | | | | | | | | | 1 1.0 | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| CARDIOVASCULAR SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cardiomyopathy | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | | | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 47 1.7 | |
| Artery, Mineral | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| ENDOCRINE SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

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| HARLAN SPRAGUE DAWLEY RATS
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300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | |
|---|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|-----|-------|--------|
| | 079 | 073 | 073 | 056 | 073 | 077 | 077 | 077 | 077 | 077 | 077 | 027 | 077 | 077 | 077 | 077 | 077 | 047 | 077 | 077 | | 066 | 066 | |
| ANIMAL ID | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Hyperplasia, Focal | 1 | 1 | 1 | 1 | 2 | | 1 | | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 1 | 32 1.6 |
| Hypertrophy, Focal | | | | 1 | | 1 | 1 | 2 | | | | 1 | | | 2 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 24 1.2 |
| Metaplasia, Osseous | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Nuclear Alteration | | | | | | | | | | | | | 1 | | | | | | | | | | | 1 1.0 |
| Vacuolization Cytoplasmic, Focal | 1 | 1 | | | | | | 1 | | | | | | | | | 1 | 1 | | | | | | 9 1.3 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Atypia Cellular | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 11 2.5 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Parathyroid Gland | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | 48 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 2 | 3 2.0 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Pars Distalis, Hyperplasia | | | | | | | 1 | 4 | | 1 | 1 | | | | 4 | | 2 | 4 | | 1 | | | | 13 2.1 |
| Pars Intermedia, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Rathke's Cleft, Cyst | | | | | | | | | | | | | | | | | | | | | | X | | 2 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| C-cell, Hyperplasia | | | | | | | | | 1 | | | | | | | | | | 2 | | | | | 3 1.3 |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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|--|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|-----|--------|---|
| | 079 | 073 | 073 | 056 | 073 | 077 | 077 | 077 | 077 | 077 | 077 | 027 | 077 | 077 | 077 | 077 | 077 | 047 | 077 | 077 | | 076 | 066 | |
| ANIMAL ID | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | | |
| Coagulating Gland Inflammation, Chronic Active | + | | | | | | | | | | | | | | | | | | | | | | 1 | |
| | 4 | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Granuloma Sperm | | | | | | | | | | | | | | | | | | | | | | | 2 4.0 | |
| Bilateral, Hypospermia | | | | | | | | | | | | | | | | 3 | | | | | 4 | 3 | 7 3.1 | |
| Bilateral, Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Bilateral, Duct, Exfoliated Germ Cell | | | | | | | | | | | | | | | | | | | | | 2 | 3 | 5 2.2 | |
| Duct, Exfoliated Germ Cell | | | | | | | | | | | | | | | | 2 | | | | | | | 1 2.0 | |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 49 | |
| Inflammation, Chronic | | | | | | | 2 | | | | | | | | | | | | | | | | 10 1.2 | |
| Inflammation, Chronic Active | 2 | | 2 | | 1 | | | | | | | | | | | | | | | | | | 8 1.5 | |
| Bilateral, Duct, Dilatation | | 2 | 2 | | | | | | | | | | | | | | | | | | | | 16 2.1 | |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Decreased Secretory Fluid | | | | | | | | | | | | | | | | | | X | | | | X | X | 8 |
| Polyarteritis Nodosa | | | | | | 1 | | | | | | | | | | | | | | | | | 1 1.0 | |
| Acinus, Dilatation | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Decreased Secretory Fluid | | | | | | | | | | | | | | X | | | | | | | | X | 7 | |
| Inflammation, Chronic Active | 3 | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Testis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Edema | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Bilateral, Edema | | | | | | | | | | 2 | | | | | | | 2 | | | | | | 2 2.0 | |
| Bilateral, Polyarteritis Nodosa | | 1 | 1 | | 1 | 2 | | | | | 2 | | | 1 | | 1 | | | 3 | | 3 | 1 | 21 1.6 | |
| Bilateral, Germinal Epithelium, Atrophy | 1 | 2 | | | 1 | 1 | | | 3 | 1 | 1 | | | 1 | | 1 | 3 | 1 | | 1 | 4 | | 21 1.8 | |
| Bilateral, Germinal Epithelium, Degeneration | | | 1 | | | | | | | | | 3 | | | | | | | | | | 4 | 7 2.6 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * TOTALS |
|---------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| HARLAN SPRAGUE DAWLEY RATS MALE | | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 2 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | | |
| 300 ppm | | 2 | 3 | 3 | 6 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 6 | 3 | 2 | 2 | 3 | 3 | 2 | 5 | 2 | 2 | 3 | 8 | 1 | 7 | |
| ANIMAL ID | | 9 | 0 | 0 | 5 | 0 | 9 | 9 | 1 | 1 | 0 | 0 | 8 | 1 | 9 | 9 | 0 | 0 | 0 | 0 | 9 | 9 | 2 | 1 | 5 | 7 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|-----|---|---|---|---|-----|
| Bilateral, Interstitial Cell, Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | | | | | |
| Interstitial Cell, Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | 1 | 2 | 1 | 6 | 1.3 |
| Rete Testis, Dilation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Seminiferous Tubule, Dilation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|---|---|----|-----|--|
| Bone Marrow | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | | | | |
| Hypercellularity | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2 | 3 | 5 | 2.8 | |
| Lymph Node, Mandibular | | | | | | | | | | | | | | | | | | | | | | | | | | 49 | | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2 | | 2 | 2.5 | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 | |
| Hyperplasia, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Lymph Node, Mesenteric | | | | | | | | | | | | | | | | | | | | | | | | | | 49 | | | | | |
| Spleen | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | | | | |
| Extramedullary Hematopoiesis | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 | 1 | 40 | 1.7 | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 | |
| Pigment | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | 2 | 44 | 1.8 | |
| Lymphoid Follicle, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | 2 | 2.5 | |
| Thymus | | | | | | | | | | | | | | | | | | | | | | | | | | 46 | | | | | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|--|
| Mammary Gland | | | | | | | | | | | | | | | | | | | | | | | | | | 49 | |
| Skin | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

M .. Missing tissue

1-4 .. Lesion qualified as:

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1) Minimal 3) Moderate

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|--|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARLAN SPRAGUE DAWLEY RATS MALE | | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 2 | 7 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 6 | 6 | |
| | 300 ppm | 2 | 3 | 3 | 6 | 3 | 2 | 2 | 3 | 3 | 3 | 6 | 3 | 2 | 2 | 3 | 3 | 2 | 5 | 2 | 2 | 3 | 8 | 1 |
| | ANIMAL ID | 9 | 0 | 0 | 5 | 0 | 9 | 9 | 1 | 1 | 0 | 8 | 1 | 9 | 9 | 0 | 0 | 9 | 0 | 9 | 2 | 1 | 5 | 7 |

* TOTALS

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|----------|--------------|
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | | | | | X | 6 | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 4 3.5 |
| Epidermis, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 2 3.0 |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemorrhage | | | | | | | | | | | | 2 | | | | | | | | | | | | | 1 2.0 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------|--------------|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | 2 | | | | | | | | | | | | | | 1 2.0 |
| Alveolus, Infiltration Cellular, Histiocyte | 1 | 1 | | | | 2 | 3 | | | 2 | | 1 | 1 | | 2 | 2 | | 1 | | 2 | 2 | 3 | | 24 1.6 | |
| Alveolus, Inflammation, Chronic | 1 | 1 | | | | | | 1 | | | | | | | | | | | | | | | | | 6 1.0 |
| Alveolus, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | X | | | | 2 |
| Inflammation, Suppurative | | | | 1 | | 1 | 1 | | | | | | | | | | | | | 2 | | | | | 6 1.2 |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Submucosa, Granuloma | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Submucosa, Inflammation, Chronic | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue

M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically

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| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|---|
| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HARLAN SPRAGUE DAWLEY RATS | | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 2 | 7 | 7 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 6 | 6 | 6 |
| MALE | | 2 | 3 | 3 | 6 | 3 | 2 | 2 | 3 | 3 | 3 | 6 | 3 | 2 | 2 | 3 | 3 | 2 | 5 | 2 | 2 | 3 | 8 | 1 | 1 |
| 300 ppm | | 9 | 0 | 0 | 5 | 0 | 9 | 9 | 1 | 1 | 0 | 8 | 1 | 9 | 9 | 0 | 0 | 9 | 0 | 9 | 2 | 1 | 5 | 7 | 7 |
| ANIMAL ID | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|------------|------------|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Nephropathy, Chronic Progressive | 2 | 3 | 4 | 2 | 3 | 3 | 2 | 4 | 2 | 3 | 2 | 1 | 3 | 4 | 2 | 2 | 2 | 1 | 3 | 2 | 4 | 1 | 4 | 4 | 48 | 2.7 | |
| Renal Tubule, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Lumen, Calculus Micro Observation Only | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate
CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|--|-----------|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | | 5 | 7 | 7 | 7 | 6 | 7 | 5 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| HARLAN SPRAGUE DAWLEY RATS
MALE
1000 ppm | | 1 | 3 | 3 | 3 | 5 | 3 | 8 | 0 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 1 | 6 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | |
| | | 2 | 0 | 1 | 1 | 2 | 1 | 5 | 9 | 1 | 1 | 9 | 9 | 0 | 0 | 1 | 6 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | |
| | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 2 | 2 | 3 | 4 | 5 | |
| | | males
(cont...) | | | | | | | | | | | | | | | | | | | | | | | | | | | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Esophagus | + | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Cecum
Lymphoid Tissue, Hyperplasia | + | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Colon
Parasite Metazoan | + | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Rectum
Parasite Metazoan | +
X X X X X X X X | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Duodenum | + | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Ileum | + | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Jejunum
Necrosis | +
1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Liver
Basophilic Focus | +
X X X X X X X X X X X | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clear Cell Focus | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatty Change | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatty Change, Focal | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatodiaphragmatic Nodule | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyarteritis Nodosa | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
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Experiment Number: 10987 - 01

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Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS MALE | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males (cont...) |
|-------------|---------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|-----------------|
| | 05 | 07 | 07 | 07 | 06 | 07 | 05 | 06 | 07 | 07 | 07 | 07 | 07 | 07 | 06 | 06 | 06 | 06 | 07 | 07 | 07 | 07 | 07 | 07 | | |
| 1000 ppm | 1 | 3 | 3 | 3 | 5 | 3 | 8 | 0 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 1 | 6 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | |
| | 2 | 0 | 1 | 1 | 2 | 1 | 5 | 9 | 1 | 1 | 9 | 9 | 0 | 0 | 1 | 6 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | |
| | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | 0011000 | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bile Duct, Hyperplasia | 1 | | | 1 | | 1 | 1 | | | | 1 | | | | | | | 1 | | | | | | 1 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Basophilic Focus | | X | | | | | | | | | | | | | | | | | | | | | | |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | 2 | | | 2 | | 3 | | | |
| Acinus, Atrophy | | | | | 2 | | | | | | | | | | | | | | | | | | | |
| Acinus, Hyperplasia | | | 2 | 2 | | | 1 | | | | 4 | | 1 | | 1 | | | | 3 | | | | 2 | 4 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | 2 | | | | | | | | |
| Mineral Ulcer | | | | | | | | | | | | | | | 3 | | | | | | | | | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mineral | | | | | 1 | | | | | | | | | | 3 | | | | | | | | | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mineral | | | | | | | | | | | | | | | 3 | | | | | 2 | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cardiomyopathy | 2 | 1 | 1 | 2 | 2 | 2 | | | 2 | 2 | 2 | | 1 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 1 |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | |
| Artery, Mineral | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrium, Thrombus | | | | | | | | | | | | | | | | | | | 2 | | | | | |

ENDOCRINE SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue

M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

| HARLAN SPRAGUE DAWLEY RATS
MALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 5 | 7 | 7 | 7 | 6 | 7 | 5 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 1 | 3 | 3 | 3 | 5 | 3 | 8 | 0 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 1 | 6 | 3 | 3 | 3 | 3 | 3 | 2 | |
| | 2 | 0 | 1 | 1 | 2 | 1 | 5 | 9 | 1 | 1 | 9 | 9 | 0 | 0 | 1 | 6 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 9 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Degeneration, Cystic | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Hyperplasia, Focal | | | | 1 | | 1 | | 2 | 2 | 2 | 1 | 1 | | | | | 2 | 2 | 2 | | 1 | 1 | 1 | | |
| Hypertrophy, Focal | | 1 | | 1 | | | | 1 | 1 | | 1 | 1 | | | | | 2 | | | 1 | 1 | 1 | | | |
| Vacuolization Cytoplasmic, Focal | 1 | | | | | | | | | | | | | 1 | | | | 1 | | | | | | 2 | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia | | | | | | | | | | | | 4 | | 3 | | | | | | | | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia | | | | | | | | | | | | | | 2 | | | | | | | | | | 2 | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia | | | | | | | | | | | | | | | | 2 | | | | | | | | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Inflammation, Pyogranulomatous, Focal | | | | | | | | | | | | | | | | | | | | | 3 | | | | |
| Pars Distalis, Cyst Multilocular | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pars Distalis, Hyperplasia | | 2 | | | | | | | | | 3 | | 2 | | 2 | | | | | | | 2 | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| C-cell, Hyperplasia | | | | | | | | | 2 | | | | | | | | 2 | | | | | | | 2 | |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | | | | | | | 1 | | | | | | | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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Experiment Number: 10987 - 01

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 0
5
1
2 | 0
7
3
0 | 0
7
3
1 | 0
7
3
1 | 0
6
5
2 | 0
7
3
1 | 0
5
8
5 | 0
6
0
9 | 0
7
3
1 | 0
7
3
1 | 0
7
2
9 | 0
7
2
9 | 0
7
3
0 | 0
6
3
1 | 0
6
1
6 | 0
6
6
5 | 0
6
3
1 | 0
7
3
0 | 0
7
3
0 | 0
7
3
0 | 0
7
3
0 | 0
7
3
0 | 0
7
3
0 | 0
7
3
0 | |
| ANIMAL ID | 0
0
1
0
1 | 0
0
1
0
2 | 0
0
1
0
3 | 0
0
1
0
4 | 0
0
1
0
5 | 0
0
1
0
6 | 0
0
1
0
7 | 0
0
1
0
8 | 0
0
1
0
9 | 0
0
1
0
0 | 0
0
1
0
1 | 0
0
1
0
2 | 0
0
1
0
3 | 0
0
1
0
4 | 0
0
1
0
5 | 0
0
1
0
6 | 0
0
1
0
7 | 0
0
1
0
8 | 0
0
1
0
9 | 0
0
2
0
0 | 0
0
1
2
1 | 0
0
1
2
2 | 0
0
1
2
3 | 0
0
1
2
4 | 0
0
1
2
5 |
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hypospermia | | | | | | | | | | | | 4 | | | | | | | | | | | | | |
| Bilateral, Hypospermia | | | | | | | 2 | | | | | | | 3 | | | | | | | | | | | |
| Bilateral, Duct, Exfoliated Germ Cell | | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| Bilateral, Interstitium, Inflammation, Chronic Active | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| Duct, Exfoliated Germ Cell | | | | | | | | | | | | | | 4 | | | | | | | | | | | |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic | | | | | | | | | | | | | | | 2 | | | 2 | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | 2 | | | | | |
| Bilateral, Duct, Dilatation | | | | | | | | | | | | | | 2 | | | 4 | | 2 | | | | | | |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Decreased Secretory Fluid Epithelium, Ventral, Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Decreased Secretory Fluid | | | | | | | X | | | | | X | | X | | | | | | | | | | | |
| Testis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Edema | | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bilateral, Polyarteritis Nodosa | | | | 3 | 1 | 3 | | | | | | | | 3 | | | | 2 | 1 | | 2 | 1 | | | |
| Bilateral, Germinal Epithelium, Atrophy | | | | | | | | | 3 | | | | 4 | | | | | | 1 | | 1 | | | | |
| Bilateral, Germinal Epithelium, Degeneration | | | | 1 | | 2 | 3 | | | | | | | 1 | 4 | | | 2 | | | | | | | |
| Bilateral, Interstitial Cell, Hyperplasia, Diffuse Germinal Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Interstitial Cell, Hyperplasia, Focal | | | 1 | | | | | | | | | | | 1 | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------------|
| HARLAN SPRAGUE DAWLEY RATS
MALE
1000 ppm | DAY ON TEST | 0
5 | 0
7 | 0
7 | 0
7 | 0
6 | 0
7 | 0
5 | 0
6 | 0
7 | 0
7 | 0
7 | 0
7 | 0
7 | 0
6 | 0
6 | 0
6 | 0
6 | 0
7 | 0
7 | 0
7 | 0
7 | 0
7 | 0
7 | 0
7 | males
(cont...) |
| | ANIMAL ID | 1
2 | 3
0 | 3
1 | 3
1 | 5
2 | 3
1 | 8
5 | 0
9 | 3
1 | 3
1 | 2
9 | 2
9 | 3
0 | 3
0 | 2
1 | 3
6 | 1
5 | 6
1 | 3
0 | 3
0 | 3
0 | 3
0 | 3
0 | 2
9 | |

Cyst Epithelial Inclusion X
 Fibrosis 2
 Eyelid, Cyst X
 Sebaceous Gland, Cyst

MUSCULOSKELETAL SYSTEM

Bone +

NERVOUS SYSTEM

Brain +
 Hemorrhage 3
 Cerebrum, Inflammation, Suppurative 3
 Peripheral Nerve + +
 Trigeminal, Degeneration 2
 Spinal Cord +
 Hemorrhage 3

RESPIRATORY SYSTEM

Lung +
 Hemorrhage
 Mineral 1 2
 Alveolar Epithelium, Hyperplasia
 Alveolus, Infiltration Cellular, Histiocyte 1 1 2 2 2 1 1 1 1 1 1 1 1
 Alveolus, Inflammation, Chronic 1 1 1 1 1 1 1
 Alveolus, Inflammation, Chronic Active 1

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
 X .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
 I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males
(cont...) |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|--------------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 5 | 7 | 7 | 7 | 6 | 7 | 5 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 1 | 3 | 3 | 3 | 5 | 3 | 8 | 0 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 1 | 6 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | |
| | 2 | 0 | 1 | 1 | 2 | 1 | 5 | 9 | 1 | 1 | 9 | 9 | 0 | 0 | 1 | 6 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Globet Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cornea, Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Nephropathy, Chronic Progressive | 2 | 2 | 3 | 4 | 4 | 4 | 1 | 3 | 3 | 1 | 2 | | 2 | 4 | 4 | 3 | 4 | 4 | | 2 | 4 | 3 | 1 | 2 | 3 | |
| Pelvis, Dilation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Urothelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
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| HARLAN SPRAGUE DAWLEY RATS
MALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| | 079 | 0731 | 0731 | 0729 | 0729 | 0730 | 0724 | 0776 | 0770 | 0764 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | |
| ANIMAL ID | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 |
| | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum
Lymphoid Tissue, Hyperplasia | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| | | | 2 | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Intestine Large, Colon
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | X | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Intestine Large, Rectum
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | | | | X | | | | | | | | | | X | X | | | | | | | | | 8 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Jejunum
Necrosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Clear Cell Focus | | | X | X | X | X | | | | | | | X | X | | X | X | X | | | | | X | | | 23 |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Fatty Change | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Fatty Change, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | X | | | | 3 |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Polyarteritis Nodosa | | | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | 3 1.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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A .. Autolysis precludes evaluation

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|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 2 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | |
| ANIMAL ID | 2 | 3 | 3 | 2 | 2 | 3 | 8 | 0 | 3 | 4 | 2 | 1 | 0 | 3 | 3 | 6 | 8 | 2 | 2 | 2 | 9 | 2 | 4 | 2 | 2 |
| | 9 | 1 | 1 | 9 | 9 | 0 | 4 | 6 | 0 | 4 | 7 | 1 | 9 | 0 | 0 | 3 | 5 | 9 | 9 | 9 | 1 | 2 | 6 | 9 | 9 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bile Duct, Hyperplasia | 1 | | | | | 1 | | | | 1 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyarteritis Nodosa | | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| Acinus, Atrophy | | | | | | | | | | | | | | | | | | 2 | | | | | | | |
| Acinus, Hyperplasia | 2 | | 1 | 4 | 1 | | | | | 2 | | | 1 | | | | | | | | | | 2 | 2 | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cardiomyopathy | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 3 | | 4 | 1 | 2 | 2 | 2 | 1 | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | |
| Artery, Mineral | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrium, Thrombus | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

ENDOCRINE SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue

M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

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|--|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|--------|
| | 079 | 073 | 071 | 072 | 077 | 075 | 070 | 074 | 076 | 078 | 064 | 077 | 076 | 077 | 077 | 077 | 066 | 066 | 077 | 072 | 072 | 069 | 067 | 067 | | 077 |
| ANIMAL ID | 001 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Degeneration, Cystic | | | | | 1 | | | | | | | | | | | | | | | | | | | | 2 1.0 | |
| Hyperplasia, Focal | 1 | | 1 | 2 | 1 | | 1 | | | | | 2 | | | | 1 | 1 | | 2 | | 1 | 2 | 2 | 1 | 1 | 27 1.4 |
| Hypertrophy, Focal | 1 | | | | | 2 | | | | 2 | 1 | 1 | | | 1 | 2 | 1 | | 1 | | 1 | 1 | | | 1 | 23 1.2 |
| Vacuolization Cytoplasmic, Focal | 1 | | | | | | | | | | | 1 | 1 | | | | | | | | 1 | | 1 | | | 8 1.0 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | 3 | | 2 | | 2 | | | | | 4 | | | | | | 2 | | | 2 | | | | | 1 | | 9 2.6 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Parathyroid Gland | M | + | + | + | + | + | + | + | M | + | M | + | M | + | + | + | + | M | M | M | + | + | + | + | 42 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 2 | | 2 | 3 2.0 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Pyogranulomatous, Focal | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Pars Distalis, Cyst Multilocular | | | | | | | | | | | | | | | | | | | | | | X | | | 1 | 1 1.7 |
| Pars Distalis, Hyperplasia | | 3 | | 2 | 1 | | | | | | | | 1 | | 1 | | | | | 1 | 1 | | | 1 | 13 1.7 | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| C-cell, Hyperplasia | | 2 | | | | | | | | | | | | | | | | | | | | | | | 5 1.8 | |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 1.0 | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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|---|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----|-----|-----|-----|-----|
| | 07
29 | 07
31 | 07
31 | 07
29 | 07
29 | 07
30 | 07
04 | 07
06 | 07
06 | 07
04 | 07
07 | 07
07 | 07
07 | 07
07 | 07
07 | 07
03 | 07
03 | 07
06 | 07
08 | 07
02 | | 07
02 | 07
09 | 07
09 | 07
01 | 07
02 | 07
04 | 07
06 | 07
09 | 07
02 | 07
04 | 07
04 | 07
05 | | | | | |
| ANIMAL ID | 001126 | 001127 | 001128 | 001129 | 001130 | 001131 | 001132 | 001133 | 001134 | 001135 | 001136 | 001137 | 001138 | 001139 | 001140 | 001141 | 001142 | 001143 | 001144 | 001145 | 001146 | 001147 | 001148 | 001149 | 001150 | 001151 | 001152 | 001153 | 001154 | 001155 | 001156 | 001157 | 001158 | | | | | |
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | | |
| Hypospermia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | | | |
| Bilateral, Hypospermia | 2 | | | | | | | | | | | | 4 | | 2 | | | | | | | | | | | 4 | 3 | 2 | | | 4 | | | 9 | 2.9 | | | |
| Bilateral, Duct, Exfoliated Germ Cell | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | 4 | 2.5 | | | |
| Bilateral, Interstitium, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | |
| Duct, Exfoliated Germ Cell | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.5 | | |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Bilateral, Duct, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2.7 | |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Decreased Secretory Fluid | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | | |
| Epithelium, Ventral, Hyperplasia, Focal | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Decreased Secretory Fluid | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | |
| Testis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Edema | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.5 |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Bilateral, Polyarteritis Nodosa | 1 | | | | | 2 | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | 2.0 |
| Bilateral, Germinal Epithelium, Atrophy | | | | | | | 1 | 1 | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | 10 | 2.6 |
| Bilateral, Germinal Epithelium, Degeneration | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 | 2.2 |
| Bilateral, Interstitial Cell, Hyperplasia, Diffuse | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Germinal Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Interstitial Cell, Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | 1.2 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 2 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 6 | 7 | 6 | | 7 |
| | 2 | 3 | 3 | 2 | 2 | 3 | 8 | 0 | 3 | 4 | 2 | 1 | 0 | 3 | 3 | 6 | 8 | 2 | 2 | 2 | 9 | 2 | 4 | 2 | 2 |
| | 9 | 1 | 1 | 9 | 9 | 0 | 4 | 6 | 0 | 4 | 7 | 1 | 9 | 0 | 0 | 3 | 5 | 9 | 9 | 9 | 1 | 2 | 6 | 2 | 9 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|-----|
| Cyst Epithelial Inclusion | X | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Eyelid, Cyst | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Sebaceous Gland, Cyst | X | | | | | | | | | | | | | | | | | | | | | | | 1 | |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|----|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Cerebrum, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Trigeminal, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|-----|----|-----|---|---|---|----|-----|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 | 3.0 | | | | | | | |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 | | | | | | | |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 | | | | | | | |
| Alveolus, Infiltration Cellular, Histiocyte | 2 | | | | | | | | | | | | | | | | | | | | | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 3 | 1 | 24 | 1.4 |
| Alveolus, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 2 | 1 | 10 | 1.1 | | | | | |
| Alveolus, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1.0 | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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1) Minimal 3) Moderate

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Experiment Number: 10987 - 01

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Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|-----------------------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|----------|--|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| HARLAN SPRAGUE DAWLEY RATS | 7 | 7 | 7 | 7 | 7 | 7 | 2 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | | |
| MALE | 2 | 3 | 3 | 2 | 2 | 3 | 8 | 0 | 3 | 4 | 2 | 1 | 0 | 3 | 3 | 6 | 8 | 2 | 2 | 9 | 2 | 4 | 2 | 2 | 2 | | |
| 1000 ppm | 9 | 1 | 1 | 9 | 9 | 0 | 4 | 6 | 0 | 4 | 7 | 1 | 9 | 0 | 0 | 3 | 5 | 9 | 9 | 1 | 2 | 6 | 9 | 9 | 9 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 6 | 6 | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | | |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cornea, Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Nephropathy, Chronic Progressive | 4 | 2 | 3 | 3 | 3 | 1 | 1 | 4 | 2 | 4 | 2 | 4 | 1 | 2 | 3 | 4 | 2 | 3 | 3 | 2 | 4 | 4 | 4 | 2 | 4 | 48 2.8 | |
| Pelvis, Dilation | 2 | | | | | | | | | | | | | | 3 | | | | | | | | | | 2 2.5 | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Urothelium, Hyperplasia | | 4 | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

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CAS Number: 84-74-2

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Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|--------------------|
| HARLAN SPRAGUE DAWLEY RATS
MALE
3000 ppm | DAY ON TEST | 07 | 07 | 05 | 07 | 07 | 07 | 07 | 05 | 07 | 07 | 07 | 07 | 01 | 07 | 07 | 06 | 07 | 07 | 02 | 06 | 07 | 07 | 07 | 07 | 07 | 07 | males
(cont...) |
| | ANIMAL ID | 00151 | 00152 | 00153 | 00154 | 00155 | 00156 | 00157 | 00158 | 00159 | 00160 | 00161 | 00162 | 00163 | 00164 | 00165 | 00166 | 00167 | 00168 | 00169 | 00170 | 00171 | 00172 | 00173 | 00174 | 00175 | | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cholangiofibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clear Cell Focus | X | X | | | X | | X | | X | | X | X | | X | X | | X | X | X | X | X | X | X | X | X | X |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatty Change, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Periportal, Fibrosis, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
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Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

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Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

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First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| | | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) | | |
|--|-----------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------|---|---|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| | | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 1 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | | 7 | 7 |
| HARLAN SPRAGUE DAWLEY RATS
MALE | 3000 ppm | 3 | 3 | 6 | 1 | 2 | 2 | 3 | 1 | 2 | 1 | 3 | 3 | 4 | 3 | 2 | 9 | 2 | 2 | 2 | 5 | 3 | 3 | 2 | 2 | 3 | 0 | |
| | | 0 | 0 | 0 | 2 | 8 | 9 | 9 | 1 | 9 | 9 | 5 | 0 | 0 | 1 | 0 | 9 | 9 | 9 | 9 | 4 | 0 | 0 | 9 | 9 | 0 | 0 | |
| | | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Hyperplasia | 3 | | | | | | 1 | | | | 2 | | 4 | | | | | | | 1 | 4 | 2 | | 2 | | | 1 | 1 | |
| Duct, Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Erosion | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Glands, Ectasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cardiomyopathy | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | | | 3 | 3 | 1 | | 1 | 2 | | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | | 2 | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Artery, Mineral | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

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CAS Number: 84-74-2

First Dose M/F: 08/30/10 / 08/31/10

Species/Strain: RATS/HSD

Lab: BAT

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARLAN SPRAGUE DAWLEY RATS MALE 3000 ppm | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 1 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| ANIMAL ID | 3 | 3 | 6 | 1 | 2 | 2 | 3 | 1 | 2 | 1 | 3 | 3 | 4 | 3 | 2 | 9 | 2 | 2 | 2 | 5 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 0 |
| | 0 | 0 | 0 | 2 | 8 | 9 | 1 | 9 | 9 | 5 | 0 | 0 | 1 | 0 | 9 | 9 | 9 | 9 | 4 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

males (cont...)

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Degeneration, Cystic | | 1 | | | | | | | | | | | | 2 | | | | | 1 | | | | | | | | | |
| Hyperplasia, Focal | 2 | | 1 | | | | | | | 2 | 2 | | | 1 | | 1 | | | | | 2 | | | | | | | |
| Hypertrophy, Focal | | 1 | | | 2 | 1 | | | | 1 | 1 | | | 1 | | 1 | 1 | 2 | 1 | 1 | 2 | | | | | | 1 | |
| Metaplasia, Osseous | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic, Focal | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | 2 | 3 | 2 | | | | | | 2 | | | | | | | | 2 | 1 | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland | + | + | M | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pars Distalis, Hyperplasia | 2 | 4 | 1 | | | | | | | 2 | | | | | | | | 2 | | 2 | 1 | 1 | 1 | 2 | | | | |
| Pars Intermedia, Hyperplasia | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| C-cell, Hyperplasia | | 1 | | | | 1 | | | | | | 2 | | | | | | | 1 | 2 | | | | | | | 2 | |

GENERAL BODY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|
| HARLAN SPRAGUE DAWLEY RATS
MALE
3000 ppm | DAY ON TEST | 0730 | 0730 | 0562 | 0778 | 0779 | 0779 | 0771 | 0579 | 0779 | 0775 | 0770 | 0770 | 0771 | 0773 | 0774 | 0773 | 0772 | 0772 | 0772 | 0674 | 0770 | 0773 | 0772 | 0772 | 0773 | 0773 | 0770 | males
(cont...) |
| | ANIMAL ID | 00151 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hypospermia | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Bilateral, Hypospermia | 2 | | | | | | | | 4 | | | | | | | | | | | 4 | | | | | | | | |
| Bilateral, Polyarteritis Nodosa | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | |
| Bilateral, Duct, Exfoliated Germ Cell | | | | | | | | | | 2 | | | | | | | | | | | 1 | | | | | | | |
| Duct, Exfoliated Germ Cell | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia, Squamous | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bilateral, Polyarteritis Nodosa | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| Bilateral, Duct, Dilation | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Duct, Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Decreased Secretory Fluid | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Ventral, Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Decreased Secretory Fluid | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Testis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Edema | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bilateral, Polyarteritis Nodosa | 1 | 1 | | 2 | | | | | 3 | | | | | 2 | | | | | | | | | | | | | | 1 |
| Bilateral, Germinal Epithelium, Atrophy | 3 | | | 4 | | | | | 4 | | | | 1 | | | | | | | | | | | | 4 | | | 3 |
| Bilateral, Germinal Epithelium, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Germinal Epithelium, Atrophy | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Interstitial Cell, Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
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Experiment Number: 10987 - 01

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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARLAN SPRAGUE DAWLEY RATS
MALE
3000 ppm | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 1 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 3 | 3 | 6 | 1 | 2 | 2 | 3 | 1 | 2 | 1 | 3 | 3 | 4 | 3 | 2 | 9 | 2 | 2 | 2 | 5 | 3 | 3 | 2 | 2 | 2 | 3 | 0 | 3 | 0 |
| | 0 | 0 | 0 | 2 | 8 | 9 | 9 | 1 | 9 | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

males
(cont...)

Rete Testis, Dilation
Seminiferous Tubule, Dysgenesis
3

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hypercellularity | | | | 1 | | | | | | 1 | | | | | 3 | | | | 3 | | 2 | | | | | | | | | | |
| Lymph Node | | | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinal, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Degeneration, Cystic | 1 | | | | | | 1 | 2 | | | | 2 | | | | | | | | | 2 | | 2 | | | | | | | | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Extramedullary Hematopoiesis | | | 2 | | | 1 | 1 | 2 | | | 1 | 1 | 2 | 2 | | | 2 | 2 | | 1 | 2 | 2 | 3 | | | 2 | 1 | | | 2 | |
| Hemorrhage | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pigment | 4 | 2 | | | 1 | 4 | 1 | 1 | 3 | 2 | 3 | 2 | 1 | 3 | 3 | 2 | 4 | 2 | 3 | 2 | | | 3 | 3 | 3 | 2 | 3 | | | | |
| Lymphoid Follicle, Atrophy | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
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Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ANIMAL ID | males (cont...) |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|-----------------|
| | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 1 | 7 | 7 | 6 | 7 | 7 | 2 | 2 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| HARLAN SPRAGUE DAWLEY RATS MALE | 3 | 3 | 6 | 1 | 2 | 2 | 3 | 1 | 2 | 1 | 3 | 3 | 4 | 3 | 2 | 9 | 2 | 2 | 2 | 5 | 3 | 3 | 2 | 2 | 2 | 3 | 0 | | | | |
| 3000 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| Cyst Epithelial Inclusion | X | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Subcutaneous Tissue, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous Tissue, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Femur, Osteopetrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Hemorrhage | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Granuloma | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

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CAS Number: 84-74-2

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Species/Strain: RATS/HSD

Lab: BAT

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARLAN SPRAGUE DAWLEY RATS MALE | | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 1 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 3000 ppm | | 3 | 3 | 6 | 1 | 2 | 2 | 3 | 1 | 2 | 1 | 3 | 3 | 4 | 3 | 2 | 9 | 2 | 2 | 2 | 2 | 5 | 3 | 3 | 2 |
| ANIMAL ID | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | | | | | | | | | | | | |
| Alveolar Epithelium, Hyperplasia, Focal Alveolus, Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| Alveolus, Inflammation, Chronic | | | | | | | | 1 | | | | | | 1 | | | | | | | | | | | |
| Alveolus, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | |
| Nose | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Foreign Body | | X | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | 1 | | | | | | | | 1 | 1 | | | | | | | | | | 1 | | | | 1 |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | |
| Squamous Epithelium, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | | | | | 4 | | | | | | | | | | | | | | | | | | | | |
| Phthisis Bulbi | | | | | | | | | | | | | | X | | | | | | | | | | | |
| Anterior Chamber, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cornea, Erosion, Multifocal | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cornea, Inflammation, Acute | | | | | 3 | | | | | | | | | | | | | | | | | | | | |
| Cornea, Ulcer, Focal | | | | | 3 | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Karyomegaly | | | | | | | | | | | | | | | 1 | | | | | | | | | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|--------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 10987 - 01
Test Type: Chronic PN
Route: DOSED FEED
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Dibutyl Phthalate
CAS Number: 84-74-2

Date Report Requested: 08/20/2019
Time Report Requested: 12:03:41
First Dose M/F: 08/30/10 / 08/31/10
Lab: BAT

| DAY ON TEST
HARLAN SPRAGUE DAWLEY RATS
MALE
3000 ppm | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) | |
|--|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|------|
| | 0730 | 0733 | 0736 | 0731 | 0732 | 0733 | 0731 | 0739 | 0735 | 0737 | 0737 | 0737 | 0731 | 0733 | 0734 | 0733 | 0732 | 0739 | 0739 | 0732 | 0732 | 0735 | 0733 | 0733 | | 0732 |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy, Chronic Progressive | 4 | 3 | 3 | 4 | 3 | 2 | 4 | 1 | 3 | 4 | 2 | 2 | 1 | 3 | 1 | 4 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | |
| Bilateral, Pelvis, Dilation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Renal Tubule, Pigment | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pelvis, Dilation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal Tubule, Cyst | | | | 1 | 1 | | | | | | 2 | | | | | | | | | | | | | X | | |
| Ureter | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urothelium, Inflammation, Chronic Active | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
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Experiment Number: 10987 - 01

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CAS Number: 84-74-2

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| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|--|
| HARLAN SPRAGUE DAWLEY RATS
MALE
3000 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 5 | 7 | 6 | 7 | 7 | 4 | 7 | 6 | 6 | |
| | 3 | 3 | 3 | 6 | 3 | 8 | 2 | 6 | 2 | 2 | 2 | 3 | 3 | 3 | 8 | 9 | 3 | 2 | 3 | 3 | 1 | 2 | 0 | 9 | |
| | 0 | 1 | 1 | 5 | 1 | 0 | 9 | 6 | 9 | 9 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 9 | 9 | 1 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | | |
| | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 0 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Intestine Large, Colon
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | + | + | + | + | + | + | + | + | 50 | 1 | |
| Intestine Large, Rectum
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | + | + | X | + | + | 50 | 4 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | 49 | |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Basophilic Focus | | | | | | | | | | X | | | | | X | | | | | | | | | | 3 | |
| Cholangiofibrosis | | | | | | | | | | | | | | | 3 | | | | | | | | | | 1 | 3.0 |
| Clear Cell Focus | X | X | X | X | X | | X | | X | X | | X | X | X | X | | | X | | X | X | | | | 32 | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Fatty Change, Focal | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Mixed Cell Focus | | | X | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |
| Bile Duct, Hyperplasia | | 1 | | | | | | | | | | | | | 1 | | | | | | | | | | 9 | 1.0 |
| Periportal, Fibrosis, Focal | | | | | | | | | | | | | | | 1 | | | | | | | | | | 1 | 1.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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BLANK .. Not examined microscopically

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Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

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First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
3000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | | |
| | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 5 | 7 | 6 | 7 | 4 | | 7 | 6 | 6 |
| ANIMAL ID | 3 | 3 | 3 | 6 | 3 | 8 | 2 | 6 | 2 | 2 | 2 | 3 | 3 | 3 | 8 | 9 | 3 | 2 | 3 | 3 | 1 | 2 | 0 | 9 |
| | 0 | 1 | 1 | 5 | 1 | 0 | 9 | 6 | 9 | 9 | 9 | 1 | 1 | 0 | 0 | 2 | 1 | 5 | 0 | 0 | 4 | 9 | 9 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 0 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Acinus, Atrophy | | | | 3 | | | | | | | 1 | | 2 | | | | | | | | | | | 3 2.0 |
| Acinus, Hyperplasia | | 1 | 4 | | 1 | | 2 | 1 | 2 | 2 | 2 | 2 | | 3 | | 2 | | 1 | 2 | | | | | 23 2.0 |
| Duct, Inflammation, Acute | | | | | | | | | | | | | | 1 | | | | | | | | | | 1 1.0 |
| Salivary Glands | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Mineral | | | | | | | | | | | | | | | | 2 | | | | | | | | 1 2.0 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Ulcer | | | | 4 | | | | | | | | | | | | | | | | | 3 | | | 3 3.0 |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Erosion | | | | | | | | | | 1 | | | | | | | | | | | | | | 1 1.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Mineral | | | | 2 | | | | | | | | | | 1 | 1 | 3 | 1 | | | | | | | 5 1.6 |
| Glands, Ectasia | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Mineral | | | | | | | | | | | | | | | 3 | 1 | | | | | | | | 2 2.0 |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cardiomyopathy | 1 | 2 | 2 | | 1 | 1 | 2 | 3 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 3 | 1 | 1 | 1 | 2 | 45 1.6 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 1.0 |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Artery, Mineral | | | | 2 | | | | | | | | | | | | | | | | | | | | 1 2.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS MALE | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|-------------|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|---|---|--|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | | | |
| 7 | 7 | 7 | 5 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 5 | 7 | 6 | 7 | 7 | 4 | 7 | 6 | 6 | |
| 3 | 3 | 3 | 6 | 3 | 8 | 2 | 6 | 2 | 2 | 2 | 3 | 3 | 3 | 8 | 9 | 3 | 2 | 3 | 3 | 1 | 2 | 0 | 9 | | |
| 0 | 1 | 1 | 5 | 1 | 0 | 9 | 6 | 9 | 9 | 9 | 1 | 1 | 0 | 0 | 9 | 2 | 1 | 5 | 0 | 0 | 4 | 9 | 1 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | | |
| 6 | 7 | 7 | 8 | 9 | 0 | 1 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|-----|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1.3 | |
| Hyperplasia, Focal | | | 2 | | 1 | | 1 | | 2 | | | | | | | 2 | 1 | 1 | | | | | | | 14 | 1.5 | |
| Hypertrophy, Focal | 1 | 1 | 2 | | | | | | | 1 | 2 | 1 | | | | | 2 | | | | 2 | | 1 | | 23 | 1.3 | |
| Metaplasia, Osseous | | | | | | | | | 3 | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | 2 | | | | | | | | | | 1 | 2.0 | |
| Vacuolization Cytoplasmic, Focal | | | | 1 | | | | | | | | | | | | | | | | | | 1 | | | 3 | 1.0 | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Hyperplasia | | | | | 1 | | | | | | | | | | | | | | | | | | | | | 7 | 1.9 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Parathyroid Gland | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | | |
| Hyperplasia | | | | | | | | | | | | | | | 2 | | | | | | | | | | | 1 | 2.0 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Pars Distalis, Hyperplasia | 1 | 1 | | | | | 2 | 1 | | | | 3 | | | | 1 | | 1 | | | 1 | | | | | 18 | 1.6 |
| Pars Intermedia, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| C-cell, Hyperplasia | | | 3 | | | | 3 | | | | | | | 1 | | | | | | | 1 | | | | | 10 | 1.7 |

GENERAL BODY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
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First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|--|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARLAN SPRAGUE DAWLEY RATS MALE | 3000 ppm | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 5 | 7 | 6 | 7 | 7 | 4 | 7 | 6 | 6 | |
| | | 3 | 3 | 3 | 6 | 3 | 8 | 2 | 6 | 2 | 2 | 2 | 3 | 3 | 3 | 8 | 9 | 3 | 2 | 3 | 3 | 1 | 2 | 0 | 9 | |
| | | 0 | 1 | 1 | 5 | 1 | 0 | 9 | 6 | 9 | 9 | 9 | 1 | 1 | 0 | 0 | 2 | 1 | 5 | 0 | 0 | 4 | 9 | 9 | 1 | |
| ANIMAL ID | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | | |
| | | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 0 | |
| * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | | |

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|-------|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hypospermia | | | | | 4 | | | | | | | | | | 4 | | | | | | 4 | | | | 5 3.4 |
| Bilateral, Hypospermia | | | | 2 | | | | | | | | | | | | | | | | | | | | | 4 3.0 |
| Bilateral, Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Bilateral, Duct, Exfoliated Germ Cell | | | | 3 | | | | | | | | | | 4 | | | | | | | 3 | | | | 5 2.6 |
| Duct, Exfoliated Germ Cell | | | | | | | | | | | | | | | 1 | | | | | | | | | | 2 1.0 |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | 49 |
| Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Bilateral, Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Bilateral, Duct, Dilation | | | | | | | | | | | | | | | | | | | | | | 1 | | | 2 2.0 |
| Duct, Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | 2 | | | 1 2.0 |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Decreased Secretory Fluid | | | | | | | | | | | | | | | | | | | | | X | X | | | 5 |
| Epithelium, Ventral, Hyperplasia, Focal | | | | | | | | | | | 3 | | | | | | | | | | | | | | 1 3.0 |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Decreased Secretory Fluid | | | | | | | | | | | | | | | | | | | | | X | X | | | 6 |
| Testis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Edema | | | | | | | | | | | | | | | | | 3 | | | | | | | | 2 3.0 |
| Bilateral, Polyarteritis Nodosa | 1 | | | | | | | | | | | | 2 | | | 4 | | | | 3 | | | | 11 2.0 | |
| Bilateral, Germinal Epithelium, Atrophy | | | | | | | | | | | | | | | | 4 | 2 | | | | 3 | | | 9 3.1 | |
| Bilateral, Germinal Epithelium, Degeneration | | | | | | 3 | | | | | | | | | | | | | | 3 | 2 | | 1 | 7 2.0 | |
| Germinal Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Interstitial Cell, Hyperplasia, Focal | | | | | | | | | | | 3 | | | | 1 | | | | | | | | | 3 1.7 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
3000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|--|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 07
30 | 07
31 | 07
31 | 05
65 | 07
31 | 06
70 | 07
69 | 06
76 | 07
76 | 07
79 | 07
79 | 07
79 | 07
79 | 07
79 | 07
79 | 07
79 | 05
89 | 05
92 | 07
93 | 06
95 | 07
95 | 07
95 | 04
99 | 07
99 | | 06
99 |
| ANIMAL ID | 001176 | 001177 | 001178 | 001179 | 001180 | 001181 | 001182 | 001183 | 001184 | 001185 | 001186 | 001187 | 001188 | 001189 | 001190 | 001191 | 001192 | 001193 | 001194 | 001195 | 001196 | 001197 | 001198 | 001199 | 001200 | 001201 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|---|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|---|-------|
| Cyst Epithelial Inclusion | | | | | | | | | X | | | | | | | | | | | | | | | | | | | 3 | |
| Ulcer | | | | | | 1 | | | | | | | | | | | | | | | | 4 | | | | | | | 3 2.7 |
| Subcutaneous Tissue, Hemorrhage | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Subcutaneous Tissue, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Femur, Osteopetrosis | | | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | 1 3.0 |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Granuloma | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | 2 1.0 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 1.3 |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
3000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|---|---|---|---|--------|
| | 0730 | 0731 | 0732 | 0733 | 0734 | 0735 | 0736 | 0737 | 0738 | 0739 | 0740 | 0741 | 0742 | 0743 | 0744 | 0745 | 0746 | 0747 | 0748 | 0749 | | | | | | |
| ANIMAL ID | 0016 | 0017 | 0018 | 0019 | 0020 | 0021 | 0022 | 0023 | 0024 | 0025 | 0026 | 0027 | 0028 | 0029 | 0030 | 0031 | 0032 | 0033 | 0034 | 0035 | | | | | | |
| Mineral | | | | 2 | | | | | | | | | | | 2 | 1 | | | | | 3 1.7 | | | | | |
| Nephropathy, Chronic Progressive Bilateral, Pelvis, Dilation | 3 | 2 | 3 | 3 | 3 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 2 | 4 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 3 | 50 2.5 |
| Epithelium, Renal Tubule, Pigment Pelvis, Dilation | | | | | | 2 | | | | | | | | | | | 3 | | | | | | | | | 1 3.0 |
| Renal Tubule, Cyst | X | | | | | | | | | | | | | | | | | | | | | | | | | 3 1.3 |
| Ureter Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Urinary Bladder | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Urothelium, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

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Experiment Number: 10987 - 01

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CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS
MALE
10000 ppm | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | |
|-------------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--|
| | 0731 | 0735 | 0730 | 0733 | 0729 | 0779 | 0772 | 0761 | 0773 | 0767 | 0752 | 0764 | 0770 | 0773 | 0770 | 0740 | 0722 | 0773 | 0777 | 0773 | 0733 | 0731 | 0773 | 0759 | 0772 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 002201 | |

males
(cont...)

ALIMENTARY SYSTEM

Esophagus

Intestine Large, Cecum
Lymphoid Tissue, Hyperplasia

Intestine Large, Colon
Lymphoid Tissue, Hyperplasia

Intestine Large, Rectum
Parasite Metazoan

Intestine Small, Duodenum

Intestine Small, Ileum

Intestine Small, Jejunum

Liver

Basophilic Focus

Cholangiofibrosis

Clear Cell Focus

Degeneration, Cystic

Fatty Change, Focal

Inflammation, Chronic Active

Mixed Cell Focus

Polyarteritis Nodosa

Bile Duct, Cyst

Bile Duct, Hyperplasia

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum
Lymphoid Tissue, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon
Lymphoid Tissue, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | X | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Basophilic Focus | | | | | X | | | | | | | | | | | | | | X | | | | | |
| Cholangiofibrosis | | | | | | | | | | | | | | | | | | | | | | | | |
| Clear Cell Focus | X | X | X | | X | X | | X | | | | X | X | X | | X | X | X | X | X | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| Fatty Change, Focal | | | | | | 1 | | | | | 1 | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | X | | |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Cyst | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | | | | 1 | 1 | | | | 1 | | | 1 | | | | 1 | | | | | 1 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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BLANK .. Not examined microscopically

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2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

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Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
10000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males
(cont...) | | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--------------------|------|------|
| | 0731 | 0735 | 0730 | 0733 | 0732 | 0739 | 0731 | 0730 | 0737 | 0736 | 0735 | 0736 | 0737 | 0737 | 0737 | 0734 | 0732 | 0737 | 0737 | 0737 | 0737 | 0733 | 0733 | 0733 | | | 0733 | 0737 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Hepatocyte, Cytoplasmic Alteration
Hepatocyte, Necrosis

1 1

Mesentery
Fat, Necrosis

+
3

Pancreas
Polyarteritis Nodosa
Acinus, Atrophy
Acinus, Hyperplasia

+ + + + + + + + + + + + + M + + + + + + + + + +
3 2 1 2 2 2 4 4

Salivary Glands
Hyperplasia

2

Stomach, Forestomach
Ulcer
Epithelium, Hyperplasia

+ +

Stomach, Glandular

+ +

CARDIOVASCULAR SYSTEM

Blood Vessel
Mineral

+ +

Heart
Cardiomyopathy
Hemorrhage
Epicardium, Inflammation, Chronic
Myocardium, Necrosis, Multifocal

+
1 3 1 1 2 2 2 1 1 1 2 1 1 3 2 2 1 2 2 1 1 1 1 2
3

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
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2) Mild 4) Marked

Experiment Number: 10987 - 01
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 Species/Strain: RATS/HSD

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 Dibutyl Phthalate
 CAS Number: 84-74-2

Date Report Requested: 08/20/2019
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 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
10000 ppm | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ANIMAL ID | |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------|---|-----------|--|
| | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 5 | 6 | 7 | 7 | 7 | 4 | 2 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | | | | |
| | 3 | 0 | 3 | 3 | 2 | 2 | 2 | 3 | 7 | 1 | 5 | 2 | 3 | 3 | 0 | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 3 | 9 | 2 | | | |
| | 1 | 5 | 0 | 0 | 9 | 9 | 1 | 0 | 7 | 2 | 4 | 9 | 0 | 0 | 1 | 9 | 6 | 0 | 0 | 1 | 1 | 1 | 5 | 9 | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex
Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia, Focal | | | | | 1 | 2 | | | 1 | | | | | | | 1 | 1 | | | 1 | 1 | | | |
| Hypertrophy, Focal | 2 | | 2 | | | | | | | | 2 | | | | | 2 | | 1 | | | | | 2 | |
| Vacuolization Cytoplasmic, Focal | | | 2 | | | 1 | | | | | | | | | | | | | | | | | | |
| Adrenal Medulla
Degeneration, Cystic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 2 | + | + | + | + | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Parathyroid Gland
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | 3 | + | + | + | + | + | + | + | + | + | + | |
| Pituitary Gland
Pars Distalis, Hyperplasia | 4 | 1 | | | | | 1 | 1 | | | | | 2 | 1 | 1 | | | 2 | | | 2 | | 1 | 1 |
| Pars Distalis, Hypertrophy | | 1 | 1 | | | 1 | 1 | | | | | | 1 | | 1 | | | 1 | | 1 | 1 | 1 | 1 | |
| Pars Intermedia, Hyperplasia | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| Thyroid Gland
C-cell, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | 1 | 3 | | | | | | | | | | | | | | | | | | | | | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

| HARLAN SPRAGUE DAWLEY RATS
MALE
10000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|-------|-------|
| | 0731 | 0735 | 0730 | 0733 | 0732 | 0739 | 0731 | 0730 | 0737 | 0736 | 0735 | 0736 | 0737 | 0737 | 0737 | 0734 | 0732 | 0737 | 0737 | 0737 | 0737 | 0733 | 0733 | 0733 | 0737 | | 0735 | 0737 |
| | ANIMAL ID | 00201 | 00202 | 00203 | 00204 | 00205 | 00206 | 00207 | 00208 | 00209 | 00210 | 00211 | 00212 | 00213 | 00214 | 00215 | 00216 | 00217 | 00218 | 00219 | 00220 | 00221 | 00222 | 00223 | 00224 | | 00225 | 00226 |
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Granuloma Sperm | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypospermia | | 4 | 4 | | | 4 | | 4 | 4 | 4 | | | 3 | | 4 | | | | | 4 | | | | | | 4 | | |
| Bilateral, Hypospermia | | | | | | | 4 | | | | 4 | 4 | | | 4 | 4 | 4 | | 4 | | 4 | 4 | 4 | | | | | |
| Bilateral, Duct, Exfoliated Germ Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Duct, Exfoliated Germ Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bilateral, Duct, Dilation | | | 3 | | 4 | | | | | | | | | | | | | | | | | | | | | | | |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Decreased Secretory Fluid | | | X | | | | X | X | X | | | X | | | | X | | | | X | | | | | | X | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Decreased Secretory Fluid | | X | | | | | | | | | | X | | | X | | | X | | X | | | | | X | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Testis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Edema | | | | | 4 | | | 4 | | | | 4 | 4 | | | | | | | | | 4 | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | |
| Bilateral, Edema | | | | | | | | | | | | 4 | | | | | | | 3 | 2 | | 4 | | | | | | |
| Bilateral, Polyarteritis Nodosa | | | | | | | | | | | | 1 | | | | | | | | | | | | 1 | | | | |
| Bilateral, Germinal Epithelium, Atrophy | | 4 | 4 | | 4 | 4 | 4 | 4 | | 4 | 4 | 4 | 4 | | 4 | 4 | 4 | 4 | | 4 | 4 | 4 | 4 | 4 | 4 | 3 | | |
| Bilateral, Germinal Epithelium, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bilateral, Interstitial Cell, Hyperplasia, Focal | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | |
| Bilateral, Interstitial Cell, Hyperplasia, Diffuse | | | 3 | | | | | | | | | | | | | | 3 | 2 | 3 | 2 | | | | 1 | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------|
| | DAY ON TEST | 0
7
3
1 | 0
7
0
5 | 0
7
3
0 | 0
7
3
0 | 0
7
2
9 | 0
7
2
9 | 0
7
2
1 | 0
6
3
0 | 0
7
3
7 | 0
6
7
1 | 0
5
2
2 | 0
6
5
4 | 0
7
2
9 | 0
7
3
0 | 0
7
3
0 | 0
4
0
0 | 0
2
3
1 | 0
7
2
9 | 0
7
3
3 | 0
7
3
3 | 0
7
3
1 | 0
7
3
1 | 0
5
9
5 | 0
7
2
9 | | |
| HARLAN SPRAGUE DAWLEY RATS MALE | ANIMAL ID | 0
0
2
0
1 | 0
0
2
0
2 | 0
0
2
0
3 | 0
0
2
0
4 | 0
0
2
0
5 | 0
0
2
0
6 | 0
0
2
0
7 | 0
0
2
0
8 | 0
0
2
0
9 | 0
0
2
1
0 | 0
0
2
1
1 | 0
0
2
1
2 | 0
0
2
1
3 | 0
0
2
1
4 | 0
0
2
1
5 | 0
0
2
1
6 | 0
0
2
1
7 | 0
0
2
1
8 | 0
0
2
2
9 | 0
0
2
2
0 | 0
0
2
2
1 | 0
0
2
2
2 | 0
0
2
2
3 | 0
0
2
2
4 | 0
0
2
2
5 | males
(cont...) |

- Bilateral, Rete Testis, Fibrosis
- Bilateral, Rete Testis, Sperm Granuloma
- Bilateral, Seminiferous Tubule, Dysgenesis
- Germinal Epithelium, Atrophy
- Germinal Epithelium, Degeneration
- Interstitial Cell, Hyperplasia, Focal
- Rete Testis, Fibrosis
- Rete Testis, Sperm Granuloma
- Seminiferous Tubule, Dysgenesis

- 3
- X
- 4
- 1
- 1
- 3
- 2
- 1
- 2
- 1
- 2
- 3
- 1
- 2
- 3
- 1
- 2
- 1
- 2
- 3
- 1
- 2
- 3
- 4
- 5

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hypercellularity | | | | | | | | | | 2 | | | | | | 1 | | | | | | 1 | | | |
| Lymph Node | | | | | | | | | | | + | + | | | | | | | | | | | | | |
| Lymph Node, Mandibular
Degeneration, Cystic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | 2 | 1 | | | | 2 | | | | | | 2 | | | | | | 1 | | | | | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Extramedullary Hematopoiesis | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | | 2 | 2 | 2 | 2 | 2 | | | | | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| Pigment | 2 | 2 | 4 | 4 | 3 | 2 | 4 | 2 | | 1 | 3 | 1 | 3 | 2 | 2 | | | | 2 | 4 | 2 | 2 | 1 | 2 | 3 |
| Lymphoid Follicle, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| HARLAN SPRAGUE DAWLEY RATS
MALE
10000 ppm | DAY ON TEST | 0731 | 0735 | 0730 | 0730 | 0732 | 0739 | 0731 | 0730 | 0737 | 0736 | 0735 | 0736 | 0737 | 0737 | 0737 | 0734 | 0732 | 0737 | 0737 | 0737 | 0737 | 0737 | 0733 | 0733 | 0733 | 0733 | 0733 | 0733 | 0735 | 0737 |
| | ANIMAL ID | 00201 | 00202 | 00203 | 00204 | 00205 | 00206 | 00207 | 00208 | 00209 | 00210 | 00211 | 00212 | 00213 | 00214 | 00215 | 00216 | 00217 | 00218 | 00219 | 00220 | 00221 | 00222 | 00223 | 00224 | 00225 | 00226 | 00227 | 00228 | 00229 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

males
(cont...)

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epidermis, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Pyogranulomatous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sciatic, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Granuloma | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolus, Infiltration Cellular, Histiocyte | 2 | 1 | 2 | 2 | 2 | 1 | | 1 | | 2 | | | 1 | 1 | 1 | 1 | 2 | 1 | | 1 | 2 | | | | | | | | 1 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 10987 - 01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 08/20/2019

Test Type: Chronic PN

Dibutyl Phthalate

Time Report Requested: 12:03:41

Route: DOSED FEED

CAS Number: 84-74-2

First Dose M/F: 08/30/10 / 08/31/10

Species/Strain: RATS/HSD

Lab: BAT

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 5 | 6 | 7 | 7 | 7 | 4 | 2 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 |
| HARLAN SPRAGUE DAWLEY RATS MALE | 3 | 0 | 3 | 3 | 2 | 2 | 2 | 3 | 7 | 1 | 5 | 2 | 3 | 3 | 0 | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 9 | 2 | 2 |
| | 1 | 5 | 0 | 0 | 9 | 9 | 1 | 0 | 7 | 2 | 4 | 9 | 0 | 0 | 0 | 1 | 9 | 6 | 0 | 0 | 1 | 1 | 5 | 9 | 9 |
| 10000 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | males (cont...) |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alveolus, Inflammation, Chronic | 1 | | | | 1 | | | | | | | | | | | | 1 | | | | 1 | | | |
| Alveolus, Inflammation, Chronic Active | | | | 1 | | | | | | | 2 | | | | | | | 1 | | | | | | |
| Interstitial, Fibrosis, Focal | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Foreign Body | X | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | 1 | | | | | | | 3 | | | | | | | | | | | | | | | | |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | |
| Pleura | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Mast Cell | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Nephropathy, Chronic Progressive | 1 | 2 | 3 | 2 | 2 | 2 | 2 | | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 3 | 2 | 2 | 3 | 1 | 3 | 1 | |
| Bilateral, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | |
| Bilateral, Pelvis, Dilation | | | | | | | | | | | | | | | | | | | | | | | | |
| Pelvis, Dilation | | | | | | | | | | | | | | | | | | | | | | | | |
| Pelvis, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------------------------|
| HARLAN SPRAGUE DAWLEY RATS
MALE
10000 ppm | DAY ON TEST | 0731 | 0735 | 0730 | 0733 | 0732 | 0729 | 0721 | 0730 | 0765 | 0767 | 0765 | 0752 | 0764 | 0772 | 0773 | 0777 | 0774 | 0777 | 0773 | 0773 | 0773 | 0773 | 0773 | 0759 | 0779 | males
(cont...) |
| | ANIMAL ID | 00201 | 00202 | 00203 | 00204 | 00205 | 00206 | 00207 | 00208 | 00209 | 00210 | 00211 | 00212 | 00213 | 00214 | 00215 | 00216 | 00217 | 00218 | 00219 | 00220 | 00221 | 00222 | 00223 | 00224 | 00225 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Renal Tubule, Cyst

Ureter
Dilation
Inflammation, Chronic Active

Urinary Bladder
Urothelium, Hyperplasia
Urothelium, Inflammation, Chronic Active

+ +

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue

M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
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Experiment Number: 10987 - 01

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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS MALE | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|-------------|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
| | 025 | 070 | 073 | 068 | 072 | 072 | 072 | 073 | 073 | 073 | 072 | 051 | 068 | 073 | 077 | 014 | 073 | 073 | 072 | 072 | 005 | 072 | 073 | 049 | |
| ANIMAL ID | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 |
| 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 |
| 678 | 701 | 730 | 684 | 729 | 729 | 729 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum
Lymphoid Tissue, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Intestine Large, Colon
Lymphoid Tissue, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Intestine Large, Rectum
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | X | | | | X | X | | | | | | | | X | | | | | | | | X | | 6 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Basophilic Focus | | | | | | | | X | | | | | | | | | | | | | | | | | | 3 |
| Cholangiofibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Clear Cell Focus | | | | X | X | X | X | X | | | | | | | | X | | | | X | X | X | X | | | 24 |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.0 |
| Fatty Change, Focal | | | | 1 | | | | | | | | | | | | | | | | | | | | | | 3 1.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.0 |
| Bile Duct, Cyst | | | | | | | | X | | | | | | | | | | | | | | | | | | 1 |
| Bile Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 9 1.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
10000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----|--|
| | 0
2
7
5 | 0
7
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9 | | |
| Hepatocyte, Cytoplasmic Alteration | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 39 | |
| Hepatocyte, Necrosis | | | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | 2 | | | | | | 1 | | |
| Acinus, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| Acinus, Hyperplasia | | | 1 | 2 | 4 | | | | 1 | 2 | 3 | 1 | | 1 | | | 1 | | | | 1 | | | | 18 | | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Ulcer | | | | | | | 3 | | | | | | | | | | | | | | | | | | 1 | | |
| Epithelium, Hyperplasia | | | | | | | | | | | 1 | | | | | | | | | | | | | | 1 | | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| CARDIOVASCULAR SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Cardiomyopathy | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | | 1 | 1 | | 1 | 1 | 2 | | 1 | | | |
| Hemorrhage | | | | | | | | | | 2 | | | | | | | | | | | | | | | 1 | | |
| Epicardium, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 | | |
| Myocardium, Necrosis, Multifocal | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARLAN SPRAGUE DAWLEY RATS
MALE
10000 ppm | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | ANIMAL ID | 2 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 1 | 7 | 7 | 7 | 2 | 7 | 0 | 7 | 7 | 7 | 4 | 7 | 4 | 7 | 7 | 4 | 7 | 7 | 4 | 7 | 4 |
| | | 5 | 0 | 3 | 8 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 1 | 8 | 3 | 2 | 4 | 3 | 3 | 2 | 2 | 5 | 2 | 3 | 2 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|---|----|----|-------|-------|--------|-----|---|-------|
| Adrenal Cortex Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | | | | | | | |
| Hyperplasia, Focal | | | | | 2 | | | | 2 | 1 | 1 | | | 1 | | 2 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | 15 | 1.3 | | | | | |
| Hypertrophy, Focal | | | | | 2 | | | | 2 | | | | | 1 | | 1 | 1 | 1 | 1 | | | | | 1 | | | | | | | | | | | | | | | | | 14 | 1.5 | | | | | |
| Vacuolization Cytoplasmic, Focal | | | | | 1 | | | | | | | | | | | | | | | | | | 1 | | 2 | | | | | | | | | | | | | | | | | 5 | 1.4 | | | | |
| Adrenal Medulla Degeneration, Cystic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | 1 2.0 | | | | | |
| Hyperplasia | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1.7 | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | | |
| Parathyroid Gland Hyperplasia | + | M | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | | 3 2.0 | | | | |
| Pituitary Gland Pars Distalis, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | 22 1.7 | | | |
| Pars Distalis, Hypertrophy | 1 | | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | | | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | | | | | | | | | | | | | | | | | 29 | 1.0 | | |
| Pars Intermedia, Hyperplasia | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |
| Thyroid Gland C-cell, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | 4 1.8 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue
 X .. Lesion present A .. Autolysis precludes evaluation
 I .. Insufficient tissue BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
10000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|----|-----|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 2 | 7 | 0 | 3 | 8 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 1 | 8 | 3 | 2 | 4 | 3 | 3 | 2 | 2 | 5 | 2 | | 3 | 9 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 | |
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Granuloma Sperm | | | | 4 | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Hypospermia | | | | | | | 4 | | 4 | | 3 | | | | | | | | | | | | | | | 13 | 3.8 |
| Bilateral, Hypospermia | 4 | | 4 | | 4 | 4 | | | | | | 2 | 4 | 4 | 4 | 4 | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 27 | 3.9 |
| Bilateral, Duct, Exfoliated Germ Cell | | 1 | | | | | | | | | | | | | | | 4 | | | | | | | | | 2 | 2.5 |
| Duct, Exfoliated Germ Cell | | | | | | | | | | | | | | | | | | | | | | | | 4 | | 1 | 4.0 |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Chronic Active | | | | | | | | | | 1 | | | | | | | 4 | | | | | | | | | 2 | 2.5 |
| Bilateral, Duct, Dilatation | | | | | | | 3 | | | | | | | | | | | | | | | | | | | 3 | 3.3 |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Decreased Secretory Fluid | X | X | | X | X | X | | | X | | | X | | | | | | | | X | | X | | | X | 18 | |
| Inflammation, Chronic Active | | | | 4 | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | 49 | |
| Decreased Secretory Fluid | X | X | | X | X | | | | X | | | X | | | | | | | X | | | | | X | X | 15 | |
| Inflammation, Chronic | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 |
| Inflammation, Chronic Active | | | | 3 | | | 2 | | | | | | | | | | | | | | | | | | | 2 | 2.5 |
| Testis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Edema | 3 | | | | | | | | | | 3 | | | | | 3 | | | | | 4 | 4 | 3 | | | 11 | 3.6 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Bilateral, Edema | | | | | | 3 | 4 | | | | | | | | | 3 | | | | | | | | | | 7 | 3.3 |
| Bilateral, Polyarteritis Nodosa | | | | 1 | 3 | 1 | 3 | | 3 | | | | 1 | 2 | 3 | | | 4 | | | | | | 4 | | 14 | 2.3 |
| Bilateral, Germinal Epithelium, Atrophy | 4 | | 4 | | 4 | 4 | 4 | | 4 | | 4 | 4 | 4 | 4 | 4 | 4 | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 40 | 4.0 |
| Bilateral, Germinal Epithelium, Degeneration | | 1 | | | | | | | | | | | | | | | | 4 | | | | | | | | 2 | 2.5 |
| Bilateral, Interstitial Cell, Hyperplasia, Focal | | | | | | | | | | | | | | 2 | 1 | | | | | | | | | | | 3 | 1.7 |
| Bilateral, Interstitial Cell, Hyperplasia, Diffuse | | | | | | | 2 | | 2 | | | | | | | | | | | | | | 2 | | | 9 | 2.2 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 08/20/2019

Test Type: Chronic PN

Dibutyl Phthalate

Time Report Requested: 12:03:41

Route: DOSED FEED

CAS Number: 84-74-2

First Dose M/F: 08/30/10 / 08/31/10

Species/Strain: RATS/HSD

Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS MALE | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 025 | 070 | 071 | 073 | 074 | 075 | 076 | 077 | 078 | 079 | 080 | 081 | 082 | 083 | 084 | 085 | 086 | 087 | 088 | 089 | 090 | 091 | 092 | 093 | | 094 | | | | | | | | | | | | | | | | | | | | | | |
| 10000 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 1 | 7 | 7 | 7 | 0 | 7 | 7 | 4 |
| ANIMAL ID | 00226 | 00227 | 00228 | 00229 | 00230 | 00231 | 00232 | 00233 | 00234 | 00235 | 00236 | 00237 | 00238 | 00239 | 00240 | 00241 | 00242 | 00243 | 00244 | 00245 | 00246 | 00247 | 00248 | 00249 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|---|--|---|---|--|---|--|---|--|--|---|---|---|---|--|--|--|--|--|--|---|--|----|-----|
| Bilateral, Rete Testis, Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Bilateral, Rete Testis, Sperm Granuloma | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Bilateral, Seminiferous Tubule, Dysgenesis | | | | | | | | | | | | | | | 2 | | | | | | | | 1 | | 2 | 1.5 |
| Germinal Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.5 |
| Germinal Epithelium, Degeneration | | | | | 1 | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Interstitial Cell, Hyperplasia, Focal | 3 | | 2 | | | | | | | | | | 1 | | | | | | | | | | 1 | | 8 | 1.5 |
| Rete Testis, Fibrosis | | | | | | | | 2 | | 2 | | | | 2 | | 2 | | | | | | | | | 10 | 2.4 |
| Rete Testis, Sperm Granuloma | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Seminiferous Tubule, Dysgenesis | | | 2 | | | 2 | | | | 3 | | | | | | | | | | | | | | | 7 | 2.0 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hypercellularity | 3 | | | 1 | | | | | | | | | 2 | | | | | 4 | | | 3 | | 3 | 4 | 10 | 2.4 |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Lymph Node, Mandibular Degeneration, Cystic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| | | | | | | | | | | | | | | 2 | | | | | | | | | | | 6 | 1.7 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Extramedullary Hematopoiesis | | | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | | 2 | 2 | 2 | 3 | 2 | 1 | 2 | 2 | | 2 | 2 | 42 | 1.8 |
| Pigment | 2 | 4 | 1 | 2 | 1 | 2 | 3 | 4 | 2 | 3 | 3 | 3 | 4 | 2 | 1 | 2 | | 1 | 3 | | | 2 | 1 | 2 | 43 | 2.3 |
| Lymphoid Follicle, Atrophy | | | | 2 | | | | | | | | | | | | | | | | | | 3 | | | 2 | 2.5 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Atrophy | | 4 | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

M .. Missing tissue

1-4 .. Lesion qualified as:

X .. Lesion present

A .. Autolysis precludes evaluation

1) Minimal 3) Moderate

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
MALE
10000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|-----|-----|
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0 | | | |
| Alveolus, Inflammation, Chronic | 1 | | 1 | | | | 1 | | 1 | | | | | | 1 | | | | | 1 | 1 | 1 | | | 1 | 14 | 1.0 | |
| Alveolus, Inflammation, Chronic Active | | | | | | | | | | | | | 2 | | | | | | | | | | | | | 4 | 1.5 | |
| Interstitial, Fibrosis, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | 2 | | | | | | | | | | | 3 | 2.0 | |
| Goblet Cell, Hyperplasia | | | | | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Pleura | | | | | | | | | | | | | | | + | | | | | | | | | | | 1 | | |
| Infiltration Cellular, Mast Cell | | | | | | | | | | | | | | | 2 | | | | | | | | | | | 1 | 2.0 | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Nephropathy, Chronic Progressive | 1 | 2 | 2 | 4 | 3 | 2 | 2 | 2 | 2 | 1 | 3 | 4 | 1 | 4 | 3 | 2 | 4 | 3 | 2 | 2 | 2 | | | 1 | 3 | 2 | 47 | 2.1 |
| Bilateral, Inflammation, Suppurative | | | | 3 | | | | | | | | | | | | | | | | | | | | 2 | | 2 | 2.5 | |
| Bilateral, Pelvis, Dilation | | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Pelvis, Dilation | | | | | | | | | | | | | | 4 | | | | | 1 | | 2 | | | | | 3 | 2.3 | |
| Pelvis, Inflammation, Chronic Active | 2 | | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | 3 | 2.0 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 08/20/2019

Test Type: Chronic PN

Dibutyl Phthalate

Time Report Requested: 12:03:41

Route: DOSED FEED

CAS Number: 84-74-2

First Dose M/F: 08/30/10 / 08/31/10

Species/Strain: RATS/HSD

Lab: BAT

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|----|-------|
| HARLAN SPRAGUE DAWLEY RATS
MALE
10000 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | | |
| ANIMAL ID | 2 | 7 | 0 | 3 | 8 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 1 | 8 | 3 | 2 | 4 | 3 | 3 | 2 | 2 | 5 | 2 | 7 | | | |
| | 5 | 1 | 0 | 4 | 9 | 9 | 9 | 0 | 0 | 1 | 1 | 9 | 9 | 4 | 1 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | | | |
| Renal Tubule, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | X | 1 | | |
| Ureter | | | | | | + | | | | | | | | | | | | | + | | | | | | | | 2 | |
| Dilation | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Inflammation, Chronic Active | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Urinary Bladder | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Urothelium, Hyperplasia | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Urothelium, Inflammation, Chronic Active | | | | | | 2 | | | | | | | | | | | | | | | | | | | | 4 | | 2 3.0 |

*** END OF MALE DATA ***

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

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Date Report Requested: 08/20/2019

Test Type: Chronic PN

Dibutyl Phthalate

Time Report Requested: 12:03:41

Route: DOSED FEED

CAS Number: 84-74-2

First Dose M/F: 08/30/10 / 08/31/10

Species/Strain: RATS/HSD

Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
0 ppm | | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 6 | 3 | 7 | 7 | 7 | 7 | 6 | 3 | 6 | 7 | 6 | 3 | 6 | 7 |
| ANIMAL ID | | 4 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 5 | 3 | 2 | 5 | 3 | 3 | 3 | 9 | 5 | 3 | 3 | 3 | 2 | |
| | | 6 | 1 | 1 | 1 | 2 | 5 | 2 | 2 | 2 | 2 | 1 | 2 | 0 | 9 | 0 | 4 | 1 | 1 | 1 | 1 | 0 | 6 | 4 | 0 | 0 | 0 | 2 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

females (cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Muscularis, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Cecum | + | + | + | + | + | M | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parasite Metazoan | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Parasite Metazoan | | | | | | | X | | | X | | X | | | | | | X | X | | | | | | | | | | |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Basophilic Focus | | | | | | X | | | | | | X | | X | | | | | | | | | | | | | | | |
| Clear Cell Focus | | | | | X | | | | X | | X | X | | | | | | | | X | | | | | | | | | |
| Eosinophilic Focus | | | | | | | | | X | | | | | | | | | | | | X | | | | | | | | |
| Extramedullary Hematopoiesis | | | | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | |
| Bile Duct, Cyst | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | |
| Bile Duct, Cyst, Multiple | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | | | | | | | 1 | | | | 1 | | | | 1 | | | | | | | 1 | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
0 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
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5 |

Hepatocyte, Necrosis

1

2

Pancreas
Infiltration Cellular, Lipocyte
Acinus, Atrophy

+
1

Salivary Glands

+ +

Stomach, Forestomach

+ +

Stomach, Glandular

+ +

CARDIOVASCULAR SYSTEM

Blood Vessel

+ +

Heart
Cardiomyopathy

+
1 1 1 1 1 1 1 1 1 2 1 1 1 1 2 1 1 1 1 1 1 1 1 1

Hemorrhage
Endocardium, Fibrosis
Myocardium, Hyperplasia, Schwann Cell

1
1
3

ENDOCRINE SYSTEM

Adrenal Cortex
Angiectasis

+ +

Degeneration, Cystic
Extramedullary Hematopoiesis

2
1

Hyperplasia, Focal
Hypertrophy, Focal

1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 2 1 1

Necrosis

2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
0 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | females
(cont...) |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
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Nuclear Alteration
Vacuolization Cytoplasmic

1 1

1

Adrenal Medulla
Hyperplasia

+ +

2

Islets, Pancreatic
Hyperplasia

+ +

Parathyroid Gland

+ M + +

Pituitary Gland
Infiltration Cellular, Mononuclear Cell
Pars Distalis, Hyperplasia
Pars Distalis, Hypertrophy

+ +

1

2 4 3 3 1 1 2 1 2 1 1 2

1 4

Thyroid Gland
C-cell, Hyperplasia

+ +

3

1

3

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Clitoral Gland
Duct, Dilation

+ +

4

Ovary
Bursa, Cyst
Follicle, Cyst

+ +

X

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------------------|-------|-------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
0 ppm | DAY ON TEST | 0646 | 0731 | 0731 | 0732 | 0735 | 0732 | 0732 | 0732 | 0731 | 0732 | 0732 | 0730 | 0679 | 0735 | 0731 | 0731 | 0730 | 0676 | 0354 | 0630 | 0732 | females
(cont...) | | |
| | ANIMAL ID | 00251 | 00252 | 00253 | 00254 | 00255 | 00256 | 00257 | 00258 | 00259 | 00260 | 00261 | 00262 | 00263 | 00264 | 00265 | 00266 | 00267 | 00268 | 00269 | 00270 | 00271 | | 00272 | 00273 |

Paraovarian Tissue, Cyst

X

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Dilation | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endometrium, Hyperplasia, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endometrium, Metaplasia, Squamous | 3 | 2 | 1 | 2 | 2 | 1 | | 1 | 2 | 2 | 1 | 3 | | 1 | | 2 | | 2 | 3 | | | | | | | 1 | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hypercellularity | 4 | | 4 | | | 3 | | 2 | 2 | 4 | 2 | | 2 | 4 | 4 | 4 | 4 | | | | 2 | 2 | 4 | | | | |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Extramedullary Hematopoiesis | 3 | 2 | 2 | 2 | 2 | 2 | | 2 | 2 | 3 | | 1 | 2 | 4 | 3 | 4 | 2 | 1 | 2 | 2 | 1 | 4 | 1 | 3 | 1 | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pigment | | | 2 | | 2 | 3 | | | 1 | 1 | | | 3 | 2 | | 1 | | | 2 | 2 | 4 | 2 | 1 | 3 | | 1 | |
| Red Pulp, Atypia Cellular | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Epithelial Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 10987 - 01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 08/20/2019

Test Type: Chronic PN

Dibutyl Phthalate

Time Report Requested: 12:03:41

Route: DOSED FEED

CAS Number: 84-74-2

First Dose M/F: 08/30/10 / 08/31/10

Species/Strain: RATS/HSD

Lab: BAT

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|----------------------|---|---|---|
| | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | 7 | 6 | 3 |
| HARLAN SPRAGUE DAWLEY RATS
FEMALE | 4 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 5 | 3 | 2 | 5 | 3 | 3 | 3 | 3 | 9 | 5 | 3 | 3 |
| | 6 | 1 | 1 | 1 | 2 | 5 | 2 | 2 | 2 | 1 | 2 | 2 | 0 | 9 | 0 | 4 | 1 | 1 | 1 | 1 | 0 | 6 | 4 | 0 | 2 |
| 0 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

Duct, Dilation, Focal

2

Skin

+ +

MUSCULOSKELETAL SYSTEM

Bone

+ +

Metaplasia, Cartilagenous

NERVOUS SYSTEM

Brain

+ +

Hemorrhage

2

Neuron, Necrosis

3

RESPIRATORY SYSTEM

Lung

+ +

Granuloma

1

Alveolus, Infiltration Cellular, Histiocyte

2 2 2 3 2 2 2 1 2 3 3 1 3 2 2 2 3 3 1 1 1 1

Alveolus, Inflammation, Chronic

1 1 1 1 1 1 1 1 1 1 1 1 1 2 1 2 2 1

Alveolus, Inflammation, Chronic Active

1 1

Nose

+ +

Goblet Cell, Hyperplasia

1

Respiratory Epithelium, Inflammation, Chronic Active

Trachea

+ +

Glands, Dilation, Focal

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
X .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS FEMALE
0 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | females (cont...) |
|--|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 0
6
4
6 | 0
7
3
1 | 0
7
3
1 | 0
7
3
1 | 0
7
3
2 | 0
7
1
5 | 0
7
3
2 | 0
7
3
2 | 0
7
3
2 | 0
5
9
1 | 0
7
3
2 | 0
7
3
0 | 0
6
5
4 | 0
7
3
1 | 0
6
5
1 | 0
3
7
1 | 0
7
3
1 | 0
7
3
1 | 0
6
9
0 | 0
3
5
6 | 0
6
4
0 | 0
7
3
0 | 0
6
5
0 | | |
| ANIMAL ID | 0
0
2
5
1 | 0
0
2
5
2 | 0
0
2
5
3 | 0
0
2
5
4 | 0
0
2
5
5 | 0
0
2
5
6 | 0
0
2
5
7 | 0
0
2
5
8 | 0
0
2
5
9 | 0
0
2
5
0 | 0
0
2
5
1 | 0
0
2
6
2 | 0
0
2
6
3 | 0
0
2
6
4 | 0
0
2
6
5 | 0
0
2
6
6 | 0
0
2
6
7 | 0
0
2
6
8 | 0
0
2
6
9 | 0
0
2
7
0 | 0
0
2
7
1 | 0
0
2
7
2 | 0
0
2
7
3 | 0
0
2
7
4 | 0
0
2
7
5 |
| | Submucosa, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | | | 1 | | | | | | | 1 | 1 | | | | | | | | | | | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney Hydronephrosis | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy, Chronic Progressive Transitional Epithelium, Hyperplasia | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | | |
| Urinary Bladder Urothelium, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
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Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

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Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
0 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 0680 | 0732 | 0732 | 0685 | 0664 | 0662 | 0771 | 0772 | 0772 | 0559 | 0663 | 0554 | 0770 | 0334 | 0773 | 0773 | 0773 | 0331 | 0350 | 0578 | 0773 | 0773 | 0773 | 0773 | |
| ANIMAL ID | 00276 | 00277 | 00278 | 00279 | 00280 | 00281 | 00282 | 00283 | 00284 | 00285 | 00286 | 00287 | 00288 | 00289 | 00290 | 00291 | 00292 | 00293 | 00294 | 00295 | 00296 | 00297 | 00298 | 00299 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|
| Esophagus
Muscularis, Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 2.0 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Intestine Large, Colon
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 2 |
| Intestine Large, Rectum
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 6 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Basophilic Focus | | | | | | | X | | | | | | | | | | | | | | | | | | | 4 |
| Clear Cell Focus | | | | | | X | X | X | X | | | | | | | | | X | | X | | | | | | 11 |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Extramedullary Hematopoiesis | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | 1 | | 1 | | | 3 1.0 |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | X | | X | | | | | | | 3 |
| Bile Duct, Cyst | | | | | | | | | | | | | | | | | | X | | | | | X | | | 5 |
| Bile Duct, Cyst, Multiple | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Bile Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 1 | | | 5 1.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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Dibutyl Phthalate

CAS Number: 84-74-2

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
0 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 0680 | 0732 | 0732 | 0685 | 0664 | 0662 | 0771 | 0773 | 0773 | 0559 | 0663 | 0554 | 0770 | 0334 | 0773 | 0773 | 0773 | 0773 | 0330 | 0558 | 0773 | 0773 | 0773 | 0773 | 0773 | |
| ANIMAL ID | 00276 | 00027 | 00008 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|---|-------|
| Hepatocyte, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 4 1.5 |
| Pancreas | + | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Infiltration Cellular, Lipocyte Acinus, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Salivary Glands | + | | | | | | | | | | | | | | | | | | | | | | | | | 49 | | |
| Stomach, Forestomach | + | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Stomach, Glandular | + | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|---|---|---|---|---|---|--|--|--|--|---|---|--|--|---|--|---|--|---|---|---|---|---|---|--------|----|--|-------|
| Blood Vessel | + | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Heart | + | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Cardiomyopathy | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | | | 2 | | 1 | | 1 | 1 | 1 | 1 | 2 | 1 | 42 1.1 | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Endocardium, Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Myocardium, Hyperplasia, Schwann Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|--|---|--|---|---|--|--|--|--|--|---|---|--|---|---|---|---|--|--|---|---|---|--------|--|---|-------|
| Adrenal Cortex | + | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Extramedullary Hematopoiesis | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Hyperplasia, Focal | 2 | 2 | 2 | | 3 | | 1 | 3 | | | | | | 2 | 1 | | 1 | 2 | 2 | 1 | | | 1 | 2 | 1 | 26 1.5 | | | |
| Hypertrophy, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.1 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 3.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

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M .. Missing tissue

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FEMALE
0 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|--------------------------|
| | 0680 | 0732 | 0732 | 0685 | 0664 | 0662 | 0771 | 0772 | 0772 | 0594 | 0669 | 0554 | 0554 | 0730 | 0374 | 0733 | 0773 | 0772 | 0773 | 0308 | 0583 | 0733 | 0773 | 0773 | | | |
| ANIMAL ID | 00276 | 00277 | 00278 | 00279 | 00280 | 00281 | 00282 | 00283 | 00284 | 00285 | 00286 | 00287 | 00288 | 00289 | 00290 | 00291 | 00292 | 00293 | 00294 | 00295 | 00296 | 00297 | 00298 | 00299 | 00300 | | |
| Nuclear Alteration
Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2 1.0
2 2.0 |
| Adrenal Medulla
Hyperplasia | + | + | + | + | + | + | 1 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 3 1.7 |
| Islets, Pancreatic
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 2.0 |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | M | + | M | + | M | + | + | 45 | |
| Pituitary Gland
Infiltration Cellular, Mononuclear Cell
Pars Distalis, Hyperplasia
Pars Distalis, Hypertrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 1.0
24 2.3
1 1.0 |
| Thyroid Gland
C-cell, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 4 2.0 |
| GENERAL BODY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GENITAL SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clitoral Gland
Duct, Dilation | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | 1 4.0 |
| Ovary
Bursa, Cyst
Follicle, Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | X | + | + | + | + | + | + | + | + | + | + | + | 50 | 2
3 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
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0 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|
| | 0680 | 0732 | 0732 | 0665 | 0660 | 0662 | 0771 | 0772 | 0772 | 0554 | 0669 | 0554 | 0770 | 0334 | 0773 | 0773 | 0773 | 0773 | 0330 | 0558 | | 0773 | 0773 | 0773 |
| ANIMAL ID | 00276 | 00277 | 00278 | 00279 | 00280 | 00281 | 00282 | 00283 | 00284 | 00285 | 00286 | 00287 | 00288 | 00289 | 00290 | 00291 | 00292 | 00293 | 00294 | 00295 | 00296 | 00297 | 00298 | 00299 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|----|-----|----|-----|
| Paraovarian Tissue, Cyst | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Dilation | | | | | | | | | | | 4 | | | | | | | | | | | 2 | 3.0 | | | | | |
| Hemorrhage | | | | | | | | | | | 2 | | | | | | | | | | | 2 | 2.0 | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | | | | | |
| Endometrium, Hyperplasia, Cystic | 2 | 3 | | 2 | | | 1 | | 4 | | 2 | | | 2 | | 1 | | 2 | 1 | | 1 | | 2 | 3 | 26 | 2.0 | | |
| Endometrium, Metaplasia, Squamous | | | | 2 | | | | 3 | | | | 1 | | | | 3 | 1 | | | | 1 | 2 | 1 | 1 | | 2 | 22 | 1.7 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|-----|-----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Hypercellularity | 4 | | 2 | 2 | 4 | 2 | 2 | | | 4 | 2 | 4 | 2 | 4 | 4 | | | 3 | | 4 | 4 | | | | 30 | 3.1 | |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | 49 | | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Extramedullary Hematopoiesis | 3 | 1 | 2 | 3 | 3 | 1 | 1 | 1 | 2 | 4 | | 4 | 4 | 4 | 1 | 2 | 1 | | 1 | 2 | 4 | 2 | 1 | 2 | 45 | 2.2 | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 | |
| Pigment | 1 | 3 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | | 4 | 1 | 1 | 1 | 1 | 2 | 2 | | 3 | 1 | | 3 | 3 | 4 | 2 | 37 | 1.9 |
| Red Pulp, Atypia Cellular | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Epithelial Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
0 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------------------|----------|
| | 0680 | 0732 | 0732 | 0685 | 0664 | 0662 | 0771 | 0772 | 0772 | 0554 | 0665 | 0554 | 0773 | 0337 | 0773 | 0772 | 0773 | 0330 | 0588 | 0773 | 0773 | 0773 | 0773 | | |
| ANIMAL ID | 00276 | 00027 | 00028 | 00029 | 00001 | 00002 | 00003 | 00004 | 00005 | 00006 | 00007 | 00008 | 00009 | 00010 | 00011 | 00012 | 00013 | 00014 | 00015 | 00016 | 00017 | 00018 | 00019 | | |
| Duct, Dilation, Focal | | | | | 2 | | | | | | | | | | | | | | | 3 | | | | 3 2.3 | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| MUSCULOSKELETAL SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone Metaplasia, Cartilagenous | + | + | + | + | 2 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
1 2.0 | |
| NERVOUS SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain Hemorrhage Neuron, Necrosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
1 2.0
1 3.0 | |
| RESPIRATORY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lung Granuloma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
1 1.0 | |
| Alveolus, Infiltration Cellular, Histiocyte | 2 | 1 | 3 | 2 | | 2 | 1 | 1 | 2 | | | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 3 | 3 | 43 1.9 | |
| Alveolus, Inflammation, Chronic | 2 | 1 | 1 | | 1 | | 2 | | 2 | | | | 1 | 2 | | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 32 1.3 | |
| Alveolus, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 2 1.0 | |
| Nose Goblet Cell, Hyperplasia Respiratory Epithelium, Inflammation, Chronic Active | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
1 1.0
1 2.0 | |
| Trachea Glands, Dilation, Focal | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
1 1.0 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
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| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|-------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
0 ppm | DAY ON TEST | 0680 | 0732 | 0732 | 0685 | 0662 | 0771 | 0772 | 0772 | 0554 | 0659 | 0554 | 0730 | 0334 | 0733 | 0733 | 0725 | 0731 | 0308 | 0582 | 0733 | 0733 | 0733 | 0731 | * TOTALS | |
| | ANIMAL ID | 00276 | 00277 | 00278 | 00279 | 00280 | 00281 | 00282 | 00283 | 00284 | 00285 | 00286 | 00287 | 00288 | 00289 | 00290 | 00291 | 00292 | 00293 | 00294 | 00295 | 00296 | 00297 | 00298 | | 00299 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Submucosa, Inflammation, Chronic

1 1.0

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Harderian Gland Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | | | | | | | | | | | | | | | | | | | | | | | 3 1.0 |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hydronephrosis | | | | | | | | | | | | | | | | | 1 | | | | | | | | 1 1.0 |
| Nephropathy, Chronic Progressive Transitional Epithelium, Hyperplasia | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 3 | 2 | 49 1.3 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Urothelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

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BLANK .. Not examined microscopically

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| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) | | | | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|------|------|------|------|
| | 0514 | 0732 | 0564 | 0771 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0676 | 0777 | 0777 | 0777 | 0777 | 0474 | 0474 | 0776 | 0677 | 0777 | | | 0676 | 0777 | 0777 | 0777 |
| | 1 | 3 | 6 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 3 | 3 | 3 | 0 | 0 | 3 | 1 | 3 | 3 | 3 | 6 | 3 | 3 | 3 |
| | 4 | 2 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 3 | 0 | 1 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 2 |
| | 0030 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 |
| | 0030 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |

Bile Duct, Hyperplasia
Hepatocyte, Necrosis

1 1 1
1 1

Pancreas
Polyarteritis Nodosa
Acinus, Atrophy

+ + + + + + + + + + + + + + + A + + + + + + + +
4

Salivary Glands

+ +

Stomach, Forestomach
Mineral
Ulcer

+
1

Stomach, Glandular
Erosion
Mineral
Glands, Ectasia

+
1

CARDIOVASCULAR SYSTEM

Blood Vessel

+ +

Heart
Cardiomyopathy

+
1 1 1 1 1 1 1 2 1 1 1 1 1 1 1 2 1 1 1

ENDOCRINE SYSTEM

Adrenal Cortex
Degeneration, Cystic
Hyperplasia, Focal
Hypertrophy, Focal

+
3
2 2 1 1 1 1 1 1 1 1 2 3 3 1 1 1 1
1 1 1 2 1 1 1 1 1 1 1 1 2 3 3 3 2 1

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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X .. Lesion present
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M .. Missing tissue
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FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|
| | 0514 | 0732 | 0564 | 0771 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0676 | 0777 | 0777 | 0777 | 0777 | 0474 | 0474 | 0777 | 0676 | 0777 | 0777 | 0676 | 0777 | 0777 | | |
| | 1 | 3 | 6 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 3 | 3 | 3 | 0 | 0 | 3 | 1 | 3 | 3 | 3 | 6 | 3 | 3 | 3 |
| | 4 | 2 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 3 | 0 | 1 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 2 |
| | 0030 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Karyomegaly
Vacuolization Cytoplasmic | | | | 1 | | 2 | | | | 1 | | | | | | | | | | | | 2 | | | | |
| Adrenal Medulla
Hyperplasia
Bilateral, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland
Hyperplasia | + | + | + | M | + | + | + | + | M | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pituitary Gland
Pars Distalis, Hyperplasia | + | + | + | 4 | + | 2 | + | + | + | + | 1 | + | + | + | + | + | + | 1 | + | + | 2 | + | + | + | + | 1 |
| Thyroid Gland
C-cell, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ovary
Cyst, Epithelial
Bursa, Cyst
Follicle, Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| | | | X | | | X | | | | | X | | | | | | | | | | X | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
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300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) | | | | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|------|------|------|------|
| | 0514 | 0732 | 0564 | 0771 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0676 | 0777 | 0777 | 0777 | 0777 | 0474 | 0474 | 0777 | 0676 | 0777 | | | 0777 | 0676 | 0777 | 0777 |
| | 1 | 3 | 6 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 3 | 3 | 3 | 0 | 0 | 3 | 1 | 3 | 3 | 3 | 6 | 3 | 3 | 3 |
| | 4 | 2 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 3 | 0 | 1 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 2 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Dilation | | | | | | | | | | | | | | | 3 | | | | | | | 3 | | | | |
| Endometrium, Hyperplasia, Cystic | | 2 | 1 | 1 | | 2 | 2 | 3 | | 2 | 1 | 2 | 4 | 2 | | 1 | 1 | 1 | 3 | 3 | | | 2 | 2 | | |
| Endometrium, Metaplasia, Squamous | | 2 | | | | 2 | | | | | | 1 | 1 | 1 | | 1 | 1 | | 2 | 3 | | | 2 | 2 | | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hypercellularity | 4 | | 4 | | | 3 | | 3 | 2 | 4 | 3 | | 2 | | 4 | 3 | | 4 | | 2 | | 2 | | 3 | |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Extramedullary Hematopoiesis | 3 | 1 | 2 | | 2 | 1 | 1 | 2 | 2 | 4 | 1 | | 1 | | 3 | 3 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 2 |
| Hyperplasia, Lymphoid | | | | | | | | 2 | | | | | | | | | | | | | | | | | |
| Pigment | 1 | 3 | 2 | 3 | 2 | 1 | 3 | 3 | 2 | 1 | 2 | 3 | 3 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Lymphoid Follicle, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |
| Ectopic Parathyroid Gland | | | | | | | | | | | | | | | | | | | | | | | | | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Focal, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | |
| Duct, Dilatation, Focal | | 2 | | | | | 3 | | 3 | | | | | | 2 | | | | | | | | | | 3 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

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X .. Lesion present
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Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|--|
| | | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0
5
1
4 | 0
7
3
2 | 0
5
6
4 | 0
7
0
1 | 0
7
3
1 | 0
7
3
1 | 0
7
3
1 | 0
7
3
1 | 0
7
3
1 | 0
7
3
1 | 0
7
3
1 | 0
7
3
1 | 0
6
7
5 | 0
7
3
1 | 0
7
3
1 | 0
4
0
3 | 0
4
0
0 | 0
7
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2 | | | | | | | |
| HARLAN SPRAGUE DAWLEY RATS
FEMALE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 300 ppm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | ANIMAL ID | | | | | | | | | | | | | | | | | | | | females
(cont...) | | | | | | | | | | | |
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9 | | |

Cyst Epithelial Inclusion
 Inflammation, Chronic Active
 Ulcer

4
4

MUSCULOSKELETAL SYSTEM

Bone +

NERVOUS SYSTEM

Brain + + + + + + + + + + + + + + + A + + + + + + + +
 Hemorrhage 4

RESPIRATORY SYSTEM

Lung +
 Alveolus, Infiltration Cellular, Histiocyte 2 3 1 3 3 3 3 1 3 2 2 3 1 2 2 2 3 3 2 3 1 3
 Alveolus, Inflammation, Chronic 2 1 2 2 1 2 2 2 1 1 2 2 1 2 1 2 1 2 1 2
 Alveolus, Inflammation, Chronic Active 1
 Nose +
 Respiratory Epithelium, Inflammation, Acute 1
 Respiratory Epithelium, Metaplasia, Squamous 3
 Respiratory Epithelium, Ulcer, Multifocal 1

Trachea +

SPECIAL SENSES SYSTEM

Eye +

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
 X .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
 I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

Experiment Number: 10987 - 01
Test Type: Chronic PN
Route: DOSED FEED
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate
CAS Number: 84-74-2

Date Report Requested: 08/20/2019
Time Report Requested: 12:03:41
First Dose M/F: 08/30/10 / 08/31/10
Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | females
(cont...) | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|-----------------------|
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| | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | | | |

URINARY SYSTEM

| Kidney
Hydronephrosis
Hyperplasia, Tubular
Nephropathy, Chronic Progressive
Renal Tubule, Cyst

Urinary Bladder
Inflammation, Acute
Urothelium, Hyperplasia | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
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5 |
| | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney Hydronephrosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Kidney Hyperplasia, Tubular | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney Nephropathy, Chronic Progressive | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney Renal Tubule, Cyst | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | | 3 | 2 | 1 | 3 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | 1 | | 1 | 2 | 1 |
| Urinary Bladder Inflammation, Acute | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Urinary Bladder Urothelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | |
| ANIMAL ID | 00326 | 00327 | 00328 | 00329 | 00330 | 00331 | 00332 | 00333 | 00334 | 00335 | 00336 | 00337 | 00338 | 00339 | 00340 | 00341 | 00342 | 00343 | 00344 | 00345 | 00346 | 00347 | 00348 | 00349 | 00350 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Colon
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
1 |
| Intestine Large, Rectum
Parasite Metazoan | + | + | + | + | + | X | + | + | + | + | + | X | + | + | + | X | + | + | + | + | + | + | + | + | 50
9 |
| Intestine Small, Duodenum
Epithelium, Necrosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
1 2.0 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis, Focal | | | | | | | | | | | | | | | | | | | | | | | | | 3 1.3 |
| Basophilic Focus | X | | | X | | | | | | | | | | | | | | | X | | | | | | 3 |
| Clear Cell Focus | | | | | | | | | X | | | | | | X | | | | | | | | | | 8 |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Fatty Change, Focal | | | | | | | | | | | | | | | 2 | | | | | | | | | | 1 2.0 |
| Hemorrhage, Focal | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 1.0 |
| Hepatodiaphragmatic Nodule | | | X | | | | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | 1 | | | | | 3 1.0 |
| Mixed Cell Focus | | | | | | | | | | X | | | | | | | | X | | | | | X | | 5 |
| Bile Duct, Cyst | | | | X | | | | | | | | | | | | X | | | | | | | | | 2 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 10987 - 01

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Species/Strain: RATS/HSD

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Lab: BAT

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FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|----------|
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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Bile Duct, Hyperplasia
Hepatocyte, Necrosis | 1 | | 1 | 1 | | | | 1 | 1 | | | | | 1 | | | 2 | 1 | | | | | | | 11 | 1.1 |
| | | | | | | | | | | | | | | | | | 2 | 1 | | | 2 | | 1 | | 6 | 1.3 |
| Pancreas
Polyarteritis Nodosa
Acinus, Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 2 | | | | | | | | 49 | |
| | | | | | | | | | | | | | | | | | | | | | 1 | | | | 2 | 2.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.5 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Stomach, Forestomach
Mineral
Ulcer | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Stomach, Glandular
Erosion
Mineral
Glands, Ectasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| | | 2 | | | | | | | | | | | | | | | | | | 2 | | | | 2 | 2.0 | |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| | | | | | | | | | 1 | | | | | | | | | | | | | | | 1 | 1.0 | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Heart
Cardiomyopathy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | 1 | | 1 | | | | | 1 | 2 | 3 | | | | | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 33 | 1.2 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Adrenal Cortex
Degeneration, Cystic
Hyperplasia, Focal
Hypertrophy, Focal | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | | | | | | | | | | | | | | | | | | | | | | 2 | 3.5 |
| | 3 | | 2 | | 1 | 1 | | 2 | 1 | | | 1 | | | | 2 | 4 | 4 | | 1 | | 1 | 2 | 27 | 1.6 |
| | 2 | 2 | 1 | | | | 1 | | 1 | 2 | | 1 | 1 | 1 | | | 4 | 1 | 1 | | 1 | | 2 | 34 | 1.5 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

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300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|------|
| | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | | 0732 |
| ANIMAL ID | 00326 | 00327 | 00328 | 00329 | 00330 | 00331 | 00332 | 00333 | 00334 | 00335 | 00336 | 00337 | 00338 | 00339 | 00340 | 00341 | 00342 | 00343 | 00344 | 00345 | 00346 | 00347 | 00348 | 00349 | 00350 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Karyomegaly | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |
| Vacuolization Cytoplasmic | | | 1 | | | | | | | | 1 | | | | | | | | | | | | | | | 6 | 1.3 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Hyperplasia | | | | | | | | | | | 2 | | | | 2 | | | | | | | | | | 3 | 1.7 | |
| Bilateral, Hyperplasia | | | | | | | | | | | | | | | | | | 2 | | | | | | | 1 | 2.0 | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | M | + | + | 45 | | |
| Hyperplasia | | | | | | | | | | | | | 2 | | | | | | | | | | | | 1 | 2.0 | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Pars Distalis, Hyperplasia | | | | | 1 | | | 4 | 3 | | | | | 2 | 1 | 2 | | | | | 1 | | | 4 | 15 | 2.2 | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| C-cell, Hyperplasia | | | | | | 4 | | | | | 2 | | | | | | | 3 | | 2 | | | | 2 | 8 | 2.3 | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst, Epithelial | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Bursa, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Follicle, Cyst | | | X | | | | | | | | | | X | | | | | | | | | | | | 5 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
| | 0
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2 | 0
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1 | 0
7
3
0 | 0
7
3
0 | 0
7
3
0 | 0
4
9
4 | 0
7
3
2 | 0
7
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2 | 0
7
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2 | 0
7
3
2 | 0
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3
2 | 0
7
3
2 | 0
5
9
4 | 0
7
3
2 | 0
4
6
6 | 0
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2 | 0
7
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2 | 0
7
3
2 | | |
| ANIMAL ID | 0
0
3
2
6 | 0
0
3
2
7 | 0
0
3
2
8 | 0
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3
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9 | 0
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0 | 0
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3 | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Dilation | | | | | 2 | | | | | 3 | | | | | 2 | | 3 | | | | | | | 6 2.7 |
| Endometrium, Hyperplasia, Cystic | 2 | 1 | | | | 2 | | 1 | 2 | 2 | | | 2 | 2 | | | 3 | | | | | 4 | 2 | 29 2.0 |
| Endometrium, Metaplasia, Squamous | 2 | 3 | | | | 2 | | 1 | | | | | 1 | 2 | | | 2 | | 3 | 1 | | 1 | 4 | 22 1.8 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hypercellularity | | | | 2 | | | | | | | | 4 | | | | | 3 | 3 | 3 | | | 2 | 3 | 21 3.0 |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Extramedullary Hematopoiesis | 2 | 1 | 2 | 2 | 1 | 2 | | 2 | 1 | 1 | 2 | | | 1 | 1 | | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 41 1.6 |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Pigment | 2 | 2 | 2 | 2 | 2 | | 3 | 3 | 2 | 2 | 3 | | 2 | 2 | 2 | | 2 | | 1 | 1 | 2 | 2 | 1 | 46 2.0 |
| Lymphoid Follicle, Atrophy | | | | | | | 4 | | | | | | | | | | | | | | | | | 1 4.0 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Ectopic Parathyroid Gland | | | | X | | | | | | | | | | | | | | | | | | | | 1 |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Inflammation, Focal, Chronic | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Duct, Dilatation, Focal | 2 | | | | | | | | | | 1 | | 2 | | | | | | | | | | | 8 2.3 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--|-----------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------|
| | 7 | | | | | | | | | | | | | | | | | | | | |
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | 3 | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | |
| | ANIMAL ID | 0 | | | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|
| Cyst Epithelial Inclusion | | | | | | | | | | | X | | | | | | | | | | | | | | | | 1 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Alveolus, Infiltration Cellular, Histiocyte | 3 | 3 | 3 | 1 | 2 | 2 | 1 | 3 | 2 | 3 | 3 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 2 | 2 | | 47 2.3 |
| Alveolus, Inflammation, Chronic | | | 1 | 2 | | 2 | | 2 | 2 | 2 | 2 | 1 | 1 | | 2 | 2 | 2 | 3 | 1 | 2 | 2 | 2 | 2 | 2 | | | 38 1.7 |
| Alveolus, Inflammation, Chronic Active | 2 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | 3 1.3 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Respiratory Epithelium, Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Respiratory Epithelium, Ulcer, Multifocal | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE 300 ppm | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------|-------------------------------------|
| | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50
4 1.0 | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 7 | 3 | 9 | 3 | 3 | 3 | 3 | 8 | 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 6 | 3 | 3 | 3 | | |
| 3 | 2 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 6 | 2 | 2 | | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 |
| 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | |
| 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | | |
| 2 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 6 | 7 | 8 | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
1 2.0
1 1.0
46 1.5
1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | 49
1 2.0
1 1.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
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Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------------------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | 0564 | 0731 | 0731 | 0731 | 0665 | 0665 | 0771 | 0773 | 0351 | 0448 | 0620 | 0771 | 0773 | 0773 | 0773 | 0663 | 0732 | 0574 | 0577 | 0733 | 0733 | 0773 | 0773 | 0773 | females
(cont...) |
| | ANIMAL ID | 00351 | 00352 | 00353 | 00354 | 00355 | 00356 | 00357 | 00358 | 00359 | 00360 | 00361 | 00362 | 00363 | 00364 | 00365 | 00366 | 00367 | 00368 | 00369 | 00370 | 00371 | 00372 | 00373 | 00374 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | X | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum
Inflammation, Chronic Active
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | X | | | | | | | | | | | | | | X | | | | | | | X | |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Basophilic Focus | | | | | | | | | | | | | | | | | X | | | | | | | | |
| Clear Cell Focus | | | | X | | X | | | | | | | | | | X | | X | | | | | | X | |
| Eosinophilic Focus | | | | | X | | X | | X | | | | | | | | | | | | | | | | |
| Extramedullary Hematopoiesis | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | |
| Fatty Change, Focal | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatty Change, Multifocal | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatodiaphragmatic Nodule | X | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | X | | | | | | | | X | |
| Bile Duct, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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Test Type: Chronic PN

Dibutyl Phthalate

Time Report Requested: 12:03:41

Route: DOSED FEED

CAS Number: 84-74-2

First Dose M/F: 08/30/10 / 08/31/10

Species/Strain: RATS/HSD

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---|---|-----------|----------------------|
| | 0
5
6
4 | 0
7
3
1 | 0
7
3
1 | 0
7
3
1 | 0
7
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1 | 0
6
2
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5 | 0
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0 | 0
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5
1 | 0
4
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8 | 0
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0 | 0
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1 | 0
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2 | 0
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0 | 0
7
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2 | 0
5
2
4 | 0
5
7
0 | 0
7
3
0 | 0
7
3
0 | 0
7
3
0 | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| Bile Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Centrilobular, Hepatocyte, Vacuolization
Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocyte, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocyte, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas
Acinus, Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Stomach, Forestomach
Inflammation, Focal, Chronic Active
Ulcer | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Epithelium, Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular
Inflammation, Focal, Chronic Active
Mineral | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Heart
Cardiomyopathy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| | 1 | | 1 | 1 | 1 | 2 | | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | 2 | 2 | 2 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Adrenal Cortex
Angiectasis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 10987 - 01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 08/20/2019

Test Type: Chronic PN

Dibutyl Phthalate

Time Report Requested: 12:03:41

Route: DOSED FEED

CAS Number: 84-74-2

First Dose M/F: 08/30/10 / 08/31/10

Species/Strain: RATS/HSD

Lab: BAT

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | females
(cont...) |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 5 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 3 | 4 | 6 | 2 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 5 | 7 | 7 | 7 | 7 | 7 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Degeneration, Cystic
Hyperplasia, Focal
Hypertrophy, Focal
Karyomegaly
Mineral | 6 | 3 | 3 | 3 | 3 | 2 | 7 | 3 | 3 | 5 | 4 | 1 | 9 | 3 | 3 | 3 | 3 | 6 | 3 | 2 | 7 | 3 | 3 | 3 | 3 | | |
| Adrenal Medulla
Hyperplasia
Infiltration Cellular, Mononuclear Cell | 4 | 1 | 1 | 1 | 1 | 5 | 5 | 1 | 0 | 1 | 8 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | | |
| Islets, Pancreatic | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Parathyroid Gland | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | |
| Pituitary Gland
Angiectasis
Pars Distalis, Hyperplasia
Pars Distalis, Karyomegaly | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | | |
| Thyroid Gland
C-cell, Hyperplasia
Follicular Cell, Hyperplasia | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | | |
| | + | + | + | + | + | + | + | + | + | 2 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| | M | M | + | + | M | + | M | + | + | + | M | M | + | + | M | + | M | M | + | + | + | + | + | + | M | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| | | | 3 | 4 | | 3 | | | | | | | | 4 | 4 | 4 | | | | | | | | 1 | 1 | | |
| | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Clitoral Gland

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
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Experiment Number: 10987 - 01

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Species/Strain: RATS/HSD

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Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE 1000 ppm | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) | | |
|-------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|--------------------------|--------------------------|--|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 0 | |
| 5 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 3 | 4 | 6 | 2 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 5 | 7 | 7 | 7 | 7 | 000000000000000000000000 | 000000000000000000000000 | |
| 6 | 3 | 3 | 3 | 3 | 3 | 2 | 7 | 3 | 3 | 5 | 4 | 1 | 9 | 3 | 3 | 3 | 3 | 6 | 3 | 2 | 7 | 3 | 3 | 3 | 3 | 000000000000000000000000 | 000000000000000000000000 | |
| 4 | 1 | 1 | 1 | 1 | 1 | 5 | 5 | 1 | 0 | 1 | 8 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 000000000000000000000000 | 000000000000000000000000 | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| Bursa, Cyst | | | | | | X | X | | | | | | | | | | | | | | | | | |
| Follicle, Cyst | | | X | | | | | | | | | | | | | | | | | | | X | | |
| Rete Ovarii, Cyst | | | | | | | | | | X | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Dilation | | | | | | | | | | | | | | | | | | | | | | 3 | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | |
| Thrombus | | | | | | | | | | | | | | | | | | | | | | | 4 | |
| Cervix, Myometrium, Hyperplasia | | | | | 3 | | | | | | | | | | | | | | | | | | | |
| Endometrium, Hyperplasia, Cystic | 1 | | | | 2 | | | 2 | | | | | 2 | | 1 | | 2 | 2 | | | 2 | 2 | | 1 |
| Endometrium, Metaplasia, Squamous | | 2 | | 4 | 4 | | | 3 | | | | | | 4 | 1 | | | 2 | 3 | | | | | 1 |

Vagina

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hypercellularity | 4 | | | 3 | | | 4 | | | 3 | 3 | 3 | | | | | | | | 3 | | | | |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia, Lymphoid | | | | | | | | | | 2 | | | | | | | | | | | | | | |
| Hyperplasia, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Extramedullary Hematopoiesis | 1 | | 1 | | 1 | | 2 | 1 | 2 | | 3 | 2 | | | | 2 | | 1 | | 3 | | 1 | 1 | |
| Hyperplasia, Lymphoid | | | | | | | | | | | 2 | | | | | | | | | | | | 2 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
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Experiment Number: 10987 - 01

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Dibutyl Phthalate

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Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | 0
5
6
4 | 0
7
3
1 | 0
7
3
1 | 0
7
3
1 | 0
6
2
5 | 0
6
7
5 | 0
7
3
1 | 0
7
3
0 | 0
3
5
1 | 0
4
1
8 | 0
6
2
0 | 0
7
3
1 | 0
7
3
1 | 0
7
3
2 | 0
6
3
0 | 0
7
3
2 | 0
5
2
4 | 0
5
7
0 | 0
7
3
0 | 0
7
3
0 | 0
7
3
0 | 0
7
3
2 | females
(cont...) |
| | ANIMAL ID | 0
0
3
5
1 | 0
0
3
5
2 | 0
0
3
5
3 | 0
0
3
5
4 | 0
0
3
5
6 | 0
0
3
5
7 | 0
0
3
5
8 | 0
0
3
5
9 | 0
0
3
5
6 | 0
0
3
5
0 | 0
0
3
6
1 | 0
0
3
6
2 | 0
0
3
6
3 | 0
0
3
6
4 | 0
0
3
6
5 | 0
0
3
6
6 | 0
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6 | 0
0
3
7
0 | 0
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3
7
1 | 0
0
3
7
2 | 0
0
3
7
3 | 0
0
3
7
4 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|--|--|--|---|---|---|---|--|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pigment | | | | 2 | 2 | 2 | 3 | | 3 | 2 | | | 1 | 3 | 2 | 2 | 4 | 3 | 4 | 3 | 3 | 3 | 2 | 3 | 2 |
| Lymphoid Follicle, Atrophy | | | | | | | 3 | | | | | | | 2 | | | | | | | 2 | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic | | | 2 | | 1 | | | | | | | | | | | | | | | | | | | |
| Duct, Dilation, Focal | | | | | 1 | 2 | | 2 | | | | | | 2 | | 2 | | | | | | | | |
| Duct, Galactocele | | | 2 | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | 4 | | 3 | | | | | | | | | |
| Epithelium, Hyperplasia, Lobular, Focal | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic Active | | | 2 | | | | | | | | | | | | | | | | | | | | | |
| Ulcer, Multifocal | | | 2 | | | | | | | | | | | | | | | | | | | | | |
| Epidermis, Hyperplasia | | | 2 | | | | | | | | | | | | | | | | | | | | | |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
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Route: DOSED FEED

CAS Number: 84-74-2

First Dose M/F: 08/30/10 / 08/31/10

Species/Strain: RATS/HSD

Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) |
|-------------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|-------------------|
| | 0564 | 0731 | 0771 | 0773 | 0773 | 0625 | 0665 | 0773 | 0773 | 0335 | 0441 | 0620 | 0727 | 0773 | 0773 | 0773 | 0663 | 0773 | 0552 | 0557 | 0773 | 0773 | 0773 | 0773 | | |
| 1000 ppm | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 | 00351 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Alveolar Epithelium, Hyperplasia | 1 | | | | | 3 | | | | | | | | | | | | | | | | | | |
| Alveolus, Infiltration Cellular, Histiocyte | 1 | | 2 | 1 | | 2 | 2 | 3 | | 1 | 1 | 3 | 1 | 3 | 1 | 1 | | 3 | 3 | 2 | 2 | 2 | 2 | 3 |
| Alveolus, Inflammation, Chronic | | | 1 | | | 2 | 2 | 2 | | 1 | | 2 | | 2 | | | | 2 | 2 | 2 | 2 | 2 | | 2 |
| Alveolus, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Ulcer, Multifocal | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Harderian Gland Atrophy | | | | | | | 2 | | | | | | | | | | | | | | | | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Calculus Micro Observation Only | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hydronephrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy, Chronic Progressive | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 3 | 2 | 1 |
| Pelvis, Dilation | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
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| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | 0564 | 0731 | 0731 | 0731 | 0625 | 0661 | 0730 | 0770 | 0331 | 0418 | 0620 | 0721 | 0771 | 0771 | 0772 | 0660 | 0722 | 0554 | 0557 | 0733 | 0733 | 0733 | 0770 | 0770 | 0772 |
| | ANIMAL ID | 00351 | 00352 | 00353 | 00354 | 00355 | 00356 | 00357 | 00358 | 00359 | 00360 | 00361 | 00362 | 00363 | 00364 | 00365 | 00366 | 00367 | 00368 | 00369 | 00370 | 00371 | 00372 | 00373 | 00374 | 00375 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

females
(cont...)

Urinary Bladder

+ +

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|-------------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | |
| 1000 ppm | 00376 | 00377 | 00378 | 00379 | 00380 | 00381 | 00382 | 00383 | 00384 | 00385 | 00386 | 00387 | 00388 | 00389 | 00390 | 00391 | 00392 | 00393 | 00394 | 00395 | 00396 | 00397 | 00398 | 00399 | 00400 | 50 |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|-----|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Intestine Large, Colon
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 | | |
| Intestine Large, Rectum
Inflammation, Chronic Active
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 | 1.0 | 3 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Clear Cell Focus | | | X | | | | | | | | | | | | | | | | | | | | | | | | 8 | | |
| Eosinophilic Focus | | | | | X | | | | | | | | | | | | | | | | | | | | | | 4 | | |
| Extramedullary Hematopoiesis | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1.0 | |
| Fatty Change, Focal | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Fatty Change, Multifocal | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | | |
| Bile Duct, Cyst | | | | X | | | | | | | | | | | | | | | | | | | | | | | 2 | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|----------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | 07 | 07 | 07 | 06 | 05 | 07 | 06 | 05 | 06 | 03 | 03 | 07 | 05 | 07 | 07 | 07 | 07 | 03 | 04 | 07 | 07 | 07 | 07 | 06 | 05 | * TOTALS |
| | | 32 | 32 | 32 | 36 | 39 | 33 | 39 | 44 | 39 | 09 | 39 | 11 | 11 | 33 | 33 | 33 | 33 | 55 | 99 | 33 | 33 | 33 | 35 | 99 | | |
| | ANIMAL ID | 00376 | 00377 | 00378 | 00379 | 00380 | 00381 | 00382 | 00383 | 00384 | 00385 | 00386 | 00387 | 00388 | 00389 | 00390 | 00391 | 00392 | 00393 | 00394 | 00395 | 00396 | 00397 | 00398 | 00399 | | |

Bile Duct, Hyperplasia 1 1 6 1.2
 Centrilobular, Hepatocyte, Vacuolization 1 1.0
 Cytoplasmic
 Hepatocyte, Hypertrophy 1 2.0
 Hepatocyte, Necrosis 2 3 2.0

Pancreas + 50
 Acinus, Atrophy 2 1.0

Salivary Glands + 50

Stomach, Forestomach + 50
 Inflammation, Focal, Chronic Active 2 1 2.0
 Ulcer 3 1 3.0
 Epithelium, Hyperplasia, Focal 3 1 3.0

Stomach, Glandular + 50
 Inflammation, Focal, Chronic Active 2 1 2.0
 Mineral 1 1 1.0

CARDIOVASCULAR SYSTEM

Blood Vessel + 50

Heart + 50
 Cardiomyopathy 1 1 2 2 1 1 2 1 2 2 1 1 1 2 1 2 1 1 1 2 3 42 1.4

ENDOCRINE SYSTEM

Adrenal Cortex + 50
 Angiectasis 2 1 2.0

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
 X .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
 I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

Experiment Number: 10987 - 01

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 7 | 7 | 7 | 6 | 5 | 7 | 6 | 5 | 6 | 3 | 3 | 7 | 5 | 7 | 7 | 7 | 7 | 3 | 4 | 7 | 7 | 7 | 6 | 5 | |
| ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | | | | | | | | 2 | | | | | | | | | | 2 | | | | 2 | 2 | 4 | 2.0 |
| Hyperplasia, Focal | | | | | 1 | 1 | | | 1 | | | 1 | 2 | 2 | | 1 | | 2 | | 1 | | 1 | 1 | 23 | 1.5 |
| Hypertrophy, Focal | 1 | | 1 | | | 1 | 1 | | 1 | | | | 1 | | 2 | | 2 | 1 | | 1 | 2 | 3 | 1 | 29 | 1.7 |
| Karyomegaly | | | | | 1 | | | | | | | | | | | | | | | | 1 | | | 4 | 1.0 |
| Mineral | | | | | | | | | | | | | | | | | | | | | | 2 | | 1 | 2.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | | | | | | 1 | | | | | 3 | | | | | 1 | | 7 | 1.7 |
| Infiltration Cellular, Mononuclear Cell | | | | | | | | | 1 | | | | | | | | | | | | | | | 1 | 1.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | M | 37 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | 3 | | 1 | 3.0 |
| Pars Distalis, Hyperplasia | | | | | | | | | | | | | | | | | | | 2 | | 4 | 2 | 1 | 14 | 2.6 |
| Pars Distalis, Karyomegaly | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| C-cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 3 | | 6 | 2.8 |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 2 | | 2 | 2.0 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
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1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|----------|
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|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|-----|
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 | 2.0 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bursa, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Follicle, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Rete Ovarii, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|-----|
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 | 3.0 |
| Dilation | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Thrombus | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Cervix, Myometrium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Endometrium, Hyperplasia, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 |
| Endometrium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | | | 19 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| Vagina | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 18 | 3.0 |
| Hypercellularity | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|-----|
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 | 2.0 |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

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|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|--|
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|--|

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 30 | 1.8 |
| Extramedullary Hematopoiesis | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
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|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------|------------|
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| Pigment | 1 | 1 | 2 | | | | 4 | | 3 | 3 | | | 1 | 2 | | | 2 | | 1 | 2 | 1 | 1 | 1 | 4 | 2 | 36 | 2.3 |
| Lymphoid Follicle, Atrophy | | | | | | | 3 | | 2 | | | | | | | | | | | | | | | | | 5 | 2.4 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| INTEGUMENTARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 |
| Duct, Dilation, Focal | | | | | | | | | | | | | | | | | | | | | 2 | | 2 | 3 | 8 | 2.0 | |
| Duct, Galactocele | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | 2 | | | | | | | | | | | | 3 | 3.0 |
| Epithelium, Hyperplasia, Lobular, Focal | | | | | | | | | | | | | 3 | | | | | | | | | | | | | 1 | 3.0 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Ulcer, Multifocal | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Epidermis, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| MUSCULOSKELETAL SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| NERVOUS SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | 2 | | 1 | 2.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|-------------|-----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|------|------|------|
| | 07 | 07 | 07 | 06 | 05 | 07 | 06 | 05 | 06 | 03 | 03 | 07 | 05 | 07 | 07 | 07 | 07 | 03 | 04 | 07 | | 07 | 07 | 07 | 06 |
| 1000 ppm | 3 | 3 | 3 | 6 | 9 | 3 | 9 | 4 | 9 | 0 | 9 | 1 | 1 | 3 | 3 | 3 | 3 | 5 | 9 | 3 | 3 | 3 | 5 | 9 | 1 |
| ANIMAL ID | 0037 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|--|---|---|---|---|---|----|-----|
| Lung | + | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 |
| Alveolus, Infiltration Cellular, Histiocyte | 3 | 1 | 2 | 1 | 2 | 2 | 3 | 2 | 3 | 1 | 2 | 3 | | 3 | 3 | 3 | 2 | | 2 | 3 | 3 | 2 | 2 | 3 | 4 |
| Alveolus, Inflammation, Chronic | 2 | 1 | 2 | 1 | | 2 | 2 | 1 | 2 | 1 | 1 | 2 | | 2 | 2 | 2 | 1 | | | 2 | 2 | 2 | | | 2 |
| Alveolus, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Nose | + | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Respiratory Epithelium, Ulcer, Multifocal | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Trachea | + | | | | | | | | | | | | | | | | | | | | | | | 50 | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|-----|
| Eye | + | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Harderian Gland Atrophy | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|----|-----|
| Kidney | + | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Calculus Micro Observation Only | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hydronephrosis | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Nephropathy, Chronic Progressive | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 1 | | 1 | 2 | 3 | 1 | 2 | 3 | 4 |
| Pelvis, Dilation | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

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Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

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Lab: BAT

Table with columns for DAY ON TEST and ANIMAL ID, and rows for HARLAN SPRAGUE DAWLEY RATS FEMALE 3000 ppm. Includes a column for 'females (cont...)'.

ALIMENTARY SYSTEM

Table showing lesion results for the Alimentary System (Esophagus, Intestine Large, Intestine Small, Liver) across 20 animals. Lesions are indicated by '+', 'X', 'M', or 'A'.

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
3000 ppm | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | females
(cont...) |
| | | 5 | 7 | 7 | 7 | 5 | 7 | 7 | 4 | 7 | 3 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 3 | 7 | 7 | |
| | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|--|--|--|--|--|--|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Bile Duct, Hyperplasia | 1 | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | |
| Centrilobular, Hepatocyte, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocyte, Cytoplasmic Alteration | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocyte, Necrosis | | | | | | | | | 2 | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | | + |
|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pancreas | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Atypia Cellular | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Salivary Glands | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cardiomyopathy | | | | | 1 | | | | 1 | 2 | 1 | 1 | 1 | | 1 | 1 | | 1 | | 1 | 1 | 1 | 2 | 2 | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | 1 | | | | | | 1 | | | | | | | | | | | | | | | | | | | 3 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
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Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
3000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---|-----------|----------------------|
| | 0
5
0
1 | 0
7
1
2 | 0
7
3
0 | 0
7
3
0 | 0
5
9
1 | 0
7
3
0 | 0
7
3
0 | 0
4
8
3 | 0
7
2
1 | 0
3
2
6 | 0
7
3
1 | 0
7
3
1 | 0
5
4
3 | 0
7
3
1 | 0
7
3
1 | 0
0
3
2 | 0
6
7
2 | 0
7
3
2 | 0
7
3
2 | 0
3
8
8 | 0
7
3
2 | 0
3
8
2 | 0
7
3
2 | | | |
| Hyperplasia, Focal | | | 2 | 1 | | | 1 | | | | 1 | | 1 | | 1 | | | 1 | 1 | 1 | 1 | | 1 | | | |
| Hypertrophy, Focal | | 2 | 1 | 2 | | 1 | 1 | | | | 1 | 1 | | | 1 | 1 | | 1 | 2 | 2 | | 1 | 1 | | | |
| Karyomegaly | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thrombus | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | 1 | | | | 1 | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Hyperplasia | | | | | | | | | | | | 2 | | | | | | | | | | | 1 | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Hyperplasia | | | | | | | | | | | | | | | | 3 | | | | | | | M | + | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Pars Distalis, Hyperplasia | | 1 | | 2 | | 4 | 2 | | | | 4 | | | | | | | | 1 | | | | 4 | 4 | | |
| Pars Distalis, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pars Distalis, Karyomegaly | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| C-cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 4 | | | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

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Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

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Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
3000 ppm | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 5 | 7 | 7 | 7 | 5 | 7 | 7 | 4 | 7 | 3 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 3 | 7 | 7 | 3 | 7 | 3 | 7 | 3 | 8 | 7 | 7 | 3 | 7 | 7 | 7 | 7 | 7 |
| | | 0 | 1 | 3 | 3 | 9 | 3 | 3 | 8 | 2 | 2 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 7 | 3 | 3 | 3 | 3 | 8 | 3 | 8 | 3 | 8 | 3 | 8 | 3 | 3 | 8 | 3 | 3 | 3 | 3 | 3 | 3 |
| ANIMAL ID | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 6 | 1 | 1 | 1 | 3 | 1 | 1 | 2 | 2 | 6 | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

females (cont...)

Clitoral Gland

+ + + + + + + + M + + + + + + + + + + + + + +

Ovary
Bursa, Cyst
Follicle, Cyst

+ + + + + + + + M + + + + + + + + + + + + + + + +
X

Uterus
Adenomyosis
Dilation
Inflammation, Chronic Active
Cervix, Myometrium, Hyperplasia
Endometrium, Hyperplasia, Cystic
Endometrium, Metaplasia, Squamous

+ + + + + + + + M + + + + + + + + + + + + + + + +
2 1 1 2 2 2 3 3 3
1 4 1 1 2 3 3

Vagina

+ +

HEMATOPOIETIC SYSTEM

Bone Marrow
Hypercellularity

+
3 3 1 4 3 3 3 3 4 4 2 2 + + + + + + + +

Lymph Node
Lumbar, Hyperplasia, Plasma Cell
Mediastinal, Hemorrhage
Mediastinal, Hyperplasia, Plasma Cell

+ +

Lymph Node, Mandibular
Hyperplasia, Lymphoid
Hyperplasia, Plasma Cell

+ + + + + M +
1

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
X .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
3000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) | |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|-----------------------|------------------|
| | 0
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2
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1 | 0
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3
2 | 0
7
3
2 | 0
7
3
2 | 0
3
8
8 | 0
7
3
2 | | | 0
7
3
2 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0
0
4
0
1 | |

Lymph Node, Mesenteric
Hyperplasia, Lymphoid

+ + + + + + + + M + + + + + + + + + + + + + + + + +

Spleen
Extramedullary Hematopoiesis
Hyperplasia, Lymphoid
Pigment
Lymphoid Follicle, Atrophy

+
1 2 2 2 3 1 4 3 3 2 1 2 2 1 1 2 1 2 1 1 1 1 1
2
1 1 1 1 4 1 1 3 1 1 2 2 1 2 3 3 2 2
2

Thymus
Atrophy

+ M +

INTEGUMENTARY SYSTEM

Mammary Gland
Duct, Dilation, Focal

+ + + + + + + + M + + + + + + + + + + + + + + + + +
3 3 2

Skin

+ + + + + + + + M + + + + + + + + + + + + + + + + +

MUSCULOSKELETAL SYSTEM

Bone
Joint, Inflammation, Chronic

+ +

NERVOUS SYSTEM

Brain

+ +

RESPIRATORY SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE 3000 ppm | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) | | | |
|---|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|-------------------|------|------|------|
| | 0501 | 0701 | 0703 | 0703 | 0709 | 0703 | 0703 | 0708 | 0702 | 0703 | 0703 | 0703 | 0704 | 0703 | 0703 | 0703 | 0706 | 0707 | 0707 | 0703 | | | 0703 | 0707 | 0707 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Alveolus, Infiltration Cellular, Histiocyte | 2 | 3 | 3 | 2 | | 3 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | | 1 | 3 | 3 | 2 | 3 | 1 | | 3 | 3 | |
| Alveolus, Inflammation, Chronic | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | | 1 | 2 | | | 1 | 2 | 2 | 1 | | 1 | | 1 | 2 | |
| Alveolus, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | |
| Goblet Cell, Respiratory Epithelium, Hyperplasia | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| Respiratory Epithelium, Submucosa, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Atrophy | | 1 | | | | | | | | 1 | | | | | | | | | | | | | | | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Nephropathy, Chronic Progressive | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | | 1 | 1 | 1 | | 2 | 2 |
| Pelvis, Inflammation, Suppurative | | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| Renal Tubule, Pigment | | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Urothelium, Hyperplasia | | | | | 1 | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue

M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
3000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|------|------|------|
| | 0732 | 0732 | 0501 | 0361 | 0732 | 0646 | 0575 | 0766 | 0666 | 0776 | 0776 | 0776 | 0776 | 0776 | 0776 | 0776 | 0776 | 0666 | 0666 | 0776 | | 0776 | 0666 | 0776 | 0776 |
| ANIMAL ID | 0042 | 0042 | 0042 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 6 | 7 | 8 |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Rectum
Parasite Metazoan | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| | | | | | | | X | | | | | | | | | | | | | | X | X | X | | 6 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis, Focal | | | | | | | | | | | | | | | | | | | | | | | 4 | | 1 4.0 |
| Basophilic Focus | | | X | | X | X | | | | | | | | | | | | | | | | | | | 4 |
| Clear Cell Focus | | | | | X | | X | | X | | X | | | | | | | | X | | | | | | 10 |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Eosinophilic Focus | | | X | | | | | | | | | | | | | | | | | | | | | | 3 |
| Extramedullary Hematopoiesis | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | 3 1.0 |
| Fatty Change, Focal | | | | | | | | | | | | | | 1 | | | | | 1 | | | | | | 5 1.0 |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | | X | | 2 |
| Inflammation, Chronic Active | | | | | | | | | | | | | 1 | | | | | | | | | | | | 3 1.0 |
| Mixed Cell Focus | | | | | X | | | | | | X | X | | | | | | | | X | | | | | 8 |
| Polyarteritis Nodosa | | | | | | | | | | | 1 | | | | 1 | | | | | | | | | | 2 1.0 |
| Bile Duct, Cyst | | | | | | | | | | | | | | | | | | | | | X | X | | | 5 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * TOTALS |
|-----------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| HARLAN SPRAGUE DAWLEY RATS FEMALE | | 7 | 7 | 5 | 3 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | |
| 3000 ppm | | 3 | 3 | 0 | 6 | 3 | 4 | 3 | 3 | 7 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 1 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 2 | |
| ANIMAL ID | | 2 | 2 | 1 | 1 | 2 | 6 | 3 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|---|---|---|---|---|---|---|---|-----|---|---|---|---|-----|-----|---|----|----|-----|
| Bile Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | 1 | | | | | | | | | 6 | 1.2 | | | | | | | | | | | | | | | | | | | | |
| Centrilobular, Hepatocyte, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | | | | | | | | | |
| Hepatocyte, Cytoplasmic Alteration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | | | | | | | | | |
| Hepatocyte, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Polyarteritis Nodosa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | | | | |
| Acinus, Atypia Cellular | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 | | | | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Blood Vessel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cardiomyopathy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 32 | 1.2 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|-----|
| Adrenal Cortex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.6 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 3.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
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Experiment Number: 10987 - 01

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Date Report Requested: 08/20/2019

Test Type: Chronic PN

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Time Report Requested: 12:03:41

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First Dose M/F: 08/30/10 / 08/31/10

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
3000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-----|-----|
| | 0732 | 0732 | 0751 | 0736 | 0773 | 0764 | 0757 | 0776 | 0766 | 0777 | 0767 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | | | |
| ANIMAL ID | 00426 | 00447 | 00448 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | | | |
| Hyperplasia, Focal | | 1 | | 1 | | 1 | 1 | 1 | | 1 | | 1 | 1 | 1 | | | 1 | 2 | | 2 | | | |
| Hypertrophy, Focal | 1 | 2 | | 1 | | | 2 | 1 | 2 | | 1 | | | 2 | 3 | 1 | | 1 | 2 | | 1 | | |
| Karyomegaly | 1 | | | | | | | | 1 | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | 3 | | | | 3 | | | | | |
| Thrombus | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Adrenal Medulla Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| | | 2 | | | | | | | | | | | | 2 | | | | | | 2 | 1 | 2 | |
| Islets, Pancreatic Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| | | | | | | | | | 2 | | | | | | | | | | | | | | |
| Parathyroid Gland Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | 47 | | |
| | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Pituitary Gland Pars Distalis, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| | 1 | | | | | | | | | | | 1 | | 2 | | | 2 | | 1 | | 4 | 4 | |
| Pars Distalis, Hypertrophy | | | | 1 | | | | | | | | | | | | | | | | | | | |
| Pars Distalis, Karyomegaly | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland C-cell, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| | | | | | | | | | | | | | | | | | | 2 | 2 | | | 3 | 2.7 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
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| HARLAN SPRAGUE DAWLEY RATS
FEMALE
3000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| | 0732 | 0732 | 0751 | 0736 | 0776 | 0765 | 0757 | 0776 | 0766 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | |
| ANIMAL ID | 0046 | 0047 | 0048 | 0049 | 0050 | 0051 | 0052 | 0053 | 0054 | 0055 | 0056 | 0057 | 0058 | 0059 | 0060 | 0061 | 0062 | 0063 | 0064 | 0065 | 0066 | 0067 | 0068 | 0069 | 0070 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Bursa, Cyst | | | | | | X | | | | | | X | | | | | | | | | | | | | | 2 |
| Follicle, Cyst | | | | | | | | | | X | | | | | X | | | | | | | | | | | 3 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Adenomyosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Dilation | | | | | | | 4 | | | | | | | 2 | | | | | | | | | | | | 3 2.7 |
| Inflammation, Chronic Active | | | | | | | | | | | | | 4 | | | | | | | | | | | | | 1 4.0 |
| Cervix, Myometrium, Hyperplasia | | | | | | 4 | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Endometrium, Hyperplasia, Cystic | | | 2 | | 1 | 2 | | 1 | 2 | 1 | | 2 | | | | 1 | | 2 | | | 3 | | 2 | 1 | 3 | 21 2.0 |
| Endometrium, Metaplasia, Squamous | | | 1 | | | 2 | 4 | 1 | | | | 2 | 4 | | | 3 | | 1 | 1 | 2 | 1 | | 3 | 1 | | 22 1.9 |
| Vagina | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hypercellularity | | | 4 | 3 | | 4 | 4 | 1 | 4 | 4 | | | 4 | | 3 | | | 4 | | | | | 2 | | | 23 3.1 |
| Lymph Node | | | | + | | | + | | | | | | | | + | | | | | | | | | | | 5 |
| Lumbar, Hyperplasia, Plasma Cell | | | | | | | | 3 | | | | | | | | | | | | | | | | | | 1 3.0 |
| Mediastinal, Hemorrhage | | | | | | | | | | | | | | | 2 | | | | | | | | | | | 1 2.0 |
| Mediastinal, Hyperplasia, Plasma Cell | | | | | | 2 | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | 2 | | | 1 2.0 |
| Hyperplasia, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
3000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|--|
| | 0732 | 0732 | 0751 | 0736 | 0774 | 0765 | 0757 | 0776 | 0766 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | | | |
| ANIMAL ID | 00426 | 00447 | 00448 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | | | |
| Lymph Node, Mesenteric
Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49
1 3.0 | | |
| Spleen
Extramedullary Hematopoiesis
Hyperplasia, Lymphoid
Pigment
Lymphoid Follicle, Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
44 1.8
2 2.0
37 1.8
1 2.0 | | |
| Thymus
Atrophy | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48
1 2.0 | | |
| INTEGUMENTARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland
Duct, Dilation, Focal | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49
7 2.6 | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| MUSCULOSKELETAL SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone
Joint, Inflammation, Chronic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
1 1.0 | | |
| NERVOUS SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| RESPIRATORY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * TOTALS | |
|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|
| | | 7 | 7 | 5 | 3 | 7 | 6 | 5 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | | |
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
3000 ppm | | 3 | 3 | 0 | 6 | 3 | 4 | 3 | 3 | 7 | 8 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 1 | 3 | 3 | 3 | 2 | | |
| ANIMAL ID | | 2 | 2 | 1 | 1 | 2 | 6 | 3 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | | |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|--|--|--|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|----|---|----|-----|-----|-----|
| Lung | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | | | | |
| Alveolus, Infiltration Cellular, Histiocyte | 2 | 2 | 1 | 1 | 2 | 2 | | | | | 3 | | | 2 | 3 | 2 | 3 | 2 | 2 | | | 3 | 3 | | 3 | 2 | | 41 | 2.1 | | |
| Alveolus, Inflammation, Chronic | 1 | 2 | | 1 | | 1 | | | | | 2 | | | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | | 1 | | | 2 | | 35 | 1.5 | |
| Alveolus, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | | 1 | 3.0 | |
| Nose | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | | | | |
| Inflammation, Suppurative | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |
| Goblet Cell, Respiratory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Respiratory Epithelium, Submucosa, Inflammation, Chronic Active | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Trachea | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | | | | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|---|-----|
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Harderian Gland Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | 2 | 1.0 |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|-----|-----|---|-----|
| Kidney | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | | | | |
| Nephropathy, Chronic Progressive | 2 | 1 | 1 | 1 | 2 | 1 | | | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 3 | | 46 | 1.4 | | |
| Pelvis, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Renal Tubule, Pigment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Urinary Bladder | | | | | | | | | | | | | | | | | | | | | | | | | | 49 | | | | | |
| Urothelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 49 | 1 | 1.0 | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
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Experiment Number: 10987 - 01

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Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------------------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
10000 ppm | DAY ON TEST | 0730 | 0730 | 0655 | 0662 | 0773 | 0774 | 0472 | 0763 | 0661 | 0766 | 0773 | 0773 | 0574 | 0773 | 0773 | 0773 | 0578 | 0773 | 0665 | 0575 | 0773 | 0575 | 0474 | 0474 | 0474 | females
(cont...) |
| | ANIMAL ID | 00451 | 00452 | 00453 | 00454 | 00455 | 00456 | 00457 | 00458 | 00459 | 00460 | 00461 | 00462 | 00463 | 00464 | 00465 | 00466 | 00467 | 00468 | 00469 | 00470 | 00471 | 00472 | 00473 | 00474 | 00475 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parasite Metazoan | X | | | | X | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis, Focal | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clear Cell Focus | | | | | X | | | | | | | | | | | | | | | | | | | | |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | |
| Extramedullary Hematopoiesis | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage, Focal | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | 1 | | | | | | | | | | 1 | | | 1 | | | | | | | | |
| Bile Duct, Cyst, Multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | | | | | | | | | | 2 | 1 | | | 1 | | 1 | | | | | | |
| Hepatocyte, Cytoplasmic Alteration | 1 | 1 | 2 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 | | 1 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
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Experiment Number: 10987 - 01

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Dibutyl Phthalate

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
10000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|----------------------|
| | 0730 | 0730 | 0655 | 0662 | 0773 | 0774 | 0477 | 0766 | 0666 | 0777 | 0666 | 0777 | 0777 | 0575 | 0777 | 0777 | 0777 | 0575 | 0777 | 0666 | 0575 | 0777 | 0575 | 0474 | | |
| | 00451 | 00442 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | |

Hepatocyte, Necrosis

2 2

Mesentery

Pancreas

Basophilic Focus

Polyarteritis Nodosa

+
2

Salivary Glands

+ + + + + + + + + + + + + + + + + + + M + + + +

Stomach, Forestomach

Inflammation, Focal, Chronic Active

Ulcer

Epithelium, Hyperplasia

Epithelium, Hyperplasia, Focal

Epithelium, Hyperplasia, Multifocal

+
3
4

Stomach, Glandular

Mineral

+ +

CARDIOVASCULAR SYSTEM

Blood Vessel

Mineral

+
2

Heart

Cardiomyopathy

Hemorrhage

+
1 1

ENDOCRINE SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
10000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|--|
| | 0730 | 0733 | 0735 | 0736 | 0737 | 0737 | 0734 | 0737 | 0736 | 0736 | 0737 | 0737 | 0737 | 0735 | 0737 | 0737 | 0737 | 0735 | 0737 | 0736 | 0735 | 0737 | 0735 | 0734 | 0734 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00451 | | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | 2 | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | | | | |
| Hyperplasia, Focal | 1 | 2 | | | | | | | | 3 | | 2 | 2 | | | 2 | 1 | 1 | 1 | | 1 | | 1 | 2 | | | | |
| Hypertrophy, Focal | 1 | | | | | 1 | | | | | | 1 | 1 | 1 | | 2 | | | | 1 | | | 1 | | 1 | | | |
| Necrosis | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| Thrombus | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Hyperplasia | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | M | + | M | + | + | + | + | + | + | + | M | + | M | + | M | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Pars Distalis, Atypia Cellular | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| Pars Distalis, Cyst | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Pars Distalis, Hyperplasia | | | | 1 | | | | 1 | | | 2 | | 1 | | | | 1 | 4 | | | | 2 | 4 | | | | | |
| Pars Distalis, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| C-cell, Hyperplasia | | 1 | | | 2 | | | | | | | | | | | 2 | | | | | | | | | | | | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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10000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|
| | 0730 | 0730 | 0665 | 0665 | 0770 | 0770 | 0474 | 0774 | 0666 | 0666 | 0777 | 0777 | 0777 | 0575 | 0777 | 0777 | 0777 | 0575 | 0777 | 0666 | 0575 | 0777 | 0575 | 0474 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland
Inflammation, Chronic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 3 |
| Ovary
Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Bursa, Cyst | | X | | | | | | | | X | X | | | X | | | | | | | | | | | | |
| Follicle, Cyst | | | | | | X | | | | X | | | | | | | | | | | | | | | | |
| Uterus
Dilation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 3 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thrombus | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cervix, Dilation | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Cervix, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Endometrium, Hyperplasia, Cystic | 2 | 2 | | | 3 | | | 3 | 4 | | 3 | | 1 | | 3 | | 3 | 2 | 4 | 2 | | | | 1 | 2 | |
| Endometrium, Metaplasia, Squamous | 1 | 2 | | | 1 | | | 2 | 2 | | 2 | | | | 3 | | 1 | 1 | 1 | | 3 | | | | 2 | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow
Hypercellularity | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | 2 | 4 | 4 | 4 | | 2 | | 2 | 4 | | 2 | 2 | | 2 | 2 | | | | 2 | 2 | | | | | 4 | 2 |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mandibular
Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | |
| Lymph Node, Mesenteric
Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
10000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---|-----------------------|----------------------|--|
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| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0
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4
5
1 | females
(cont...) | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Infiltration Cellular, Mast Cell | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Extramedullary Hematopoiesis | 1 2 2 4 2 2 1 1 4 2 3 2 3 2 2 2 1 1 2 2 1 1 2 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | 4 3 1 1 3 1 4 1 4 1 2 3 3 2 3 3 2 3 4 3 4 3 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Pigment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymphoid Follicle, Atrophy | 2 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus | + + + + + + + + + M + + + M + + + + + + + + + + | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelial Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Mammary Gland | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Duct, Dilation, Focal | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia, Lobular, Focal | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Skin | + | | | | | | | | | | | | | | | | | | | | | | | | |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Bone | + | | | | | | | | | | | | | | | | | | | | | | | | |
|------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Brain | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | |

RESPIRATORY SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue

M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

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CAS Number: 84-74-2

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First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
10000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------------|----------------------|
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5 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0
0
4
5
1 | |

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|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Keratin Cyst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolus, Infiltration Cellular, Histiocyte | 3 | 2 | 1 | 1 | 1 | 2 | | 1 | 1 | 1 | 2 | 1 | 3 | 2 | 3 | 3 | 1 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 1 |
| Alveolus, Inflammation, Suppurative | | | | | | | | | | 3 | | | | | | | | | | | | | | | |
| Alveolus, Inflammation, Chronic | 2 | 1 | | | 1 | | | 1 | 1 | | | 1 | | 1 | 1 | 2 | 1 | 1 | 1 | 2 | | 2 | 1 | 2 | 1 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Foreign Body | | | | | | | | | | X | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | 3 | | | | | | | | | | | | | | | |
| Glands, Dilation | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Goblet Cell, Respiratory Epithelium, Hyperplasia | | | | | | | | | | | | 2 | | | | | | | | | | | | | |
| Respiratory Epithelium, Erosion, Multifocal | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Submucosa, Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Glands, Dilation, Focal | | | | | | | | | | | | | | | | | | | | | | | | | |
| Glands, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | |
| Submucosa, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | |
| Submucosa, Inflammation, Chronic Active | | | | | | | | | | | 2 | | | | | | | | | | | | | | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cornea, Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | | | | | | | | | 1 | | | | | | | | | | | | 1 | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
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Experiment Number: 10987 - 01

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Species/Strain: RATS/HSD

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Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------------------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
10000 ppm | DAY ON TEST | 07 | 07 | 06 | 06 | 07 | 07 | 04 | 07 | 06 | 06 | 07 | 07 | 07 | 05 | 07 | 07 | 07 | 05 | 07 | 06 | 05 | 07 | 05 | 04 | 04 | females
(cont...) |
| | ANIMAL ID | 03 | 03 | 05 | 02 | 03 | 03 | 02 | 03 | 05 | 01 | 03 | 03 | 03 | 04 | 03 | 00 | 03 | 08 | 03 | 01 | 01 | 03 | 05 | 04 | 06 | |
| | | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hydronephrosis | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| Mineral | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Nephropathy, Chronic Progressive | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 2 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

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FEMALE
10000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| | 0731 | 0731 | 0731 | 0732 | 0732 | 0733 | 0733 | 0734 | 0734 | 0735 | 0735 | 0736 | 0736 | 0737 | 0737 | 0738 | 0738 | 0739 | 0739 | 0740 | 0740 | 0741 | 0741 | 0742 | |
| | ANIMAL ID | 0047 | 0048 | 0049 | 0050 | 0051 | 0052 | 0053 | 0054 | 0055 | 0056 | 0057 | 0058 | 0059 | 0060 | 0061 | 0062 | 0063 | 0064 | 0065 | 0066 | 0067 | 0068 | 0069 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 0 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Parasite Metazoan | | | | | X | | | | | | | | | | | | | | | | | | | | 3 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis, Focal | | | | | | | | | 3 | | | | | | | | | | | | | 2 | | | 3 2.0 |
| Basophilic Focus | | | | | | | | X | | | | | | | | | | | | | | | | | 1 |
| Clear Cell Focus | | | | X | | | | X | X | | | | | | | | | | | | | | | | 4 |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | X | | X | | X | | | | 3 |
| Extramedullary Hematopoiesis | | | | | | | | | | | | | | | | | | | 1 | | | | 1 | | 3 1.0 |
| Hemorrhage, Focal | | | | 2 | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Hepatodiaphragmatic Nodule | | | X | | | | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation, Chronic Active | | | | | 2 | | | | | | | | | | | | | | | | | | | | 4 1.3 |
| Bile Duct, Cyst, Multiple | | | | | | | | | | | | | | | | | | | | | | | X | | 1 |
| Bile Duct, Hyperplasia | | | | | | | 2 | 1 | 1 | | | | | | | 2 | 1 | 1 | | 1 | | 1 | | | 12 1.3 |
| Hepatocyte, Cytoplasmic Alteration | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 40 1.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

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BLANK .. Not examined microscopically

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|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
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|-------------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|-----|
| Hepatocyte, Necrosis | 2 | | | | | | | | | | | | | | | | | | | | | | | | 5 | 1.8 |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Pancreas | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Polyarteritis Nodosa | X | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Salivary Glands | + | | | | | | | | | | | | | | | | | | | | | | | | 49 | |
| Stomach, Forestomach | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Inflammation, Focal, Chronic Active | 2 | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Ulcer | 3 | | | | | | | | | | | | | | | | | | | | | | | | 2 | 3.0 |
| Epithelium, Hyperplasia | 2 | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 |
| Epithelium, Hyperplasia, Focal | 1 | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Epithelium, Hyperplasia, Multifocal | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Stomach, Glandular | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Mineral | 1 | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|-----|
| Blood Vessel | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Heart | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Cardiomyopathy | 1 | | | | | | | | | | | | | | | | | | | | | | | | 27 | 1.1 |
| Hemorrhage | 3 | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |

ENDOCRINE SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 10987 - 01

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Dibutyl Phthalate

CAS Number: 84-74-2

Date Report Requested: 08/20/2019

Time Report Requested: 12:03:41

First Dose M/F: 08/30/10 / 08/31/10

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
10000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
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| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis | | | | 2 | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | 3 1.3 |
| Hyperplasia, Focal | 2 | | 1 | 2 | | 2 | | 1 | | | | 1 | | | 1 | 1 | | 1 | | 1 | 1 | 1 | | | 25 1.4 |
| Hypertrophy, Focal | 2 | | 1 | 2 | | 1 | 2 | 1 | | | | 1 | | | 1 | 1 | 1 | 1 | | 1 | 2 | 2 | | 2 | 24 1.3 |
| Necrosis | | | | | | 1 | | | | | | | | | | | | | | | | | | | 2 1.0 |
| Thrombus | | | | | | 1 | | | | | | | | | | | | | | | | | | | 2 1.0 |
| Vacuolization Cytoplasmic | | | | | | | 1 | | | | | | | | | 1 | | | | | | | | | 3 1.0 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | | | 2 | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Parathyroid Gland | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | 43 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Pars Distalis, Atypia Cellular | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Pars Distalis, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pars Distalis, Hyperplasia | | | 1 | | | 1 | 1 | | 3 | 2 | | | | 1 | 1 | | 4 | 4 | | | | | 1 | | 18 1.9 |
| Pars Distalis, Hypertrophy | | | | 1 | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| C-cell, Hyperplasia | | | | 1 | | | | | | | | | | | | | | | | | | | 1 | | 5 1.4 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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10000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|-----|
| Clitoral Gland
Inflammation, Chronic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 | 3.0 |
| Ovary
Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 | |
| Bursa, Cyst | | X | | | | | | | | | | | | | | | | | | | | | | | 5 | 5 | |
| Follicle, Cyst | | | X | | | | | X | | | | | | | | | X | | | | | | | | 5 | 5 | |
| Uterus
Dilation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 3 | 3.3 | |
| Hemorrhage | | | | | | | | | | | | | | 4 | | | | | | | | 3 | | | 1 | 1.0 | |
| Thrombus | | | | | | | | | | | | | | 1 | | | | | | | | | | | 1 | 1.0 | |
| Cervix, Dilation | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Cervix, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Endometrium, Hyperplasia, Cystic | 2 | 2 | 4 | | 3 | | 4 | 4 | 2 | 2 | | | | 1 | 2 | 1 | 3 | | 1 | 3 | 3 | | 3 | 30 | 2.5 | | |
| Endometrium, Metaplasia, Squamous | 2 | 2 | | | | | 1 | 1 | 2 | 2 | | | | 2 | 2 | 2 | 1 | 2 | | 1 | 2 | | | 25 | 1.7 | | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|-----|
| Bone Marrow
Hypercellularity | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 33 | 2.7 |
| Lymph Node | | | | + | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Lymph Node, Mandibular
Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | 1 | 2.0 | |
| Lymph Node, Mesenteric
Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 | 3.0 | |
| Hyperplasia, Lymphoid | | | 3 | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
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Infiltration Cellular, Mast Cell

1 2.0

Spleen

50

Extramedullary Hematopoiesis

40 2.2

Hyperplasia, Lymphoid

2 2.0

Pigment

46 2.3

Lymphoid Follicle, Atrophy

3 2.7

Thymus

48

Cyst

1

Epithelial Cell, Hyperplasia

1 2.0

INTEGUMENTARY SYSTEM

Mammary Gland

50

Duct, Dilation, Focal

5 2.4

Epithelium, Hyperplasia, Lobular, Focal

1 1.0

Skin

50

MUSCULOSKELETAL SYSTEM

Bone

50

NERVOUS SYSTEM

Brain

50

Hemorrhage

1 3.0

RESPIRATORY SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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FEMALE
10000 ppm | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 3 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 4 | 5 | 7 | 6 | 7 | 3 | 6 | 3 | 4 | 5 | 7 | 6 | 7 | 3 | 6 | 3 | 3 | 3 | 3 | 3 | |
| | ANIMAL ID | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 3 | 3 | 3 | 2 | 3 | 5 | 3 | 3 | 3 | 3 | 6 | 3 | 4 | 3 | 1 | 3 | 3 | 1 | 8 | 3 | 2 | 8 | 1 | 3 | 3 | 1 | 3 | 3 | 1 | 3 | | |
| | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 1 | 1 | 1 | 1 | 9 | 1 | 1 | 1 | 1 | 2 | 1 | 8 | 3 | 2 | 8 | 1 | 3 | 3 | 1 | 3 | 1 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 0 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|-----|-----|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Keratin Cyst | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| Alveolus, Infiltration Cellular, Histiocyte | 1 | 2 | 3 | 2 | 3 | 1 | 2 | 3 | 2 | 3 | 3 | | 3 | 2 | 3 | 2 | 3 | 2 | 2 | | | 2 | 2 | 3 | 3 | 1 | | | | | | | | | | | | 47 | 2.1 | | | |
| Alveolus, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | 2 | 2.5 | | |
| Alveolus, Inflammation, Chronic | 1 | 1 | 2 | | 2 | 1 | 2 | 2 | 1 | 2 | 2 | | 2 | 2 | 2 | 2 | 2 | 1 | 2 | | | 1 | 1 | 2 | 2 | | | | | | | | | | | | | | 39 | 1.5 | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | 2 | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | 2 | 2.5 | | |
| Glands, Dilation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | |
| Goblet Cell, Respiratory Epithelium, Hyperplasia | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 | | |
| Respiratory Epithelium, Erosion, Multifocal | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | 1 | 1.0 | | |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | |
| Respiratory Epithelium, Submucosa, Inflammation, Acute | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Glands, Dilation, Focal | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Glands, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Submucosa, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | 1 | 1.0 |
| Submucosa, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|---|-----|-----|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | |
| Cornea, Hyperplasia, Squamous | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3 | 1.0 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
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Route: DOSED FEED

CAS Number: 84-74-2

First Dose M/F: 08/30/10 / 08/31/10

Species/Strain: RATS/HSD

Lab: BAT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
10000 ppm | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 7 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 7 | 3 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 4 | 5 | 7 | 6 | 7 | 3 | 7 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | ANIMAL ID | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 5 | 3 | 3 | 3 | 3 | 6 | 3 | 4 | 3 | 2 | 8 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 1 | 1 | 1 | 1 | 9 | 1 | 7 | 1 | 2 | 2 | 2 | 1 | 8 | 3 | 2 | 8 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 |
| * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hydronephrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Mineral | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Nephropathy, Chronic Progressive | 1 | 2 | 3 | 2 | 1 | 3 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | | | | | | | | | | | | 49 | 1.5 | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |

*** END OF REPORT ***

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked