

Experiment Number: 10472 - 03
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

p-Chloro-a,a,a-trifluorotoluene

CAS Number: 98-56-6

Date Report Requested: 05/16/2016

Time Report Requested: 11:15:09

First Dose M/F: 01/17/11 / 01/17/11

Lab: BNW

F2_HSD Rats

NTP Study Number: C10472B
Lock Date: 08/29/2013
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: 03/08/2016

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

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Cecum Artery, Inflammation	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Rectum Serosa, Inflammation	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum Artery, Inflammation	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Jejunum Artery, Inflammation	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Basophilic Focus							X																	
Clear Cell Focus	X	X	X		X	X	X	X	X	X	X	X			X	X	X		X	X	X	X		X
Eosinophilic Focus								X																
Hematopoietic Cell Proliferation																								1
Hemorrhage																								
Hepatodiaphragmatic Nodule												X					X							
Hyperplasia, Nodular																								
Inflammation, Chronic Active																							1	
Mixed Cell Focus															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
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HARLAN SPRAGUE DAWLEY RATS MALE Control	DAY ON TEST																									males (cont...)	
	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729	0729		
ANIMAL ID	0001	0002	0003	0004	0005	0006	0007	0008	0009	0010	0011	0012	0013	0014	0015	0016	0017	0018	0019	0020	0021	0022	0023	0024	0025		
Bile Duct, Hyperplasia	1	1	1		1	1	1	1	1	1	1	1	1	2				1	1		1	1			2		
Centrilobular, Hepatocyte, Hypertrophy																											
Hepatocyte, Degeneration													1														
Hepatocyte, Necrosis												1															
Mesentery																											
Fat, Necrosis																											
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Acinus, Atrophy																											
Acinus, Hyperplasia																											
Artery, Inflammation	1																										
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Parotid Gland, Atrophy																											
Stomach, Forestomach Epithelium, Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, Glandular Mineralization Ulcer	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Tooth																											

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Aorta, Inflammation																											
Aorta, Mineralization																											

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HARLAN SPRAGUE DAWLEY RATS MALE Control	DAY ON TEST																								males (cont...)	
	0729	0729	0729	0750	0773	0776	0776	0777	0777	0777	0777	0777	0777	0777	0777	0777	0777	0777	0777	0777	0777	0777	0777	0777		
ANIMAL ID	0001	0002	0003	0004	0005	0006	0007	0008	0009	0010	0011	0012	0013	0014	0015	0016	0017	0018	0019	0020	0021	0022	0023	0024	0025	
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Cardiomyopathy	1		1	1	1	2	1	2	1	1	1		1	1		2	2		1	1	1	1	1	1		
Epicardium, Inflammation																										
ENDOCRINE SYSTEM																										
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Degeneration, Cystic					1			1		2									1			1				
Hyperplasia			1				1		1									1								
Hypertrophy					1			1				2	2			2			1	1			1		1	
Vacuolization Cytoplasmic																										
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Hyperplasia	3		1				1	2	1	1		2		2					1			2	1		1	
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Hyperplasia										1																
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+		
Hyperplasia																										
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Cyst																										
Pars Distalis, Hyperplasia					1	2		1	1				3					2								
Pars Intermedia, Hyperplasia										2																
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Ultimobranchial Cyst										X												X				
Ultimobranchial Cyst, Multiple																										
C-cell, Hyperplasia			1			2	3	1						1						2	1	2	1		1	

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	0 7 2 9	0 7 2 9	0 7 2 9	0 5 0 5	0 7 3 0	0 6 7 4	0 7 3 0	0 6 7 0	0 7 2 7	0 7 3 2	0 7 3 0	0 7 3 0	0 7 3 0	0 5 4 2	0 6 7 2	0 6 4 8	0 5 8 8	0 5 6 8	0 4 3 8	0 7 2 9	0 7 2 9	0 7 2 9	0 7 2 9	0 3 2 2	0 7 2 2	0 3 7 4	0 7 3 0								
	0 0 0 0 1	0 0 0 0 2	0 0 0 0 3	0 0 0 0 4	0 0 0 0 5	0 0 0 0 6	0 0 0 0 7	0 0 0 0 8	0 0 0 0 9	0 0 0 0 0	0 0 0 0 1	0 0 0 0 2	0 0 0 0 3	0 0 0 0 4	0 0 0 0 5	0 0 0 0 6	0 0 0 0 7	0 0 0 0 8	0 0 0 0 9	0 0 0 0 0	0 0 0 0 1	0 0 0 0 2	0 0 0 0 3	0 0 0 0 4	0 0 0 0 5	0 0 0 0 6	0 0 0 0 7	0 0 0 0 8	0 0 0 0 9	0 0 0 0 0	0 0 0 0 1	0 0 0 0 2	0 0 0 0 3	0 0 0 0 4	0 0 0 0 5

Follicular Cell, Hyperplasia

1

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Coagulating Gland
Inflammation

+
2

Epididymis
Artery, Inflammation

+ +

Preputial Gland
Cyst
Inflammation

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

Prostate
Inflammation

+
 3

Seminal Vesicle
Inflammation

+
 2 2

Testes
Artery, Inflammation
Germinal Epithelium, Atrophy
Interstitial Cell, Hyperplasia

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

HEMATOPOIETIC SYSTEM

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| HARLAN SPRAGUE DAWLEY RATS
MALE
Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males
(cont...) | |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|--------------------|------------------|
| | 0
7
2
9 | 0
7
2
9 | 0
7
2
9 | 0
5
0
5 | 0
7
3
0 | 0
6
7
4 | 0
7
3
0 | 0
6
7
7 | 0
7
2
0 | 0
7
3
0 | 0
7
3
0 | 0
7
3
0 | 0
7
3
0 | 0
5
4
2 | 0
6
7
2 | 0
6
4
8 | 0
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8
8 | 0
5
6
8 | 0
4
8
8 | 0
7
3
0 | 0
7
2
9 | 0
7
2
9 | 0
7
2
9 | 0
3
2
4 | | | 0
7
7
3 |
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Lymph Node
Deep Cervical, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Iliac, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Bronchial | M | M | + | M | + | + | + | + | M | M | + | + | M | + | M | + | M | + | + | + | + | M | + | M | + | | |
| Lymph Node, Mandibular
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node, Mediastinal
Congestion | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node, Mesenteric
Congestion | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | |
| Spleen
Hematopoietic Cell Proliferation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | 2 | 2 | 1 | | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | | | | | | | | | 1 | 1 | 1 | 2 | 1 | |
| Thymus
Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | 4 | 4 | 3 | 4 | 4 | 4 | 3 | 3 | 4 | 4 | 4 | 4 | | | 4 | | 4 | 1 | 3 | 3 | 4 | 3 | 3 | 2 | 3 | | |
| INTEGUMENTARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | + | + | + | + | + | + | + | M | M | M | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

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| | | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) |
|---|--|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|--------------------|
| HARLAN SPRAGUE DAWLEY RATS
MALE
Control | | 07 | 07 | 07 | 05 | 07 | 06 | 07 | 06 | 07 | 07 | 07 | 07 | 07 | 05 | 06 | 06 | 05 | 05 | 04 | 07 | 07 | 07 | 03 | 07 | | |
| ANIMAL ID | | 09 | 02 | 09 | 00 | 03 | 07 | 03 | 07 | 02 | 03 | 03 | 03 | 04 | 02 | 02 | 08 | 08 | 08 | 08 | 03 | 02 | 02 | 02 | 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 | | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | 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 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cyst, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sebaceous Gland, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Gliosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cerebellum, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cerebrum, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Glial Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | | |
| Axon, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nerve, Gliosis | | | | | | | | | | | | | | | | | | | | | | | | | |

RESPIRATORY SYSTEM

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

Larynx Inflammation +
 1 1 1 1

Lung Fibrosis +
 Hemorrhage 1 2 1 1 1 2 2 1 1
 Infiltration Cellular, Histiocyte 1
 Inflammation, Chronic 1 2 1 1 3 2 2 1 2 1 1
 Metaplasia, Osseous 1 1 1
 Alveolar Epithelium, Hyperplasia 1 1 1
 Alveolus, Infiltration Cellular, Histiocyte 1 1 1 1 1 1 1 1

Nose Exudate +
 1 1 2 1 1 1 1 1 1 2 2 4 2 1 1 1 1 1 1
 Inflammation, Chronic Active 2 1 2 1 2 1 1 1 1 1 2 2 4 2 1 1 1 1 1 2
 Olfactory Epithelium, Accumulation, Hyaline Droplet 1
 Olfactory Epithelium, Degeneration 1
 Olfactory Epithelium, Metaplasia, Respiratory 1

Trachea Inflammation +
 1

SPECIAL SENSES SYSTEM

Eye Anterior Chamber, Inflammation, Suppurative +
 3
 Cornea, Inflammation 2 2

Harderian 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| | | 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 | | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 5 | 6 | 6 | 5 | 5 | 4 | 7 | 7 | 7 | 3 | 7 | | |
| HARLAN SPRAGUE DAWLEY RATS MALE | | 2 | 2 | 2 | 0 | 3 | 7 | 3 | 7 | 2 | 3 | 3 | 3 | 4 | 7 | 4 | 8 | 6 | 8 | 3 | 2 | 2 | 2 | 7 | 3 | | |
| Control | | 9 | 9 | 9 | 5 | 0 | 4 | 0 | 7 | 2 | 0 | 0 | 0 | 2 | 2 | 8 | 8 | 8 | 8 | 0 | 9 | 9 | 9 | 4 | 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 | 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 | | |
| | | 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...) |

Hyperplasia

Zymbal's Gland

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cyst | | | | | | | | | | | | | | | X | | | | | | | | X | | |
| Hemorrhage | | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| Infarct | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy | 4 | 2 | 3 | | 2 | 4 | 2 | 3 | 4 | 1 | 3 | 2 | 2 | 4 | 1 | 4 | 2 | 1 | 2 | 3 | 4 | 4 | 2 | 1 | 2 |
| Renal Tubule, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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
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 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|
| | 0730 | 0663 | 0589 | 0661 | 0590 | 0485 | 0772 | 0668 | 0771 | 0573 | 0772 | 0772 | 0772 | 0772 | 0663 | 0773 | 0773 | 0773 | 0773 | 0556 | | 0449 | 0554 | 0775 | 0573 |
| ANIMAL ID | 00026 | 00007 | 00008 | 00009 | 00000 | 00001 | 00002 | 00003 | 00004 | 00005 | 00006 | 00007 | 00008 | 00009 | 00010 | 00011 | 00012 | 00013 | 00014 | 00015 | 00016 | 00017 | 00018 | 00019 | 00020 |
| Bile Duct, Hyperplasia | 1 | 1 | 1 | 1 | | | | | | 1 | | | | | 1 | 1 | | | 1 | 2 | 1 | 1 | 1 | 1 | 32 |
| Centrilobular, Hepatocyte, Hypertrophy | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | 2 |
| Hepatocyte, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hepatocyte, Necrosis | | | | | | 1 | | | | 1 | | | | | | | | | | | | | | | 3 |
| Mesentery | | | | | | + | | | | | | | | | | | | | | | | | | | 2 |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Acinus, Atrophy | | | | | | | | | | | | | 1 | | | | | | | | 1 | | | | 8 |
| Acinus, Hyperplasia | | | | | | | | | 2 | | | 1 | | | | | 1 | | | | | | | 1 | 7 |
| Artery, Inflammation | | 1 | | | | | | | 2 | | | | | | | | | | 2 | | 2 | 1 | | 1 | 17 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Parotid Gland, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Stomach, Forestomach Epithelium, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Glandular Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | 2 | | 1 |
| Tooth | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Aorta, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Aorta, Mineralization | | | | | | | | | 1 | | | | | | | | | | | | | | | | 3 |

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| HARLAN SPRAGUE DAWLEY RATS
MALE
Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-----------------|--------|
| | 0730 | 0663 | 0589 | 0661 | 0590 | 0485 | 0779 | 0668 | 0779 | 0573 | 0773 | 0779 | 0779 | 0779 | 0661 | 0773 | 0773 | 0773 | 0773 | 0576 | | 0493 | 0584 | 0779 | 0573 |
| ANIMAL ID | 00026 | 00077 | 00088 | 00099 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cardiomyopathy | 2 | 2 | 2 | 1 | | 1 | 1 | 2 | | | 2 | 1 | 1 | 1 | 2 | 1 | 1 | | 2 | 1 | 1 | 2 | 1 | 2 | |
| Epicardium, Inflammation | | | | | 1 | | | | | | | | | | | | | | | | | | | 41 1.3
1 1.0 | |
| ENDOCRINE SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Degeneration, Cystic | | 1 | | | | | | | 1 | | | | | | 1 | | 1 | | | | | | | 9 1.1 | |
| Hyperplasia | | | 1 | | | | 2 | 3 | | 1 | 1 | | | | | | | | 1 | | | 1 | | 11 1.3 | |
| Hypertrophy | | 1 | | | 1 | | | | 2 | | | | | 1 | 1 | 1 | 1 | | 1 | | | 1 | | 18 1.2 | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | 2 | | | | | | | | | 1 2.0 | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | 1 | 2 | | | | | 1 | 1 | 2 | | 2 | 2 | 1 | 3 | | 1 | | 2 | 2 | | 1 | | 2 | 2 | 28 1.6 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | 48 | |
| Hyperplasia | | | 1 | | | 1 | | | | | | | | | | | 1 | 1 | | | | | | 4 1.0 | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst | | | | | | | | 1 | | | | | | | 1 | | | | | | | | | 2 1.0 | |
| Pars Distalis, Hyperplasia | | | | 2 | | | | | 1 | 3 | | 1 | 2 | | 1 | | 1 | | | | | | | 13 1.6 | |
| Pars Intermedia, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Ultimobranchial Cyst | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Ultimobranchial Cyst, Multiple | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| C-cell, Hyperplasia | 1 | | | | 1 | | 1 | | 2 | | | | 1 | 1 | | | | | | | | | | 16 1.4 | |

* .. 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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Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------------|-------------|
| | 0730 | 0663 | 0589 | 0661 | 0590 | 0485 | 0779 | 0628 | 0719 | 0533 | 0726 | 0779 | 0779 | 0779 | 0671 | 0733 | 0733 | 0733 | 0722 | 0722 | 0516 | 0493 | 0584 | 0729 | |
| ANIMAL ID | 00026 | 00007 | 00008 | 00009 | 00000 | 00001 | 00002 | 00003 | 00003 | 00004 | 00005 | 00006 | 00007 | 00008 | 00009 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 | 00000 |
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node | | | | + | | | | + | | | | | | | | | | | | | | | | | 7 |
| Deep Cervical, Hyperplasia | | | | | | | | 3 | | | | | | | | | | | | | | | | | 1 3.0 |
| Iliac, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Renal, Congestion | | | | | | | | | | | | | | | 2 | | | | | | | | | | 1 2.0 |
| Renal, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Lymph Node, Bronchial | + | + | + | + | M | + | M | M | + | + | + | + | M | M | M | M | M | M | + | + | + | M | + | + | 30 |
| Lymph Node, Mandibular
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
3 2.7 |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Lymph Node, Mediastinal
Congestion | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
3 2.0 | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Lymph Node, Mesenteric
Congestion | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49
1 2.0 | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
29 1.1
1 3.0 | |
| Hematopoietic Cell Proliferation | 1 | | | | | | | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 | | 1 | 1 | 1 | | | | 29 | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Thymus | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48
45 3.4 | |
| Atrophy | 4 | 4 | 3 | | | 2 | 4 | 2 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 2 | 4 | 4 | 3 | 4 | 1 | 4 | 4 | 4 | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland | + | + | + | + | + | M | + | + | + | M | + | + | + | + | + | + | + | + | M | + | + | + | + | + | 43 |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
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MALE
Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|
| | 0730 | 0663 | 0589 | 0661 | 0590 | 0485 | 0749 | 0678 | 0759 | 0573 | 0726 | 0779 | 0779 | 0779 | 0671 | 0733 | 0733 | 0733 | 0722 | 0722 | 0722 | 0631 | 0733 | 0733 | | 0733 | 0516 | 0493 | 0548 | 0757 |
| ANIMAL ID | 00026 | 00072 | 00088 | 00092 | 00093 | 00101 | 00102 | 00103 | 00104 | 00105 | 00106 | 00107 | 00108 | 00109 | 00110 | 00111 | 00112 | 00113 | 00114 | 00115 | 00116 | 00117 | 00118 | 00119 | 00120 | 00121 | 00122 | 00123 | 00124 | 00125 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Cyst Epithelial Inclusion | | | | 2 | | | | | | | | | | | 2 | | | | | | | | | | | | | | | 3 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Sebaceous Gland, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Skeletal Muscle | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | 7 |
| Degeneration | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Gliosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Cerebellum, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Cerebrum, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Glial Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Peripheral Nerve | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | 7 |
| Axon, Degeneration | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Spinal Cord | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | 7 |
| Nerve, Gliosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

RESPIRATORY SYSTEM

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+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
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Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|----------|
| | 0730 | 0663 | 0589 | 0661 | 0590 | 0475 | 0779 | 0678 | 0779 | 0573 | 0773 | 0779 | 0779 | 0779 | 0671 | 0773 | 0773 | 0773 | 0773 | 0576 | 0493 | 0546 | 0574 | 0779 | 0573 | |
| ANIMAL ID | 00026 | 00072 | 00078 | 00089 | 00090 | 00091 | 00092 | 00093 | 00094 | 00095 | 00096 | 00097 | 00098 | 00099 | 00100 | 00101 | 00102 | 00103 | 00104 | 00105 | 00106 | 00107 | 00108 | 00109 | 00110 | |
| Larynx Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | | | | | 1 | | | | | | | | | | | | | | | | | | 5 1.0 | |
| Lung Fibrosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | | | | | | | | | | | | | 1 | | | | | 1 | | | | | 8 1.4 | |
| Hemorrhage | | | 1 | | | | | 1 | | | | | | 1 | | 1 | | | | 1 | | | | 1 | 11 1.2 | |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Inflammation, Chronic | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 | 1 | | 1 | | 2 | 1 | 1 | | 1 | 1 | 1 | 32 1.2 | |
| Metaplasia, Osseous | | | | 1 | | 1 | 1 | | | 1 | 1 | 1 | | | | | | | | | | | | | 12 1.0 | |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Alveolus, Infiltration Cellular, Histiocyte | 1 | | 1 | | | | 1 | 1 | 1 | 1 | | 1 | | 1 | 1 | 1 | 1 | | 1 | | 1 | 1 | | 1 | 27 1.0 | |
| Nose Exudate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | | | | | | | 1 | | | | 2 | | 1 | | | | | | | | | | 8 1.3 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | 2 1.0 | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | | | 2 | 2 | 3 | 2 | 1 | 1 | 1 | 1 | | 2 | | | 1 | 1 | 1 | | 1 | 2 | 2 | 1 | | 1 | 37 1.5 | |
| Olfactory Epithelium, Degeneration | | | | | | | | | | | | | | | | | | | | | | 2 | | | 1 2.0 | |
| Olfactory Epithelium, Metaplasia, Respiratory | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Trachea Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye Anterior Chamber, Inflammation, Suppurative | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Cornea, Inflammation | | | | 1 | | | | | 1 | | | | | | | | | | | | | | | | 4 1.5 | |
| Harderian 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS MALE Control | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | |
|-------------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------|---|
| | 0730 | 0663 | 0589 | 0661 | 0590 | 0485 | 0729 | 0688 | 0721 | 0723 | 0722 | 0722 | 0722 | 0631 | 0733 | 0733 | 0733 | 0733 | 0610 | 0771 | 0772 | 0526 | 0493 | 0584 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |

Hyperplasia 1 1.0

Zymbal's Gland + 1

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|----|-----|
| Kidney | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | X | 3 | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | | |
| Infarct | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 | | |
| Nephropathy | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 4 | 3 | 2 | 3 | 2 | 3 | 1 | 2 | 3 | 3 | 2 | 4 | 1 | 4 | 4 | 49 | 2.5 |
| Renal Tubule, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 | | |
| Urinary Bladder | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | | |
| Urothelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 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
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 1) Minimal 3) Moderate
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Experiment Number: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
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 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|
| | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | |
| 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 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum
Inflammation, Acute
Artery, Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 3 | | | | | | | 1 | | | |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum
Peyer's Patch, Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum
Peyer's Patch, Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clear Cell Focus | X | X | | X | X | X | X | | X | X | | | | X | X | X | X | X | | X | X | X | | X | X | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatty Change | | | | | | | | | | | | | | | | 1 | | | | | | | | 2 | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | | | | | | | X | | | | | | | | X | | | | | | | X | 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
 1-4 .. Lesion qualified as:
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 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

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 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

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 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males
(cont...) | | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--------------------|------|---|
| | 0730 | 0732 | 0735 | 0737 | 0737 | 0737 | 0737 | 0736 | 0737 | 0737 | 0737 | 0735 | 0733 | 0737 | 0733 | 0736 | 0737 | 0737 | 0736 | 0736 | 0737 | 0737 | 0737 | 0735 | 0736 | | | 0736 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0022001 | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | |
| Bile Duct, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | 1 | | | 1 | 1 | | 1 | | 1 | 1 | 1 | 1 | | | | | | 1 | 1 | 1 | | 1 | 1 | 1 | | | | | |
| Centrilobular, Hepatocyte, Hypertrophy | 1 | 2 | | 1 | 1 | | 1 | | 1 | | | | | | | | 1 | | 2 | | | | | | | | | | |
| Hepatocyte, Necrosis | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | 2 | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Acinus, Atrophy | 1 | | | | 1 | | | | | 1 | 1 | | | | | | 1 | | | | | | | | | | | | |
| Acinus, Hyperplasia | | | 1 | | | | 2 | | | | | | | | | 1 | | | | | | | | | | | | | |
| Artery, Inflammation | | | | | | 1 | | 2 | | 1 | | 1 | | | | | 1 | 1 | | 1 | | | | 2 | | 1 | 1 | | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | |
| Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |

CARDIOVASCULAR 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: 10472 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

p-Chloro-a,a,a-trifluorotoluene

CAS Number: 98-56-6

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First Dose M/F: 01/17/11 / 01/17/11

Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|--|
| | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | | |
| 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 | | |
| Blood Vessel
Aorta, Mineralization | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Heart
Cardiomyopathy
Atrium, Thrombosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| ENDOCRINE SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex
Degeneration, Cystic
Hyperplasia
Hypertrophy
Necrosis
Thrombosis
Vacuolization Cytoplasmic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Adrenal Medulla
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Islets, Pancreatic
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Parathyroid Gland
Hyperplasia | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Pituitary Gland
Angiectasis
Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

* .. 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
MALE
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|
| | 0730 | 0732 | 0735 | 0737 | 0737 | 0737 | 0737 | 0736 | 0737 | 0737 | 0737 | 0735 | 0733 | 0737 | 0733 | 0736 | 0737 | 0737 | 0736 | 0736 | 0737 | 0737 | 0737 | 0735 | 0736 | |
| 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 | |
| Pars Distalis, Hyperplasia | 1 | | | 2 | 1 | 2 | | | | 1 | 1 | 1 | | | | | | | | 2 | 3 | 1 | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Ultimobranchial Cyst | | | | | | | | | | | | | | | | | | | | | | X | | | | |
| C-cell, Hyperplasia | | | | | | | 1 | 1 | | | | 3 | 1 | | | | | | 1 | | | | 3 | | 1 | |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Follicular Cell, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Artery, Inflammation | | | | | | | | | | | 2 | | | | | | | | | 1 | | | | | |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cyst | | | | | | | | | 2 | | | | | | | | | | | | | | | | |
| Inflammation | | 1 | | 1 | | 1 | | | 1 | | | | | 1 | | 2 | | 1 | | | | | 1 | 1 | |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Inflammation | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Artery, Inflammation | 3 | 2 | | | | 2 | | 2 | | 2 | | 2 | | 2 | | 1 | 3 | 2 | 2 | | | | 2 | 1 | 1 |
| Germinal Epithelium, Atrophy | 3 | | | 3 | | | | 2 | | | | 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

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 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS MALE | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males (cont...) |
|-------------|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|-----------------|
| | 0730 | 0732 | 0735 | 0737 | 0737 | 0737 | 0737 | 0736 | 0737 | 0737 | 0737 | 0735 | 0733 | 0737 | 0733 | 0736 | 0737 | 0737 | 0736 | 0736 | 0737 | 0737 | 0737 | 0735 | 0736 | | |
| 100 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 | |
| | 0020 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | |

Interstitial Cell, Hyperplasia 2

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Bone Marrow | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | | |
| Axillary, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inguinal, Ectasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Ectasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Ectasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Bronchial | + M M + + + + M + M M M + + M + + + + + + M + M | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mandibular | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mediastinal | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

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| HARLAN SPRAGUE DAWLEY RATS
MALE
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) |
|---|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------------|
| | 0730 | 0732 | 0735 | 0737 | 0737 | 0737 | 0737 | 0736 | 0737 | 0737 | 0737 | 0735 | 0733 | 0737 | 0733 | 0736 | 0737 | 0737 | 0736 | 0736 | 0737 | 0737 | 0737 | 0735 | 0736 | |
| ANIMAL ID | 002001 | 002002 | 002003 | 002004 | 002005 | 002006 | 002007 | 002008 | 002009 | 002010 | 002011 | 002012 | 002013 | 002014 | 002015 | 002016 | 002017 | 002018 | 002019 | 002020 | 002021 | 002022 | 002023 | 002024 | 002025 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Necrosis
 Red Pulp, Congestion 3

Thymus
 Atrophy +
 4 3 2 4 4 3 4 4 3 4 4 3 4 4 4 2 2 4 4 4 4

INTEGUMENTARY SYSTEM

Mammary Gland M M + M + M + M + + + + M + + + + + + + + M + +
 Skin +
 Cyst Epithelial Inclusion 1 2
 Edema
 Inflammation 3
 Subcutaneous Tissue, Fibrosis 2

MUSCULOSKELETAL SYSTEM

Bone +
 Skeletal Muscle
 Regeneration + +

NERVOUS SYSTEM

Brain +
 Artery, Inflammation
 Hypothalamus, Compression 3 3
 Peripheral Nerve + +

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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| HARLAN SPRAGUE DAWLEY RATS
MALE
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males
(cont...) | | | | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--------------------|------|------|------|------|
| | 0730 | 0732 | 0735 | 0737 | 0737 | 0737 | 0737 | 0736 | 0737 | 0737 | 0737 | 0735 | 0733 | 0737 | 0733 | 0736 | 0737 | 0737 | 0736 | 0736 | | | 0737 | 0737 | 0737 | 0735 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 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 |
| | 0 | 0 | 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 | 5 |

Spinal Cord +
 Axon, Degeneration 2 +

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation | | | | | | | | | | 1 | 1 | 1 | 1 | | | | | | | | | | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Edema | | | 2 | | | | | | | | | | | | | | | | | | | | | | |
| Fibrosis | | | | | | 1 | 1 | 3 | | 1 | | 1 | | 1 | | 2 | 1 | 1 | 1 | | 1 | | | | |
| Hemorrhage | | | 2 | | | 1 | 1 | 3 | | 1 | | 1 | 1 | | 2 | 2 | | 1 | 1 | 2 | | | | | |
| Inflammation, Chronic | | | | | | 1 | 2 | 3 | 1 | 1 | | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 |
| Metaplasia, Osseous | 1 | | | 1 | | | | | | 1 | | | 1 | | | | | | 1 | 1 | 1 | 1 | | | |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Alveolus, Infiltration Cellular, Histiocyte | | | | 1 | | | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | | 1 | 2 | 1 | | | |
| Mediastinum, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Exudate | | | 1 | | 1 | | | 1 | | | | | | | | | 1 | 1 | | | | | 1 | | 1 |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 1 | 1 | 1 | | 1 | 1 | 2 | 1 | 1 | | | | 2 | 1 | 1 | 2 | | | 2 | 1 | 2 | 1 | | 2 | 1 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males
(cont...) |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--------------------|
| | 0730 | 0739 | 0752 | 0772 | 0777 | 0777 | 0777 | 0766 | 0777 | 0777 | 0777 | 0755 | 0733 | 0777 | 0733 | 0766 | 0777 | 0777 | 0766 | 0766 | 0777 | 0777 | 0777 | 0755 | 0766 | | |
| | 0020 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | 0002 | |

Hemorrhage
 Anterior Chamber, Inflammation, Suppurative
 Cornea, Inflammation

1 3 1 3

Harderian Gland
 Atrophy
 Inflammation

+
 1 1

Zymbal's Gland

+

URINARY SYSTEM

Kidney
 Cyst
 Nephropathy
 Pelvis, Dilatation
 Renal Tubule, Mineralization

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

Urinary Bladder
 Inflammation
 Necrosis

+
 2

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MALE
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|------|------|----|
| | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | | 0729 | 0729 | | |
| ANIMAL ID | 00226 | 0007 | 0008 | 0009 | 0000 | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0000 | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | |
| | 07 | 05 | 07 | 07 | 07 | 03 | 07 | 07 | 07 | 07 | 06 | 05 | 07 | 06 | 06 | 03 | 07 | 04 | 03 | 06 | 06 | 06 | 05 | 06 | 06 |
| | 27 | 7 | 2 | 2 | 3 | 0 | 3 | 2 | 2 | 2 | 3 | 1 | 3 | 0 | 4 | 1 | 2 | 8 | 0 | 9 | 7 | 8 | 8 | 5 | 7 |
| | 9 | 0 | 9 | 4 | 0 | 6 | 0 | 9 | 9 | 9 | 1 | 5 | 0 | 7 | 3 | 0 | 9 | 5 | 3 | 5 | 6 | 6 | 9 | 0 | 4 |
| | 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 |
| | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | |
| | 67 | 78 | 89 | 00 | 01 | 02 | 03 | 03 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 04 | 04 | 05 | 06 | 07 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Peyer's Patch, Hyperplasia, Lymphoid | | | | | | | | | | | | | | 2 | | | | | | | | | | | 1 2.0 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Peyer's Patch, Hyperplasia, Lymphoid | | | | | | | | | | | | | | 2 | | | | | | | | | | | 1 2.0 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Basophilic Focus | X | | | | | | | | | | X | | | | | | | | | | | | | | 3 |
| Clear Cell Focus | X | | X | | X | X | | X | X | X | | | X | X | X | | | | X | X | | | X | | 31 |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | 2 1.0 |
| Eosinophilic Focus | X | | | | | | | X | | X | | | X | | | | | | | | | | X | | 5 |
| Fatty Change | | | | | | | | | | | | | | | | | | | | | | | 1 | | 3 1.3 |
| Hematopoietic Cell Proliferation | | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Hemorrhage | | | | | | | | | | | | | | | | | | 1 | | | | | | | 1 1.0 |
| Inflammation, Chronic Active | | | 1 | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Mixed Cell Focus | | | | | | | | | | | | | | | | X | | | | | | X | | | 6 |

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|---|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------|----|----|----|----|----|
| | 07 | 05 | 07 | 07 | 07 | 03 | 07 | 07 | 07 | 07 | 06 | 05 | 07 | 06 | 06 | 03 | 07 | 04 | 03 | 06 | | 06 | 06 | 05 | 06 | 06 |
| ANIMAL ID | 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 | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Bile Duct, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Bile Duct, Hyperplasia | 1 | 1 | 1 | 1 | | | 2 | | | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 1 | | | | | 26 | |
| Centrilobular, Hepatocyte, Hypertrophy | 1 | | | | 1 | 1 | | | | 1 | 1 | | | | | | 1 | | 2 | | | | | | 17 | |
| Hepatocyte, Necrosis | | | | | | | | | | | | | | | | | | | | | | | 1 | | 3 | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | 2 | | | 2 | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Acinus, Atrophy | 1 | | | | | | | | | | | | | | | | | | | | | | | | 6 | |
| Acinus, Hyperplasia | | | | | | | 1 | | | | | | 1 | | | | | 1 | 1 | | | 1 | 1 | 2 | 11 | |
| Artery, Inflammation | 1 | | | | 2 | | 1 | 1 | | | | | 1 | | | | 2 | | | 2 | 1 | 1 | | | 19 | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Mineralization | | | | | | | | | | | | | | | 2 | | | | | | | | | | 1 | |
| Ulcer | | | | | 2 | | | | | | | | | | | | | | | | | | | | 1 | |
| Epithelium, Hyperplasia | | | | | 2 | | | | | | | | | | | | | | | | | | | 1 | 4 | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | 2 | | | 1 | |
| Tongue | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |

CARDIOVASCULAR SYSTEM

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MALE
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | |
|---|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------|----------------|----------------|----------------|----------------|--|
| | 07
29 | 05
27
00 | 07
22
09 | 07
22
04 | 07
30
06 | 03
07
00 | 07
23
09 | 07
22
09 | 07
22
09 | 06
23
01 | 05
21
05 | 07
30
00 | 06
26
07 | 06
24
03 | 03
21
00 | 07
28
05 | 04
20
03 | 06
29
05 | 06
27
06 | 06
28
00 | | 05
28
09 | 06
25
00 | 06
27
04 | | |
| 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 | | |
| Blood Vessel
Aorta, Mineralization | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 3.0 |
| Heart
Cardiomyopathy
Atrium, Thrombosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 39 1.4
2 3.5 |
| ENDOCRINE SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex
Degeneration, Cystic
Hyperplasia
Hypertrophy
Necrosis
Thrombosis
Vacuolization Cytoplasmic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 5 1.0
15 1.3
11 1.3
2 1.5
2 1.5
1 1.0 |
| Adrenal Medulla
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 37 1.5 | |
| Islets, Pancreatic
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 1.0 | |
| Parathyroid Gland
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | 1 1.0 | |
| Pituitary Gland
Angiectasis
Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 2.0
3 1.3 | |

* .. 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: 10472 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

p-Chloro-a,a,a-trifluorotoluene

CAS Number: 98-56-6

Date Report Requested: 05/16/2016

Time Report Requested: 11:15:09

First Dose M/F: 01/17/11 / 01/17/11

Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|---|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------|----|----|----|----|
| | 07 | 05 | 07 | 07 | 07 | 03 | 07 | 07 | 07 | 07 | 06 | 05 | 07 | 06 | 06 | 03 | 07 | 04 | 03 | 06 | | 06 | 06 | 05 | 06 |
| ANIMAL ID | 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 |
| | 29 | 27 | 22 | 22 | 30 | 06 | 03 | 29 | 29 | 29 | 11 | 50 | 30 | 07 | 63 | 41 | 20 | 85 | 03 | 65 | 67 | 88 | 85 | 67 | 44 |
| | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| | 67 | 78 | 29 | 30 | 01 | 23 | 32 | 33 | 33 | 34 | 56 | 78 | 89 | 01 | 24 | 41 | 22 | 43 | 44 | 45 | 66 | 77 | 88 | 99 | 00 |

Pars Distalis, Hyperplasia

1 1 2 1 2 15 1.5

Thyroid Gland

+ M + 49

Ultimobranchial Cyst

1

C-cell, Hyperplasia

1 2 1 2 3 12 1.7

Follicular Cell, Hyperplasia

1 4.0

Follicular Cell, Hypertrophy

4 4 1 4 4 1 4.0

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Epididymis

+ 50

Artery, Inflammation

2 3 1.7

Preputial Gland

+ 50

Cyst

2 2.0

Inflammation

2 1 1 1 2 2 1 2 2 1 1 2 2 2 2 2 2 2 2 2 26 1.5

Prostate

+ 50

Inflammation

1 2 2 5 2.0

Seminal Vesicle

+ 50

Inflammation

2 2 1.5

Testes

+ 50

Artery, Inflammation

3 1 3 1 3 2 2 4 2 2 26 2.0

Germinal Epithelium, Atrophy

4 6 2.7

* .. 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

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| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------------|
| HARLAN SPRAGUE DAWLEY RATS
MALE
100 ppm | DAY ON TEST | 07 | 05 | 07 | 07 | 07 | 03 | 07 | 07 | 07 | 07 | 06 | 05 | 07 | 06 | 06 | 03 | 07 | 04 | 03 | 06 | 06 | 06 | 05 | 06 | 06 | * TOTALS |
| | ANIMAL ID | 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 | |
| | | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | |

Interstitial Cell, Hyperplasia

1 2.0

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node | | | + | | | | | | | | | | | | + | | | | | | | | | | + | | 7 |
| Axillary, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Inguinal, Ectasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Lumbar, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Lumbar, Ectasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Lumbar, Hyperplasia | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | 1 1.0 |
| Renal, Congestion | | | | | | | | | | | | | | | 2 | | | | | | | | | | 2 | | 4 2.0 |
| Renal, Ectasia | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Lymph Node, Bronchial | + | + | M | M | M | + | + | M | + | M | + | M | M | M | + | + | M | M | + | + | M | M | + | M | M | + | 26 |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Lymph Node, Mediastinal | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Hyperplasia | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hematopoietic Cell Proliferation | 1 | | | | 1 | 2 | 1 | 1 | 1 | 1 | | | | | 1 | | | 1 | | 1 | | 1 | | 1 | | 1 | 30 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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 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
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 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS MALE | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|-------------|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|---|---|---|
| | 100 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 | | |
| | 7 | 5 | 7 | 7 | 7 | 3 | 7 | 7 | 7 | 7 | 6 | 5 | 7 | 6 | 6 | 3 | 7 | 4 | 3 | 6 | 6 | 6 | 5 | 6 | 6 |
| | 2 | 7 | 2 | 2 | 3 | 0 | 3 | 2 | 2 | 2 | 3 | 1 | 3 | 0 | 4 | 1 | 2 | 8 | 0 | 9 | 7 | 8 | 8 | 5 | 7 |
| | 9 | 0 | 9 | 4 | 0 | 6 | 0 | 9 | 9 | 9 | 1 | 5 | 0 | 7 | 3 | 0 | 9 | 5 | 3 | 5 | 6 | 0 | 9 | 0 | 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 |
| | 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 | 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 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|----|-----|
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | | |
| Red Pulp, Congestion | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Atrophy | 4 | 4 | 4 | | 4 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 3 | | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 3 | 44 | 3.6 |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Mammary Gland | + | + | + | + | M | M | + | + | + | + | + | + | + | M | + | + | + | + | M | + | M | + | + | + | + | 38 | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cyst Epithelial Inclusion | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 4 | 1.5 |
| Edema | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 | 3.0 | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Subcutaneous Tissue, Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|-----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | | + | | 6 | |
| Regeneration | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Hypothalamus, Compression | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2 | 3.0 | |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | | | + | | 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
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 CAS Number: 98-56-6

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 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| | 0729 | 0750 | 0772 | 0774 | 0777 | 0773 | 0777 | 0777 | 0777 | 0777 | 0776 | 0755 | 0777 | 0766 | 0766 | 0733 | 0777 | 0744 | 0733 | 0766 | 0766 | 0766 | 0755 | 0766 | 0766 | |
| ANIMAL ID | 002266 | 000077 | 000088 | 000099 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | 000000 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|-----|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 | 3.0 | | | | | | | | | | | | | | | | | | | | |
| Anterior Chamber, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | | | | | | | | | | | | | | | | | | | | |
| Cornea, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | 5 | 1.6 | | | | | | | | | | | | | | | | | | | |
| Harderian Gland | | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | 1.5 | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 3 | 1.0 | | | | | | | | | | | | | | | | | | | |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | | | + | | 2 | | | | | | | | | | | | | | | | | | | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Kidney | | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 4 | 4 | 2 | 4 | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 4 | 2 | 1 | 2 | 1 | | 1 | 3 | 4 | 4 | 4 | 3 | |
| Pelvis, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | 3 | | | | | | |
| Renal Tubule, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | | | | |
| Urinary Bladder | | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males
(cont...) | | | | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--------------------|------|------|--------|------|
| | 0463 | 0729 | 0729 | 0669 | 0668 | 0730 | 0665 | 0560 | 0667 | 0770 | 0771 | 0772 | 0773 | 0666 | 0668 | 0554 | 0774 | 0666 | 0666 | 0666 | | | 0666 | 0666 | 0666 | 0557 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004001 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004002 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004003 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004004 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004005 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004006 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004007 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004008 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004009 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004010 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004011 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004012 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004013 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004014 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004015 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004016 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004017 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004018 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004019 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 004020 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Peyer's Patch, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Peyer's Patch, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Peyer's Patch, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | |
| Clear Cell Focus | X | X | X | X | | X | | X | X | X | X | X | | | | | | | | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | |
| Eosinophilic Focus | | | | X | | | | | | | | | | | | | | | | | | | |
| Fatty Change | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Cyst | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | |
| Centrilobular, Hepatocyte, Hypertrophy | 1 | 2 | 1 | 2 | 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

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

Centrilobular, Hepatocyte, Necrosis
 Hepatocyte, Necrosis

1 1

1

Mesentery
 Fat, Necrosis

+
2

Pancreas
 Inflammation
 Acinus, Atrophy
 Acinus, Hyperplasia
 Artery, Inflammation
 Duct, Cyst

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

Salivary Glands
 Inflammation

2

Stomach, Forestomach

+ +

Stomach, Glandular
 Mineralization

2

CARDIOVASCULAR SYSTEM

Blood Vessel
 Aorta, Mineralization

2

2

Heart
 Cardiomyopathy
 Congestion
 Atrium, Thrombosis

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

Atrium, Myocardium, Inflammation

3

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | 1 | + |
| Degeneration, Cystic | | 1 | | | | | | | | | | 1 | | | | | | | | | | | 2 | 1 |
| Hyperplasia | 1 | | | | | 1 | | | | 1 | 1 | 1 | 2 | | | | | | | | 1 | | | 1 |
| Hypertrophy | 1 | | 1 | | | 1 | | | | | | 1 | | | | | | | 1 | | | | | |
| Necrosis | | | | | | | | 1 | | | | | | | | | | 2 | | | | | | |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | 1 | 1 | 4 | | 2 | 2 | | 2 | 3 | | 1 | | | 1 | 2 | 1 | | 1 | 4 | 2 | 1 | 2 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | 3 | | | | | | | | | | | | | 2 | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | M | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | 1 | | | | | | | | | | | | | | | | | | 1 | |
| Pars Distalis, Hyperplasia | | 1 | 2 | | | | 1 | | | | | | 3 | | | | | | | | | 1 | | |
| Pars Distalis, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ultimobranchial Cyst | | | | | | | | | | | | | | | | | | | | | | | | |
| C-cell, Hyperplasia | | | | | | | | | | 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:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

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 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
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 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males
(cont...) | | | | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--------------------|------|------|---------|------|
| | 0463 | 0729 | 0729 | 0669 | 0668 | 0730 | 0665 | 0650 | 0667 | 0770 | 0770 | 0770 | 0770 | 0666 | 0666 | 0554 | 0776 | 0666 | 0666 | 0666 | | | 0666 | 0666 | 0557 | 0771 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044001 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044002 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044003 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044004 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044005 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044006 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044007 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044008 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044009 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044010 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044011 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044012 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044013 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044014 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044015 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044016 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044017 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044018 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044019 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0044020 | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Artery, Inflammation | | | | | | | | | | | | | | | | 2 | | | | | | | | | |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Cyst | | | | | | | | | | | | | | | 2 | | | | | | | | | | |
| Inflammation | | 1 | | | | 1 | | | | | 1 | 1 | | | | 1 | | | | | | 2 | | | |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Artery, Inflammation | | | | 2 | | | 2 | 1 | | | 2 | 2 | | 2 | 2 | | 3 | 2 | | 2 | 2 | 2 | 1 | 3 | |
| Germinal Epithelium, Atrophy | | | | | | 2 | | | | | | | | | | | 3 | 2 | | 2 | | 2 | 2 | | |
| Tunic, Inflammation | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia | | | | | | | | | | | | | | | | | 4 | | | | | | | |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | |
| Iliac, Ectasia | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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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Experiment Number: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
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 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males
(cont...) |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--------------------|
| | 0463 | 0472 | 0477 | 0466 | 0466 | 0477 | 0466 | 0465 | 0466 | 0467 | 0467 | 0467 | 0467 | 0466 | 0466 | 0465 | 0467 | 0466 | 0466 | 0466 | 0466 | 0466 | 0466 | 0465 | 0467 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0040 | | |
| Renal, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | 0044 | | |
| Lymph Node, Bronchial | + | + | + | M | + | + | M | M | M | M | + | + | M | + | + | M | M | M | + | M | + | + | + | M | M | 0044 | |
| Lymph Node, Mandibular
Congestion
Ectasia
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 0044 | | |
| Lymph Node, Mediastinal
Congestion
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 0044 | | |
| Lymph Node, Mesenteric
Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 0044 | | |
| Spleen
Hematopoietic Cell Proliferation
Lymphoid Follicle, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 0044 | | |
| Thymus
Atrophy
Cyst
Hematopoietic Cell Proliferation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 0044 | | |

INTEGUMENTARY SYSTEM

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

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
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 1) Minimal 3) Moderate
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Experiment Number: 10472 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

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p-Chloro-a,a,a-trifluorotoluene

CAS Number: 98-56-6

Date Report Requested: 05/16/2016

Time Report Requested: 11:15:09

First Dose M/F: 01/17/11 / 01/17/11

Lab: BNW

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

Cyst Epithelial Inclusion
 Edema
 Inflammation
 Ulcer
 Sebaceous Gland, Cyst

2
 2
 2 2
 1
 2

MUSCULOSKELETAL SYSTEM

Bone +

Skeletal Muscle +

NERVOUS SYSTEM

Brain +

Unilateral, Compression

Peripheral Nerve +

Spinal Cord +

RESPIRATORY SYSTEM

Larynx +

Inflammation 1 1 1

Metaplasia, Squamous 2

Lung +

Edema 2

Fibrosis 1 1 1 1 1 1 1 1 1 1 1 1

Hemorrhage 1 1 1 1 1 1 2 1 2 1 2 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | males
(cont...) | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|
| | 0
4
6
3 | 0
7
2
9 | 0
7
2
9 | 0
6
6
9 | 0
6
7
8 | 0
7
3
0 | 0
6
3
5 | 0
5
3
0 | 0
6
9
7 | 0
7
3
0 | 0
7
1
7 | 0
7
2
9 | 0
6
3
1 | 0
6
8
3 | 0
5
1
4 | 0
7
2
9 | 0
6
7
4 | 0
6
6
7 | 0
6
6
9 | 0
6
8
1 | | 0
6
1
1 | 0
5
9
7 | 0
7
1
7 | | |
| ANIMAL ID | 0
0
4
0
1 | 0
0
4
0
2 | 0
0
4
0
3 | 0
0
4
0
4 | 0
0
4
0
5 | 0
0
4
0
6 | 0
0
4
0
7 | 0
0
4
0
8 | 0
0
4
0
9 | 0
0
4
0
0 | 0
0
4
0
1 | 0
0
4
0
2 | 0
0
4
0
3 | 0
0
4
0
4 | 0
0
4
0
5 | 0
0
4
0
6 | 0
0
4
0
7 | 0
0
4
0
8 | 0
0
4
0
9 | 0
0
4
0
0 | 0
0
4
0
1 | 0
0
4
0
2 | 0
0
4
0
3 | 0
0
4
0
4 | 0
0
4
0
5 | |
| Inflammation, Chronic
Metaplasia, Osseous
Alveolus, Infiltration Cellular, Histiocyte | 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
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 | 2
1
1 | 1
1
1 | 1
1
1 | 3
1
1 | 2
1
1 | 3
1
3 | | | |
| Nose
Exudate
Hemorrhage
Olfactory Epithelium, Accumulation, Hyaline
Droplet
Olfactory Epithelium, Degeneration | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye
Cornea, Hyperplasia
Cornea, Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Harderian Gland
Atrophy
Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney
Cyst
Nephropathy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| 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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Experiment Number: 10472 - 03
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
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 CAS Number: 98-56-6

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 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|
| | 079 | 077 | 065 | 072 | 053 | 061 | 077 | 077 | 077 | 077 | 053 | 055 | 077 | 055 | 066 | 066 | 066 | 077 | 044 | 066 | | 055 | 066 | 055 |
| 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 |
| | 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 | 6 | 7 | 5 | 6 | 7 | 7 | 7 | 7 | 5 | 5 | 7 | 5 | 6 | 6 | 6 | 7 | 4 | 6 | 5 | 6 | 5 | 7 |
| | 9 | 7 | 5 | 9 | 4 | 8 | 0 | 0 | 9 | 0 | 0 | 1 | 3 | 8 | 6 | 6 | 7 | 0 | 7 | 3 | 9 | 0 | 2 | 2 |
| | 2 | 1 | 5 | 2 | 3 | 1 | 3 | 3 | 2 | 3 | 0 | 7 | 0 | 2 | 2 | 9 | 0 | 3 | 7 | 3 | 9 | 0 | 2 | 2 |
| | 9 | 7 | 5 | 9 | 4 | 8 | 0 | 0 | 9 | 0 | 0 | 1 | 3 | 8 | 6 | 6 | 7 | 0 | 7 | 3 | 9 | 0 | 2 | 2 |
| | 7 | 7 | 6 | 7 | 5 | 6 | 7 | 7 | 7 | 5 | 5 | 7 | 5 | 6 | 6 | 6 | 7 | 4 | 6 | 5 | 6 | 5 | 7 | 7 |
| | 7 | 7 | 6 | 7 | 5 | 6 | 7 | 7 | 7 | 5 | 5 | 7 | 5 | 6 | 6 | 6 | 7 | 4 | 6 | 5 | 6 | 5 | 7 | 7 |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|--------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Peyer's Patch, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Peyer's Patch, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Peyer's Patch, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Basophilic Focus | X | | | | | | | | | | | | | | | | | | | | | | | | 4 | |
| Clear Cell Focus | X | X | | X | X | | X | X | X | X | | X | | X | | | X | | X | X | | X | X | | 29 | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Eosinophilic Focus | X | | | | | X | | | | | | X | | | | | X | | | | X | | | | 6 | |
| Fatty Change | | | | | | 1 | | | 1 | | | | | | | | 1 | | | | | | | | 7 1.3 | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Mixed Cell Focus | | | | | | | | X | | | | | | X | | | | X | | | | | | | 3 | |
| Bile Duct, Cyst | | | X | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Bile Duct, Hyperplasia | 1 | | | | 1 | | 1 | 2 | | 1 | | 1 | | 1 | | 1 | | | | 1 | | | 1 | | 24 1.1 | |
| Centrilobular, Hepatocyte, Hypertrophy | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | | 1 | | 1 | 2 | 1 | | 2 | 2 | | 2 | 2 | | 3 | 1 | 1 | 39 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:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
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 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
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 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|---|-------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------|---------------|---------------|---------------|-------|
| | 07
29 | 07
21
7 | 06
15
5 | 07
22
9 | 05
31
4 | 06
07
8 | 07
07
0 | 07
07
0 | 07
07
0 | 05
03
0 | 05
03
0 | 07
00
1 | 05
07
3 | 06
02
8 | 06
09
6 | 06
00
6 | 07
03
7 | 04
07
2 | 06
03
0 | 05
09
0 | | 06
02
3 | 05
08
8 | 07
07
6 | |
| ANIMAL ID | 00426 | 00447 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | | |
| Centrilobular, Hepatocyte, Necrosis | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 | |
| Hepatocyte, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4 1.0 |
| Mesentery
Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 2.0 |
| Pancreas
Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 1.0 | |
| Acinus, Atrophy | | | | 1 | | | 1 | | | 1 | | | | | | | | | | | | | 6 | 6 1.2 | |
| Acinus, Hyperplasia | 1 | | | 1 | | 1 | | | | | | | 1 | | 1 | | 2 | | | | 1 | 1 | 12 | 12 1.1 | |
| Artery, Inflammation | | 1 | | 1 | | 1 | | 1 | 2 | | | 2 | 1 | | 1 | | | | 1 | | | | 19 | 19 1.5 | |
| Duct, Cyst | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 4.0 | |
| Salivary Glands
Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 2 1.5 | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Stomach, Glandular
Mineralization | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 2.0 | |
| CARDIOVASCULAR SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel
Aorta, Mineralization | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | 2 2.0 | |
| Heart
Cardiomyopathy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 45 1.5 | |
| Congestion | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | | 1 | 2 | 2 | 1 | 1 2.0 | |
| Atrium, Thrombosis | | | | | | | | | | | | | | | | | | | | | | | 1 | 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS MALE | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|-------------|---------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|-----|
| | 300 ppm | | | | | | | | | | | | | | | | | | | | | | |
| ANIMAL ID | 004226 | 000442 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | 000444 | |
| 079 | 077 | 065 | 072 | 053 | 061 | 073 | 073 | 072 | 073 | 053 | 055 | 077 | 055 | 066 | 066 | 066 | 077 | 044 | 066 | 055 | 066 | 057 | 077 |
| 004 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 |
| 29 | 77 | 55 | 29 | 34 | 18 | 30 | 30 | 29 | 30 | 00 | 00 | 33 | 00 | 22 | 66 | 66 | 70 | 37 | 33 | 90 | 03 | 28 | 22 |
| 9 | 7 | 5 | 9 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Atrium, Myocardium, Inflammation

1 3.0

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Degeneration, Cystic | | | 1 | 1 | | | | | | | | | | 1 | 1 | | 3 | 1 | | | | | | 10 | 1.3 |
| Hyperplasia | | | | 1 | 1 | | 1 | 1 | | | 1 | | | 1 | | 1 | 3 | | 1 | | | | | 19 | 1.2 |
| Hypertrophy | 1 | | | 1 | | | | | | | | | | 2 | | | 2 | | | 1 | | 1 | 1 | 13 | 1.2 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | 1 | 1 | 1 | 1 | 2 | 2 | 1 | | | | 2 | | 2 | 3 | 3 | 4 | 2 | 1 | | 2 | | 2 | 1 | 35 | 1.8 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Parathyroid Gland | + | + | + | + | + | M | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | 48 | |
| Hyperplasia | 1 | | | | | | | | | | | | | | | | | 1 | | | | | | 4 | 1.8 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Angiectasis | | | | | | | | | | | | | | | | | | 2 | | | | | | 1 | 2.0 |
| Cyst | 1 | | | | | | | | | | | | | | | | | | 1 | | | 1 | | 5 | 1.0 |
| Pars Distalis, Hyperplasia | 1 | | | 1 | | | 1 | | | | | | 3 | | 2 | | | | 3 | | | | 2 | 12 | 1.8 |
| Pars Distalis, Necrosis | | | | | | | | | | | | | | | 3 | | | | | | | | | 1 | 3.0 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Ultimobranchial Cyst | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| C-cell, Hyperplasia | | | | | 1 | 2 | | 2 | | 3 | | | 1 | 1 | | 1 | 1 | | | | | 1 | | 14 | 1.6 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
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MALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 079 | 077 | 065 | 072 | 053 | 061 | 077 | 077 | 077 | 077 | 055 | 055 | 077 | 055 | 066 | 066 | 066 | 077 | 044 | 066 | 055 | 066 | 055 | 077 | |
| 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 | 00444 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Artery, Inflammation | 1 | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | | | | 2 | | | | | | | 2 | | | | | | | | | | | | | 3 2.0 |
| Inflammation | 1 | 1 | | | | 1 | | 1 | 1 | | | | | | | 2 | | | 1 | 1 | | | | | 14 1.1 |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Inflammation | | | | | | | | | 1 | | | | | | | | | | | | | | | | 1 1.0 |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Artery, Inflammation | 3 | 1 | | | 2 | | | 2 | 2 | | | 2 | | 2 | 2 | 1 | | | 2 | 2 | | | | | 25 2.0 |
| Germinal Epithelium, Atrophy | 2 | | | 3 | 2 | | | | | | | | | | | | | 1 | 2 | | 2 | | | | 12 2.1 |
| Tunic, Inflammation | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 1.0 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Lymph Node | | + | + | | + | | | | + | | | | + | | | | | | + | | | | + | | 10 |
| Iliac, Ectasia | | | | | | | | | | | | | | | | | | | | | | | 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|------|--|
| | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | 0729 | | 0729 | |
| ANIMAL ID | 00426 | 00427 | 00428 | 00429 | 00430 | 00431 | 00432 | 00433 | 00434 | 00435 | 00436 | 00437 | 00438 | 00439 | 00440 | 00441 | 00442 | 00443 | 00444 | 00445 | 00446 | 00447 | 00448 | 00449 | 00450 | | |
| Renal, Congestion | 2 | 2 | | 2 | | | | | 2 | | | | 2 | | | | | | 2 | | | | | | | | |
| Lymph Node, Bronchial | M | + | + | + | + | + | M | M | M | + | + | M | M | + | M | M | + | + | + | + | + | + | M | + | | | |
| Lymph Node, Mandibular
Congestion | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Ectasia | | | | 2 | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| Lymph Node, Mediastinal
Congestion | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Hyperplasia | | | | 2 | | | | | | 2 | | | | | | | | | 2 | | | | | | | | |
| Lymph Node, Mesenteric
Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Hematopoietic Cell Proliferation | 1 | | | 1 | 1 | 1 | 1 | | | | | | | | 1 | | | 1 | 1 | | 1 | 2 | 1 | 1 | | | |
| Lymphoid Follicle, Hyperplasia | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | | | |
| Atrophy | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 4 | 2 | | 3 | 4 | | | |
| Cyst | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | |
| INTEGUMENTARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |

* .. 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
 A .. Autolysis precludes evaluation
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Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 07 | 07 | 06 | 07 | 05 | 06 | 07 | 07 | 07 | 07 | 05 | 05 | 07 | 05 | 06 | 06 | 06 | 07 | 04 | 06 | 05 | 06 | 05 | 07 | 07 | |
| ANIMAL ID | 00426 | 00427 | 00428 | 00429 | 00430 | 00431 | 00432 | 00433 | 00434 | 00435 | 00436 | 00437 | 00438 | 00439 | 00440 | 00441 | 00442 | 00443 | 00444 | 00445 | 00446 | 00447 | 00448 | 00449 | 00450 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|---|-----|-----|
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 2.0 | |
| Edema | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Inflammation | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | 1 | 2.0 |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Sebaceous Gland, Cyst | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | 1 | 2.0 |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Skeletal Muscle | | + | | | | | | | | | + | | | | | + | | | | | | | | | | | 4 | |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Unilateral, Compression | | | | | | | | | | | | | | | | | | 4 | | | | | | | | | 1 | 4.0 |
| Peripheral Nerve | | | + | | | | | | | | + | | | | | | + | | | | | | | | | | 4 | |
| Spinal Cord | | | + | | | | | | | | | | | | | | + | | | | | | | | | | 4 | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | 6 | 1.0 |
| Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Edema | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Fibrosis | | | 1 | | 2 | | 1 | | | | | | | | | | | | | | | | | | | | 28 | 1.4 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | 28 | 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

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| HARLAN SPRAGUE DAWLEY RATS
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300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | | |
|---|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|------------|
| | 07
29 | 07
29 | 06
15 | 07
29 | 05
23 | 06
18 | 07
00 | 07
00 | 07
00 | 07
00 | 07
00 | 05
00 | 05
00 | 07
00 | 05
00 | 06
00 | 06
00 | 06
00 | 07
00 | 04
00 | | 06
00 | 05
00 | 06
00 | 05
00 | 07
00 | 07
00 | |
| ANIMAL ID | 00426 | 00427 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | 00444 | |
| Inflammation, Chronic | 1 | 2 | 3 | | 1 | 3 | 1 | 1 | 1 | 1 | | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 3 | 3 | 1 | 1 | 1 | 2 | 2 | | 47 | 1.4 |
| Metaplasia, Osseous | | | 1 | | 1 | 1 | | 1 | 1 | 1 | | | | | | | 1 | 1 | | 1 | | | | | | | 17 | 1.0 |
| Alveolus, Infiltration Cellular, Histiocyte | 1 | | | | 1 | 2 | 1 | 1 | 1 | 1 | | | | | | | 1 | 1 | 1 | | 1 | 1 | | 1 | | | 27 | 1.1 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Exudate | | | 1 | 1 | | | | | 1 | | | 1 | | | 1 | 1 | | | | | | | | | 1 | | 12 | 1.0 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | | 2 | 2 | 1 | 2 | 1 | | | 1 | | 2 | | | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | | | 34 | 1.3 |
| Olfactory Epithelium, Degeneration | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cornea, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Cornea, Inflammation | | | 1 | | | | | | 1 | | | | | | | | | | | | | | | | | | 9 | 1.4 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Atrophy | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst | | | | | | | | | X | | | | | | | | | | | X | | | | | | | 2 | |
| Nephropathy | 3 | 4 | 4 | 3 | 4 | 4 | 3 | 2 | 3 | 4 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 2 | 2 | 4 | 1 | 4 | 4 | 4 | 2 | | 50 | 3.3 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |

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

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I .. Insufficient tissue

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

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Small, Duodenum Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Ileum Cyst Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Jejunum Inflammation Artery, Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Angiectasis | | | | | | | | | | | | | | | | | 1 | | | | | | | 2 | | | | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cholangiofibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clear Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatty Change | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 0
5
1
6 | 0
7
1
5 | 0
6
6
8 | 0
4
8
6 | 0
6
7
2 | 0
5
7
3 | 0
4
8
6 | 0
5
2
8 | 0
7
2
7 | 0
6
6
1 | 0
7
0
4 | 0
6
1
6 | 0
7
1
8 | 0
6
6
5 | 0
6
4
3 | 0
7
0
0 | 0
4
6
7 | 0
7
0
3 | 0
6
8
6 | 0
6
8
8 | 0
5
8
9 | 0
4
7
6 | 0
6
4
9 | 0
5
9
1 | |
| ANIMAL ID | 0
0
6
0
1 | 0
0
6
0
2 | 0
0
6
0
3 | 0
0
6
0
4 | 0
0
6
0
5 | 0
0
6
0
6 | 0
0
6
0
7 | 0
0
6
0
8 | 0
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|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aorta, Mineralization | 3 | | | | | | | | | | | | 3 | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cardiomyopathy | 1 | | 2 | 1 | 1 | 1 | 2 | | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | | | 1 | 1 |
| Atrium, Thrombosis | | | 3 | | | | | | | | | | | | | 4 | | | | | | | | | | | |
| Myocardium, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Degeneration, Cystic | | | 1 | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| Hyperplasia | | | 1 | | | | | | | | | | | | | | | | 1 | 1 | | | | | | 1 | |
| Hypertrophy | | | 2 | | | | | | | 1 | | 1 | 1 | 1 | | | | | | | | | | | 1 | 2 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zona Fasciculata, Atrophy | | | | | | | | | 4 | | | | | | | | | | | | | | | | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | 2 | | 3 | | | | 3 | | | | | 2 | | | | | 2 | 2 | 2 | 3 | 2 | 4 | 2 | | 1 | 3 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | M | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | |
| Hyperplasia, Focal | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males
(cont...) | |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|--------------------|------------------|
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2 | 0
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3 | | | 0
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4 |
| Pars Distalis, Hyperplasia | | 2 | 3 | | | | | | | 2 | | | | | | | | | | | | | | | | | 2 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ultimobranchial Cyst | | | | | | | | | | | | | | | | | | | X | X | | | | | | | |
| C-cell, Hyperplasia | 1 | 1 | 1 | | | 1 | 3 | | 1 | | | | | 3 | | | | | | | | | | | | | |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | | | | | | | | 4 | | | | | | | | | | | | | | | | | |
| Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | 2 | | | | | | | 2 | 2 | | | 1 | | 1 | 1 | 2 | 1 | | | 1 | | | | 2 |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | | | | | | | | 4 | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | | | | | | | | 4 | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Artery, Inflammation | 1 | | 2 | | 1 | 2 | | | 2 | | 2 | 2 | | 2 | | 1 | 2 | | 2 | 1 | 2 | | 2 | 2 | 1 | |

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

+ .. Tissue examined microscopically

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: 10472 - 03
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 Route: RESPIRATORY EXPOSURE WHOLE BODY
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 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| DAY ON TEST
HARLAN SPRAGUE DAWLEY RATS
MALE
1000 ppm | 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 | 6 | 4 | 6 | 5 | 4 | 5 | 7 | 6 | 7 | 6 | 7 | 6 | 6 | 7 | 7 | 4 | 7 | 6 | 6 | 5 | 4 | 6 | | 5 | |
| 1 | 1 | 6 | 8 | 7 | 7 | 8 | 2 | 2 | 6 | 0 | 1 | 1 | 6 | 4 | 3 | 0 | 6 | 0 | 8 | 8 | 8 | 7 | 4 | 9 | | | |
| 6 | 5 | 8 | 6 | 2 | 3 | 6 | 8 | 7 | 1 | 4 | 6 | 8 | 8 | 5 | 0 | 3 | 7 | 3 | 6 | 8 | 9 | 6 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | | |
| 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 | | | |
| 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 | | | |
| Germinal Epithelium, Atrophy | | | 2 | | | | | 3 | | | | | 2 | | | | | 3 | | | | | | | | | |
| Interstitial Cell, Hyperplasia | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Lymph Node | + | | | | | | | | | | | | | | | | | | | | + | + | + | | |
| Renal, Congestion | 2 | | | | | | | | | | | | | | | | | | | | 2 | | | 2 | |
| Lymph Node, Bronchial | + | + | M | M | + | M | M | M | + | + | M | M | M | M | + | + | M | + | + | + | M | + | M | M | + |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ectasia | | | | | | | | | | | | | | | 2 | | | | | | | | | | |
| Lymph Node, Mediastinal | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Congestion | 2 | 2 | | | | | | | 2 | | | | | | | | | | | | | | 2 | | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hematopoietic Cell Proliferation | 1 | 1 | 1 | | | | 1 | | | | 1 | | 2 | | | 1 | 3 | | 1 | | 1 | | | 1 | 1 |
| Red Pulp, Congestion | | | | | | | | 2 | | | | | | | | | | | | | | | | | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + |
| Atrophy | 2 | 4 | 4 | 4 | 2 | 3 | 4 | 4 | | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 4 | | 2 | 4 | | 4 | 3 | 3 | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | |

INTEGUMENTARY 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males
(cont...) |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------|-----------|--------------------|
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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 | 006666 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 006666 | | |
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| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 006666 | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland | + | M | M | + | + | + | + | + | + | + | + | M | M | + | + | + | + | + | + | + | + | + | M |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst Epithelial Inclusion | | | | 2 | | | | | | | | | | 2 | 2 | | | | | | | | |
| Ulcer | | | | | 3 | | | | | | | | | | | | | 2 | | | | | |

MUSCULOSKELETAL SYSTEM

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

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | |
| Cerebrum, Necrosis | | | | | | | | | | | | | | | | | | | | | | | |
| Hypothalamus, Compression | | | | | | | | | | | | | | | | | | | | | | | |
| Peripheral Nerve | + | | | | + | | | | | | | | | | | | | | | | | | |
| Spinal Cord | + | | | | + | | | | | | | | | | | | | | | | | | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation | | | | | | | | | | 1 | | | | | | | | | | | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. 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 | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males
(cont...) |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---|-----------|--------------------|
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| Fibrosis | 2 | 3 | 2 | | 1 | | 3 | 1 | 1 | | | | 1 | | 1 | 3 | | 2 | | 3 | | | 1 | 2 | | | |
| Foreign Body | | | | | | | | | X | | | | X | | | | | | | | | | | | | | |
| Hemorrhage | 3 | 2 | 2 | 1 | 1 | 1 | 3 | 1 | | | | | | | 1 | 2 | | 2 | | 3 | | | | 2 | | | |
| Inflammation, Chronic | 3 | 3 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 3 | | 2 | 1 | 3 | | 1 | 1 | 2 | | |
| Metaplasia, Osseous | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | 1 | | | |
| Alveolus, Infiltration Cellular, Histiocyte | | | | | | 1 | | 1 | | 1 | | | | | 1 | | 3 | 1 | | | | | 1 | 1 | 1 | | |
| Bronchiole, Inflammation, Suppurative | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Exudate | | 1 | 1 | | | | 1 | 1 | 1 | 1 | | | 1 | 1 | | | 1 | 1 | | | 1 | 2 | | 1 | 1 | | |
| Nasopharyngeal Duct, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 1 | | 1 | | 1 | 2 | 2 | 1 | 1 | 1 | | 1 | | 1 | | | | 2 | | | 1 | | | 1 | | | |
| Olfactory Epithelium, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Inflammation | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Cornea, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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 2) Mild 4) Marked

Experiment Number: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | males
(cont...) |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|
| | 05166 | 07168 | 06467 | 04654 | 06658 | 04482 | 00577 | 00458 | 00026 | 00722 | 00660 | 00711 | 00674 | 00766 | 00643 | 00700 | 00466 | 00788 | 00668 | 00658 | 00549 | 00467 | 00649 | 00691 | | | |
| | ANIMAL ID | 00601 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | 00066 | |
| Nephropathy | 4 | 2 | 4 | 4 | 3 | 3 | 4 | 2 | 4 | 3 | 4 | 4 | 3 | 3 | 2 | 3 | 4 | 3 | 4 | 4 | 4 | 4 | 2 | 4 | 4 | 4 | |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder
Ulcer | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

* .. 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
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 0612 | 0613 | 0614 | 0615 | 0616 | 0617 | 0618 | 0619 | 0620 | 0621 | 0622 | 0623 | 0624 | 0625 | 0626 | 0627 | 0628 | 0629 | 0630 | 0631 | 0632 | 0633 | 0634 | 0635 | |
| ANIMAL ID | 00626 | 00627 | 00628 | 00629 | 00630 | 00631 | 00632 | 00633 | 00634 | 00635 | 00636 | 00637 | 00638 | 00639 | 00640 | 00641 | 00642 | 00643 | 00644 | 00645 | 00646 | 00647 | 00648 | 00649 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----------------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Small, Duodenum
Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 3.0 |
| Intestine Small, Ileum
Cyst
Hemorrhage | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 2.0
1 3.0 |
| Intestine Small, Jejunum
Inflammation
Artery, Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 3.0
1 2.0 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | 3 1.3 |
| Basophilic Focus | | | | | | X | | | | | | | | | | | | | | | | | X | | | 2 |
| Cholangiofibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Clear Cell Focus | | | | | | | | | | | | | | | | | | | | | | | X | | | 10 |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | 8 |
| Fatty Change | | | | | | | | | | | | | | | | | | | | | | | | | | 26 1.2 |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | 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
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|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|--------|
| | 0612 | 0613 | 0617 | 0618 | 0619 | 0620 | 0621 | 0622 | 0623 | 0624 | 0625 | 0626 | 0627 | 0628 | 0629 | 0630 | 0631 | 0632 | 0633 | 0634 | 0635 | 0636 | 0637 | 0638 | 0639 | | 0640 |
| ANIMAL ID | 00626 | 00627 | 00628 | 00629 | 00630 | 00631 | 00632 | 00633 | 00634 | 00635 | 00636 | 00637 | 00638 | 00639 | 00640 | 00641 | 00642 | 00643 | 00644 | 00645 | 00646 | 00647 | 00648 | 00649 | 00650 | 00651 | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Bile Duct, Hyperplasia | 1 | | | 1 | | | 1 | 1 | | | 1 | 1 | 1 | | 1 | 1 | | | | | 1 | 1 | 2 | | | | 23 1.1 |
| Centrilobular, Hepatocyte, Hypertrophy | 1 | | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | | 47 1.8 |
| Centrilobular, Hepatocyte, Necrosis | | 3 | | | | | | | | 2 | | | | | | | | | | | | | | | | | 2 2.5 |
| Hepatocyte, Necrosis | | | | | | | | | | | | 1 | | | | | | | 1 | | | | | | | | 4 1.0 |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Acinus, Atrophy | | | | | | | | | | | | | 1 | 1 | 1 | | | | | | | | | | | 2 | 4 1.3 |
| Acinus, Hyperplasia | | | | 1 | | 1 | | | | | | | | | | 4 | | | | | 4 | | | | | 1 | 11 2.0 |
| Acinus, Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Artery, Inflammation | | | | 1 | 1 | | 2 | | | | 1 | 2 | | 2 | 2 | | 2 | 1 | | | | | | | 1 | | 19 1.6 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Atrophy, Focal | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | 1 2.0 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 2.5 |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 2.5 |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Mineralization | | | | | | | | | | | 2 | | | | | | | | | | | | | | 1 | | 3 1.7 |

CARDIOVASCULAR SYSTEM

Blood Vessel + 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:
 X .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
 I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

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

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|--|--|--|---|---|---|---|---|--|--|--|--|---|---|--------------|--|--------------|---|---|---|---------------|
| Aorta, Mineralization | 1 | | | | | | | | | | | | | | | | | | | | 3 2.3 | | | | | | |
| Heart | + | | | | | | | | | | | | | | | | | | | | 50 | | | | | | |
| Cardiomyopathy | 1 | 1 | 2 | 2 | 2 | 1 | | | | 2 | 1 | 1 | 1 | 2 | | | | | 1 | 2 | 2 | | | 1 | 2 | 2 | 40 1.4 |
| Atrium, Thrombosis | 1 | 4 | | | | | | | | | | | | | | | | | | | | | 4 3.0 | | | | |
| Myocardium, Mineralization | 1 | | | | | | | | | | | | | | | | | | | | 1 1.0 | | | | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|--|--|---|---|---|---|--|---|---|---|---|---|---|---|--------------|---|---|---------------|---|--------------|--------------|--------------|---|---------------|
| Adrenal Cortex | + | | | | | | | | | | | | | | | | | | | | 50 | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | 6 1.0 | | |
| Hyperplasia | 1 | | | | 2 | | | | | | 1 | | | | 1 | 8 1.1 | | | | | | | | | |
| Hypertrophy | 1 | | | | | 1 | 1 | | | | 2 | | 1 | 2 | | 1 | 1 | | 14 1.3 | | | | | | |
| Necrosis | 2 | | | | | | | | | | | | | | | | | | | | 1 | 2 1.5 | | | |
| Thrombosis | | | | | | | | | | | | | | | 2 | | | | | | 1 2.0 | | | | |
| Zona Fasciculata, Atrophy | | | | | | | | | | | | | | | | | | | | | 1 4.0 | | | | |
| Adrenal Medulla | + | | | | | | | | | | | | | | | | | | | | 50 | | | | |
| Hyperplasia | 2 | | | 2 | 2 | 3 | 2 | | 3 | 2 | 4 | 1 | 2 | 1 | 2 | 1 | | 1 | 4 | 1 | | | | 2 | 30 2.2 |
| Necrosis | | | | | | | | | | | | | | | | | | | | 3 | 1 3.0 | | | | |
| Islets, Pancreatic | + | | | | | | | | | | | | | | | | | | | | 50 | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | 4 | 1 4.0 | | | | |
| Parathyroid Gland | + | | | | | | | | | | | | | | | | | | | | 46 | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | M | 1 3.0 | | | | |
| Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | M | 1 1.0 | | | | |
| Pituitary Gland | + | | | | | | | | | | | | | | | | | | | | 50 | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | | |

* .. 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
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Experiment Number: 10472 - 03

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1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------|
| | 06 | 05 | 06 | 05 | 06 | 04 | 04 | 07 | 06 | 07 | 05 | 04 | 06 | 07 | 05 | 06 | 05 | 04 | 07 | 05 | 06 | 05 | 00 | 07 | |
| ANIMAL ID | 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 |
| | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| | 22 | 22 | 22 | 23 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 |
| | 67 | 78 | 89 | 00 | 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 00 | 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 00 | 11 |

Pars Distalis, Hyperplasia 1 2 1 1 8 1.8

Thyroid Gland + 50
 Ultimobranchial Cyst 2
 C-cell, Hyperplasia 1 2 1 2 1 1 1 2 15 1.5
 Follicular Cell, Hyperplasia 1 1.0

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Epididymis + 50
 Atrophy 1 4.0
 Artery, Inflammation 1 2.0

Preputial Gland + 50
 Cyst 2 1 2.0
 Inflammation 1 1 1 1 1 1 1 17 1.3

Prostate + 50
 Atrophy 1 4.0
 Inflammation 2 1.5

Seminal Vesicle + 50
 Atrophy 1 4.0
 Inflammation 1 2 1.0

Testes + 50
 Artery, Inflammation 1 1 1 1 1 1 1 2 2 2 3 2 2 28 1.7

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|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|-----|
| | 0
6
1
2 | 0
5
3
0 | 0
6
1
7 | 0
5
6
1 | 0
6
5
4 | 0
4
8
2 | 0
4
3
0 | 0
7
2
9 | 0
6
1
4 | 0
7
3
0 | 0
5
7
5 | 0
4
2
1 | 0
6
2
1 | 0
7
2
9 | 0
5
4
9 | 0
6
5
4 | 0
4
9
2 | 0
7
2
9 | 0
5
7
5 | 0
6
4
8 | 0
5
7
1 | 0
0
9
6 | 0
7
0
9 | 0
5
6
8 | | | | | | | | | | | | | | | | | | | |
| | 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 | 6 | 2.3 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 2 | 2.0 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 6 | 2.3 | |
| | 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 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 2.0 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----------------|--|
| Bone Marrow | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Lymph Node
Renal, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 3 2.0 | |
| Lymph Node, Bronchial | + | M | + | + | + | M | + | M | M | + | + | + | M | + | M | M | M | + | + | + | M | M | + | M | + | 26 | |
| Lymph Node, Mandibular
Congestion
Ectasia | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | 1 2.0
1 2.0 | |
| Lymph Node, Mediastinal
Congestion | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | 8 2.0 | |
| Lymph Node, Mesenteric | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Spleen
Hematopoietic Cell Proliferation
Red Pulp, Congestion | + | | | | | | | | | | | | | | | | | | | | | | | | 50 | 22 1.2
1 2.0 | |
| Thymus
Atrophy
Cyst | + | | | | | | | | | | | | | | | | | | | | | | | | 49 | 45 3.5
1 2.0 | |

INTEGUMENTARY SYSTEM

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 + .. Tissue examined microscopically
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1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 0612 | 0613 | 0617 | 0618 | 0621 | 0622 | 0623 | 0624 | 0625 | 0626 | 0627 | 0628 | 0629 | 0630 | 0631 | 0632 | 0633 | 0634 | 0635 | 0636 | 0637 | 0638 | 0639 | 0640 | |
| ANIMAL ID | 00626 | 00627 | 00628 | 00629 | 00630 | 00631 | 00632 | 00633 | 00634 | 00635 | 00636 | 00637 | 00638 | 00639 | 00640 | 00641 | 00642 | 00643 | 00644 | 00645 | 00646 | 00647 | 00648 | 00649 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Mammary Gland | + | M | + | + | + | M | + | M | M | + | + | + | M | M | + | + | + | M | M | + | + | + | + | + | + | 37 | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2.0 |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2.7 |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Cerebrum, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 |
| Hypothalamus, Compression | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.3 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
MALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|----------|--|
| | 0612 | 0613 | 0617 | 0618 | 0619 | 0620 | 0621 | 0622 | 0623 | 0624 | 0625 | 0626 | 0627 | 0628 | 0629 | 0630 | 0631 | 0632 | 0633 | 0634 | 0635 | 0636 | 0637 | 0638 | 0639 | | |
| ANIMAL ID | 00626 | 00627 | 00628 | 00629 | 00630 | 00631 | 00632 | 00633 | 00634 | 00635 | 00636 | 00637 | 00638 | 00639 | 00640 | 00641 | 00642 | 00643 | 00644 | 00645 | 00646 | 00647 | 00648 | 00649 | 00650 | | |
| Fibrosis | 3 | 3 | | | 2 | | | 1 | | 1 | 2 | | | | 1 | | | 1 | 1 | | | | | 2 | 24 | | |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Hemorrhage | 3 | 2 | | | 2 | 1 | 1 | | | 1 | 2 | | | 1 | 1 | 1 | | 2 | 1 | 2 | 1 | | | 2 | 28 | | |
| Inflammation, Chronic | 3 | 4 | 1 | 1 | 3 | 1 | 1 | 1 | | 1 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 3 | 2 | 1 | | 3 | 45 | | |
| Metaplasia, Osseous | | | 1 | | | | | 1 | | 1 | | | | | | | | | | | | 1 | | | 9 | | |
| Alveolus, Infiltration Cellular, Histiocyte | | | 1 | 1 | | | 1 | | 1 | | 2 | 1 | | 1 | | 2 | 1 | | 2 | | 1 | 1 | 1 | | 22 | | |
| Bronchiole, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Exudate | | | | | 1 | | | | | 1 | | | | | 1 | | | | | 1 | | | | | 18 | | |
| Nasopharyngeal Duct, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | 1 | | | | | 1 | | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 1 | | 1 | 1 | 1 | 1 | 2 | | 1 | | 1 | 2 | 1 | 1 | 1 | 2 | | 1 | | 1 | | 1 | | 1 | 30 | | |
| Olfactory Epithelium, Degeneration | | | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 2 | | |
| Olfactory Epithelium, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cornea, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | 1 | | 2 | | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cyst | | | | | | | | | | X | X | | | | | | | | | | | X | | | 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: 10472 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

p-Chloro-a,a,a-trifluorotoluene

CAS Number: 98-56-6

Date Report Requested: 05/16/2016

Time Report Requested: 11:15:09

First Dose M/F: 01/17/11 / 01/17/11

Lab: BNW

| DAY ON TEST
HARLAN SPRAGUE DAWLEY RATS
MALE
1000 ppm | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|--|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|-----------|-----------|------------|
| | 0612 | 0613 | 0614 | 0615 | 0616 | 0617 | 0618 | 0619 | 0620 | 0621 | 0622 | 0623 | 0624 | 0625 | 0626 | 0627 | 0628 | 0629 | 0630 | 0631 | 0632 | 0633 | 0634 | 0635 | 0636 | | 0637 | 0638 | 0639 | 0640 |
| | 006626 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | 006666 | | 006666 | 006666 | 006666 | 006666 |
| Nephropathy | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 2 | 4 | 3 | 4 | 4 | 4 | 3 | 3 | 4 | 4 | 3 | 3 | 4 | 2 | 4 | 1 | 4 | 4 | | | | 50 | 3.4 |
| Thrombosis | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Urinary Bladder
Ulcer | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | 2.0 |

*** 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: 10472 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

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p-Chloro-a,a,a-trifluorotoluene

CAS Number: 98-56-6

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First Dose M/F: 01/17/11 / 01/17/11

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
Control | DAY ON TEST | 0732 | 0731 | 0731 | 0535 | 0373 | 0579 | 0772 | 0773 | 0636 | 0314 | 0563 | 0653 | 0753 | 0574 | 0553 | 0773 | 0559 | 0738 | 0431 | 0369 | 0738 | 0611 | 0739 | 0733 | 0732 | females
(cont...) |
| | ANIMAL ID | 0010 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Cholangiofibrosis | | | | | | | | | | | | | | | | | | 3 | | | | | | | | |
| Clear Cell Focus | | | X | | | | | X | | | | X | X | | | | | | | X | | X | | | | X |
| Eosinophilic Focus | | | | | | X | | X | | | | | | | | | | | | X | | | | | | |
| Fatty Change | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fibrosis | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | | 1 | | | | | | | | | | | | 1 | | | | | 1 | | | | |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | X | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Pigmentation | | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| Bile Duct, Cyst | | | | | | | | | | | | | | | | | | | 2 | | | | | | | X |
| Bile Duct, Cyst, Multiple | | | | | | | | | | | | | | | 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
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

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

Bile Duct, Hyperplasia
 Hepatocyte, Necrosis

1 1 1 1 1 2 1 1

Mesentery
 Fat, Necrosis

Pancreas
 Acinus, Atrophy
 Acinus, Hyperplasia
 Artery, Inflammation

+
 1
 1

Salivary Glands
 Inflammation
 Parotid Gland, Hyperplasia

+
 2

Stomach, Forestomach

+ +

Stomach, Glandular
 Ectopic Tissue

+ +

CARDIOVASCULAR SYSTEM

Blood Vessel

+ +

Heart
 Cardiomyopathy

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

ENDOCRINE SYSTEM

Adrenal Cortex
 Angiectasis

+
 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

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Experiment Number: 10472 - 03
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 Route: RESPIRATORY EXPOSURE WHOLE BODY
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 p-Chloro-a,a,a-trifluorotoluene
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 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---|---|-----------|----------------------|
| | 0
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1 | 0
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6 | 0
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6 | 0
7
3
2 | 0
7
3
2 | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Hypertrophy | 1 | | | | | | | | 1 | 1 | | | | | 1 | | | | | | | | | 3 | 2 | | |
| Necrosis | | | | | | | | | 1 | | | | | | 1 | | | | | | | | | | | | |
| Thrombosis | | | | | | | | | 4 | | | | | | 1 | | | | | | | | | | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | 1 | | | | | | 1 | 2 | | | | | 1 | | | | | | | 1 | 1 | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Parathyroid Gland | + | M | + | + | + | + | + | + | + | + | + | + | M | M | + | + | + | + | + | + | + | + | + | + | + | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Angiectasis | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | |
| Pars Distalis, Hyperplasia | | | | | 2 | | | | | 2 | | | | | 3 | | | | 2 | | | 1 | | 2 | | | |
| Pars Intermedia, Hyperplasia | | | | | | | | | | 4 | | | | | | | | | | | | | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Ultimobranchial Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C-cell, Hyperplasia | 1 | 1 | | | 1 | | | | | | 1 | | | | | 1 | | | | | | 3 | | 1 | 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

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

Experiment Number: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
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 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
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 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | females
(cont...) |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| | 0
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2 | | |
| ANIMAL ID | 0
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3 | 0
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4 | 0
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5 | |
| Clitoral Gland Cyst Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary Cyst Fibrosis Inflammation Artery, Inflammation Mesothelium, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Uterus Adenomyosis Bacterium Dilatation Hemorrhage Inflammation, Suppurative Inflammation, Chronic Active Metaplasia, Squamous Prolapse Cervix, Cyst, Squamous, Multiple Cervix, Hypertrophy, Stromal Endometrium, Hyperplasia, Cystic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vagina Hyperplasia, Granular Cell | + | + | + | + | M | + | M | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | |

HEMATOPOIETIC 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
Control | DAY ON TEST | | ANIMAL ID | | | | | | | | | | | | | | | | | | | | females
(cont...) | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 0
7
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2 | 0
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5
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6 | 0
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9
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7
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9 | 0
7
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1 | 0
7
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2 | 0
6
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4 | 0
3
1
1 | 0
5
3
4 | 0
6
3
6 | 0
7
8
4 | 0
5
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2 | 0
7
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4 | 0
5
3
6 | 0
7
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2 | 0
4
8
4 | 0
3
1
1 | 0
6
9
6 | 0
7
3
2 | | 0
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| | 0
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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node
Lumbar, Congestion
Renal, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Bronchial | M | + | + | M | + | M | M | + | + | M | + | + | + | M | M | M | + | + | + | M | + | + | + | + | M |
| Lymph Node, Mandibular
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + |
| Lymph Node, Mediastinal | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node, Mesenteric
Congestion | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen
Hematopoietic Cell Proliferation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Thymus
Atrophy
Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland
Hyperplasia, Cystic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skin
Cyst Epithelial Inclusion | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. 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: 10472 - 03
 Test Type: CHRONIC
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

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 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | females
(cont...) |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
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| ANIMAL ID | 0
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Ulcer 2

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skeletal Muscle Hemorrhage | | | | | | + | | | | | | | | | | | | | | | | | + | 2 |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain Hypothalamus, Compression | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx Inflammation Squamous Epithelium, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lung Fibrosis Hemorrhage Inflammation, Chronic Metaplasia, Osseous Metaplasia, Squamous Alveolar Epithelium, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 3 | 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 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: 10472 - 03
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 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
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 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|------|
| | 0732 | 0731 | 0731 | 0556 | 0353 | 0557 | 0757 | 0757 | 0757 | 0663 | 0355 | 0656 | 0555 | 0757 | 0555 | 0757 | 0557 | 0454 | 0353 | 0851 | 0656 | 0757 | 0557 | 0454 | 0353 | | | 0656 |
| | 0010 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 |
| Alveolus, Infiltration Cellular, Histiocyte | 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 |
| Nose Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 2 | 1 | 3 | | | 3 | 3 | | 1 | 3 | | 2 | 2 | 2 | 1 | 2 | 3 | 2 | 1 | 1 | 3 | 1 | 2 | 1 | 2 | | | |
| Sinus, Polyp, Inflammatory | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye Cornea, Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Harderian Gland Atrophy | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland Inflammation | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Kidney Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney Nephropathy | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | | 2 | 4 | | 1 | 1 | 1 | 2 | 1 | | | | | | | |
| Kidney Interstitium, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney Pelvis, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

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 X .. Lesion present
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

p-Chloro-a,a,a-trifluorotoluene

CAS Number: 98-56-6

Date Report Requested: 05/16/2016

Time Report Requested: 11:15:09

First Dose M/F: 01/17/11 / 01/17/11

Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------|
| | 04 | 07 | 07 | 07 | 05 | 07 | 07 | 05 | 07 | 07 | 04 | 07 | 05 | 03 | 05 | 06 | 05 | 07 | 05 | 07 | 06 | 05 | 07 | 07 | |
| ANIMAL ID | 05 | 01 | 03 | 03 | 09 | 03 | 03 | 02 | 03 | 03 | 05 | 03 | 03 | 00 | 05 | 04 | 03 | 03 | 03 | 03 | 07 | 04 | 03 | 03 | 03 |
| | 09 | 00 | 01 | 02 | 00 | 01 | 01 | 08 | 01 | 02 | 00 | 01 | 04 | 03 | 09 | 06 | 06 | 02 | 04 | 02 | 04 | 00 | 01 | 01 | 01 |
| | 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 |
| | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| | 02 | 02 | 02 | 02 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 |
| | 06 | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
| Bile Duct, Hyperplasia | | 1 | | | | | | | | | 1 | | | | 1 | 1 | | | | | 1 | | | 1 | |
| Hepatocyte, Necrosis | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parotid Gland, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ectopic Tissue | | | | | | | | | | | | | | | | | | | | | | | | | |
| CARDIOVASCULAR SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cardiomyopathy | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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

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FEMALE
Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|---|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------|----|----|----|--------|
| | 04 | 07 | 07 | 07 | 05 | 07 | 07 | 05 | 07 | 07 | 04 | 07 | 05 | 03 | 05 | 06 | 05 | 07 | 05 | 07 | | 06 | 05 | 07 | 07 |
| ANIMAL ID | 05 | 01 | 03 | 03 | 09 | 03 | 03 | 02 | 03 | 03 | 05 | 03 | 03 | 00 | 05 | 04 | 03 | 03 | 03 | 03 | 07 | 04 | 03 | 03 | 03 |
| | 09 | 00 | 01 | 02 | 00 | 01 | 01 | 08 | 01 | 02 | 00 | 01 | 04 | 03 | 09 | 06 | 06 | 02 | 04 | 02 | 04 | 00 | 01 | 01 | 01 |
| | 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 |
| | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| | 02 | 02 | 02 | 02 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 05 |
| | 06 | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
| Degeneration, Cystic | 2 | 1 | | | | | 2 | | | | 2 | | | 2 | | 1 | | | | 1 | | 1 | | 2 | 9 1.4 |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | 4 1.0 |
| Hypertrophy | 2 | 2 | 1 | | | | 1 | | 1 | | | | 1 | | | | | | 2 | | | | 2 | | 15 1.5 |
| Necrosis | | | | 1 | | | | | | | | | | | | | | | | | | | | | 3 1.0 |
| Thrombosis | | | | | | | 2 | | | | | | | | | | | | | | | | 4 | | 4 2.8 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 1.0 |
| Degeneration | | | | | | | | | | | | | | | | | | | | 1 | | | | | 1 1.0 |
| Hyperplasia | | | 1 | 1 | 1 | | 1 | 1 | 1 | 2 | | 1 | | 1 | | 1 | | | | | 1 | | | | 17 1.1 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Parathyroid Gland | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | 45 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Pars Distalis, Hyperplasia | | | 1 | 3 | | 3 | | | 1 | | | | | | 2 | | | 1 | | 1 | | | 1 | 1 | 15 1.7 |
| Pars Intermedia, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Ultimobranchial Cyst | | | | X | | | | | | | | | | | | | X | | | | | | | | 3 |
| C-cell, Hyperplasia | | | 1 | 4 | | | | | | | | | 1 | 1 | | | 1 | | 1 | 1 | | | 1 | | 16 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

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

Experiment Number: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----|
| | 0
4
5
9 | 0
7
1
0 | 0
7
3
1 | 0
7
3
2 | 0
5
9
0 | 0
7
3
1 | 0
7
3
1 | 0
5
2
8 | 0
7
3
1 | 0
5
3
2 | 0
7
3
5 | 0
4
3
0 | 0
7
3
3 | 0
5
3
0 | 0
3
0
9 | 0
6
4
6 | 0
5
3
6 | 0
7
3
2 | 0
5
3
4 | 0
7
3
2 | | 0
6
7
4 | 0
5
4
0 | 0
7
3
1 | 0
7
3
1 | 0
7
3
1 | |
| ANIMAL ID | 0
0
1
2
6 | 0
0
1
2
7 | 0
0
1
2
8 | 0
0
1
2
9 | 0
0
1
3
0 | 0
0
1
3
1 | 0
0
1
3
2 | 0
0
1
3
3 | 0
0
1
3
4 | 0
0
1
3
5 | 0
0
1
3
6 | 0
0
1
3
7 | 0
0
1
3
8 | 0
0
1
3
9 | 0
0
1
4
0 | 0
0
1
4
1 | 0
0
1
4
2 | 0
0
1
4
3 | 0
0
1
4
4 | 0
0
1
4
5 | 0
0
1
4
6 | 0
0
1
4
7 | 0
0
1
4
8 | 0
0
1
4
9 | 0
0
1
4
0 | 0
0
1
4
1 | |
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | | 2 | | | | | | | | | | | | | | | | 2 | | | | | | | | 3 |
| Inflammation | | 1 | | | | 1 | 1 | | | 1 | 2 | | 1 | | | | | 2 | | 1 | 1 | | | 2 | | | 13 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | 1 | | | | 1 | | | | | | | 2 | | 2 | | | 2 | | 2 | | | | | | | 11 |
| Fibrosis | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | 1 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Mesothelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenomyosis | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 |
| Bacterium | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Inflammation, Suppurative | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation, Chronic Active | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Metaplasia, Squamous | | | | | | | | | | | | 3 | | | | | | 2 | | | | | 3 | | | 4 | |
| Prolapse | | | | | | X | | | | | | | | | | | | | | | | | | | | | 1 |
| Cervix, Cyst, Squamous, Multiple | | | | | | | | | | | | | | | | | | | | | | | X | | | | 1 |
| Cervix, Hypertrophy, Stromal | | | | | | | | | | | | | | | | | | 4 | | | | | | | | | 1 |
| Endometrium, Hyperplasia, Cystic | | 2 | | 2 | | 2 | 2 | 2 | 2 | 3 | 3 | 1 | 1 | 1 | 4 | 1 | 3 | 3 | 2 | 4 | 2 | 3 | 2 | 1 | 1 | 41 | |
| Vagina | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | 46 | |
| Hyperplasia, Granular Cell | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

HEMATOPOIETIC 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

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 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|---|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------|----|----|-----|--------|
| | 04 | 07 | 07 | 07 | 05 | 07 | 07 | 05 | 07 | 07 | 04 | 07 | 05 | 03 | 05 | 06 | 05 | 07 | 05 | 07 | | 06 | 05 | 07 | 07 |
| ANIMAL ID | 05 | 01 | 03 | 03 | 09 | 03 | 03 | 02 | 03 | 03 | 05 | 03 | 03 | 00 | 05 | 04 | 03 | 03 | 03 | 03 | 07 | 04 | 03 | 03 | 03 |
| | 09 | 00 | 01 | 02 | 00 | 01 | 01 | 08 | 01 | 02 | 00 | 01 | 04 | 03 | 09 | 06 | 06 | 02 | 04 | 02 | 04 | 00 | 01 | 01 | 01 |
| | 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 |
| | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| | 02 | 02 | 02 | 02 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 |
| | 06 | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 00 |
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Lumbar, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Renal, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Lymph Node, Bronchial | M | M | M | + | + | + | + | + | + | + | M | + | M | M | + | + | + | + | M | + | M | + | + | + | 32 |
| Lymph Node, Mandibular
Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| | | | | | | | | 3 | | | | | | 3 | | | | | | | | | | | 2 3.0 |
| Lymph Node, Mediastinal | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node, Mesenteric
Congestion | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hematopoietic Cell Proliferation | 1 | | 1 | 1 | 2 | 1 | 1 | | 1 | | | 1 | 3 | 3 | | 2 | | 1 | 1 | | 1 | | 1 | 1 | 31 1.3 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Atrophy | 3 | 3 | 4 | 4 | 4 | 3 | 3 | | 4 | 4 | 2 | | 2 | 2 | 3 | 3 | 2 | 3 | 1 | 4 | 3 | 4 | | 4 3 | 44 3.2 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Mammary Gland
Hyperplasia, Cystic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | | | | | | 4 | | | | | | | | | | | | | | | | | 2 3.0 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | | | | | | 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:
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Experiment Number: 10472 - 03
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 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
Control | 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 |
| | 4 | 7 | 7 | 7 | 5 | 7 | 7 | 5 | 7 | 7 | 4 | 7 | 5 | 3 | 5 | 6 | 5 | 7 | 5 | 7 | 6 | 5 | 7 | 7 | 7 |
| | 5 | 1 | 3 | 3 | 9 | 3 | 3 | 2 | 3 | 3 | 5 | 3 | 3 | 0 | 5 | 4 | 3 | 3 | 3 | 3 | 7 | 4 | 3 | 3 | 3 |
| | 9 | 0 | 1 | 2 | 0 | 1 | 1 | 8 | 1 | 2 | 0 | 1 | 4 | 3 | 9 | 6 | 6 | 2 | 4 | 2 | 4 | 0 | 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 | 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 | 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 |

Ulcer 2 2 3 2.0

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Skeletal Muscle Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 3 |

1 2.0

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Brain Hypothalamus, Compression | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

7 2.4

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Larynx Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Squamous Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lung Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | 11 |
| Lung Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | 12 |
| Lung Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | 35 |
| Lung Metaplasia, Osseous | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| Lung Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lung Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

1 1.0

2 1.0

50

11 1.0

12 1.1

35 1.2

5 1.0

1 2.0

2 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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| HARLAN SPRAGUE DAWLEY RATS
FEMALE
Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------|--------|----------|
| | 04 | 07 | 07 | 07 | 05 | 07 | 07 | 05 | 07 | 07 | 04 | 07 | 05 | 03 | 05 | 06 | 05 | 07 | 05 | 07 | 06 | 05 | 07 | 07 | |
| ANIMAL ID | 05 | 01 | 03 | 03 | 09 | 03 | 03 | 02 | 03 | 03 | 05 | 03 | 03 | 00 | 05 | 04 | 03 | 03 | 03 | 07 | 04 | 03 | 03 | 03 | |
| | 09 | 00 | 01 | 02 | 00 | 01 | 01 | 08 | 01 | 02 | 00 | 01 | 04 | 03 | 09 | 06 | 06 | 02 | 04 | 02 | 04 | 00 | 01 | 01 | |
| | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | |
| | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | |
| | 02 | 02 | 02 | 02 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 04 | 05 | |
| | 06 | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | |
| Alveolus, Infiltration Cellular, Histiocyte | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | | 1 | 1 | 1 | | 1 | 1 | | 1 | | 1 | | 1 | 1 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 2 1.0 | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 1 | | 2 | 2 | 1 | 2 | | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | 2 | 2 | 1 | 1 | 40 1.9 | | |
| Sinus, Polyp, Inflammatory | | | | | | | | | | | | | | | 3 | | | | | | | | | 1 3.0 | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cornea, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Atrophy | | | | | | | | | | 1 | | | | | | | | | | | | | | 2 1.0 | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Nephropathy | 1 | 1 | 1 | 1 | 1 | | 1 | 2 | 1 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | | 1 | 1 | 1 | 1 | 2 1 | 44 1.3 | |
| Interstitial, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Pelvis, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 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

Table with columns: HARLAN SPRAGUE DAWLEY RATS FEMALE 100 ppm, DAY ON TEST (0-7), ANIMAL ID (0-1), and females (cont...)

ALIMENTARY SYSTEM

Table with columns: Organ/Tissue (Esophagus, Intestine Large, Intestine Small, Liver), Lesion Type (Inflammation, Artery, Angiectasis, etc.), and Severity/Count (+, 1, 2, 3, X, BLANK)

* .. 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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 Lab: BNW

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

Fibrosis 1
 Hematopoietic Cell Proliferation
 Hepatodiaphragmatic Nodule X
 Mixed Cell Focus
 Bile Duct, Cyst X X X X X
 Bile Duct, Hyperplasia 1 1 1 X 2 1
 Centrilobular, Hepatocyte, Hypertrophy

Mesentery

Pancreas +
 Acinus, Atrophy 2 2
 Acinus, Hyperplasia
 Artery, Inflammation 2 2 3 1
 Duct, Cyst

Salivary Glands

Stomach, Forestomach +
 Inflammation, Chronic Active 1

Stomach, Glandular

Tooth +
 Inflammation, Suppurative

CARDIOVASCULAR SYSTEM

Blood Vessel +
 Aorta, Inflammation 2

* .. 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

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

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cardiomyopathy | | 1 | | | 1 | | 1 | | | | | | | | | 1 | 1 | | 2 | 1 | 3 | 1 | | | |
| Lymphatic, Pericardium, Inflammation | | | | | | | | | | | | | | 2 | | | | | | | | | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | 1 | | | | | | | | | | 3 | | | | | | | | | | | | |
| Degeneration, Cystic | | 1 | | | | | | | 1 | 1 | 2 | | 1 | | | | | | | | | 1 | | 2 |
| Hyperplasia | | | | 1 | | | | | | | | | | 1 | | 2 | | | | | | | | |
| Hypertrophy | | | | | | 1 | 2 | | | | | 1 | 1 | 1 | | | | 1 | | | | 1 | 1 | 1 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | 4 | 1 | 1 | | | | 2 | | 1 | 1 | | 2 | | | 2 | 3 | | 1 | 1 | | 1 | | 1 | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | |
| Parathyroid Gland | + | + | + | M | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | M | + | + | + |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| Pars Distalis, Hyperplasia | | | | | | | | | | 3 | 3 | 1 | | 1 | | | 3 | | | | 3 | | | 2 |
| Pars Intermedia, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | 2 | | | | | | |
| Ultimobranchial Cyst | | | | | X | | | | | | | | | | | | | | | | | | | |
| C-cell, Hyperplasia | 1 | | | 1 | | | 2 | | | 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:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| | | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
100 ppm | ANIMAL ID | 0731 | 0064 | 0054 | 0066 | 0066 | 0066 | 0057 | 0077 | 0077 | 0077 | 0067 | 0077 | 0067 | 0077 | 0067 | 0074 | 0077 | 0077 | 0077 | 0066 | 0066 | 0057 | 0077 | females
(cont...) | |
| | | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | | |
| | | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0000 | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0000 | 0001 | 0002 | 0003 | | 0004 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Lymph Node Congestion | | | | | | | | + | | | | | | | | | | | | | | | | | | | |
| Lymph Node Hyperplasia Iliac, Hyperplasia | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | |
| Lymph Node Lumbar, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node Lumbar, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node Pancreatic, Hyperplasia | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | |
| Lymph Node Renal, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node Renal, Ectasia | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Bronchial | + | + | + | M | M | M | M | M | + | M | + | + | M | M | M | + | + | M | + | + | + | M | M | M | + | | |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Lymph Node, Mediastinal Congestion | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 2 | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Spleen Hematopoietic Cell Proliferation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Spleen Inflammation | | 2 | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | | 1 | | | | 3 | | | 1 | 1 | | |
| Thymus Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | 3 | 3 | 1 | 4 | 4 | 2 | | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | | 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
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

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

Hyperplasia, Lymphoid

3

INTEGUMENTARY SYSTEM

Mammary Gland
 Hyperplasia, Cystic

+
 2 4 2 2 2

Skin

+ +

MUSCULOSKELETAL SYSTEM

Bone

+ +

Skeletal Muscle

+ +

NERVOUS SYSTEM

Brain
 Hypothalamus, Compression
 Unilateral, Inflammation, Granulomatous
 Unilateral, Necrosis

+
 2 4 4 2 2 3

Peripheral Nerve

+ +

Spinal Cord
 Cyst Epithelial Inclusion
 Axon, Nerve, Degeneration

+ + 1 2

RESPIRATORY SYSTEM

Larynx

+ +

* .. 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) |
|-------------|-----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|-------------------|
| | 0731 | 0674 | 0534 | 0664 | 0661 | 0668 | 0591 | 0634 | 0633 | 0633 | 0633 | 0633 | 0631 | 0633 | 0632 | 0632 | 0638 | 0622 | 0636 | 0633 | 0633 | 0633 | 0634 | 0636 | | |
| 100 ppm | 0031 | 0034 | 0034 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fibrosis | 1 | | | 1 | 1 | | 3 | | 1 | | 1 | | | 1 | 1 | | 1 | | | | 1 | | | | | | |
| Hemorrhage | 2 | | | | | | 3 | | 2 | | | | 1 | | | | | | | | 2 | | | | | | |
| Inflammation, Chronic | 2 | 1 | 1 | 1 | 2 | 1 | 3 | | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 1 | 2 | 1 | 1 | 1 | 1 | 1 | |
| Metaplasia, Osseous | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Metaplasia, Squamous | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| Alveolus, Infiltration Cellular, Histiocyte | 1 | | | | 1 | 2 | | | | 1 | 1 | | 1 | | 1 | 1 | 1 | 1 | | | 1 | 1 | | | 1 | 2 | |
| Mediastinum, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation | | | | | | | | | | | | | | 1 | | | | | | | 1 | | | | | | |
| Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | | | | | 1 | 2 | 1 | | | | 1 | 1 | | 2 | | 2 | | |
| Olfactory Epithelium, Degeneration | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cornea, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | | | | + |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
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 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically
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Experiment Number: 10472 - 03
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 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
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 Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| HARLAN SPRAGUE DAWLEY RATS
 FEMALE
 100 ppm | DAY ON TEST | 07 | 06 | 05 | 06 | 06 | 06 | 06 | 05 | 07 | 07 | 07 | 07 | 06 | 07 | 07 | 06 | 07 | 04 | 07 | 07 | 07 | 06 | 06 | 05 | 07 |
| | ANIMAL ID | 31 | 34 | 34 | 44 | 41 | 41 | 93 | 34 | 32 | 31 | 31 | 22 | 22 | 22 | 88 | 22 | 13 | 63 | 33 | 33 | 33 | 43 | 46 | 33 | 72 |
| | | 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 |
| | | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 |
| | | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 00 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 02 | 02 | 02 | 03 | 03 | 05 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |

females
(cont...)

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy | 2 | 2 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 3 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 |
| 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
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 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| | 0065 | 0064 | 0065 | 0067 | 0067 | 0067 | 0066 | 0067 | 0065 | 0067 | 0063 | 0067 | 0066 | 0065 | 0065 | 0066 | 0064 | 0067 | 0067 | 0066 | 0067 | 0066 | 0066 | 0064 | |
| ANIMAL ID | 0032 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 |
| | 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 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Large, Cecum
Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 2.0 |
| Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Intestine Large, Colon
Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 2.0 |
| Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Intestine Large, Rectum
Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 2.0 |
| Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Intestine Small, Duodenum
Artery, Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 2.0 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Intestine Small, Jejunum
Artery, Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 2.0 |
| Liver
Angiectasis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 5 1.4 |
| Basophilic Focus | | | | | | | | | 1 | | | | | | | | | | | | | | | | | 3 |
| Clear Cell Focus | | | | X | | | | | | | | | | | | | | | | | X | | | | | 15 |
| Eosinophilic Focus | | | X | X | | | | | | | | | | | | | | | | | X | X | X | X | | 6 |
| Fatty Change | | | | | | | | | | | | | | | | | | | | | | | | | | 4 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|------|
| | 0065 | 0064 | 0051 | 0073 | 0073 | 0077 | 0069 | 0073 | 0055 | 0073 | 0033 | 0076 | 0055 | 0055 | 0066 | 0044 | 0077 | 0077 | 0066 | 0076 | | 0066 | 0044 |
| ANIMAL ID | 0032 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0055 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|--|---|---|--|---|---|---|--|--|---|--|---|--|---|---|---|---|---|--|--|---|----|-----|-----|
| Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | 1 | | | | | | | | 1 | 1.0 |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Mixed Cell Focus | | X | | X | X | | | | | | | | | X | | | | X | X | | | | | | 6 | |
| Bile Duct, Cyst | | | | | X | | X | | X | | | | | X | | X | | | | | | | | | 11 | |
| Bile Duct, Hyperplasia | | | | | 1 | | | 1 | | | | | | | | | 1 | 1 | | 1 | | | 1 | 13 | 1.1 | |
| Centrilobular, Hepatocyte, Hypertrophy | | | | | | | | | | | | 2 | | | | | | | | | | | | 1 | 2.0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Acinus, Atrophy | | | | | | | | | | | | | | 1 | | | | | | | | | 1 | 4 | 1.5 |
| Acinus, Hyperplasia | | | | | | | | | | | | | | | | | 1 | | | | | | | 1 | 1.0 |
| Artery, Inflammation | | | 2 | | | | | 1 | | | | | | | | | | | 1 | | | | | 7 | 1.7 |
| Duct, Cyst | | | | | | | | | | | 2 | | | | | | | | | | | | | 1 | 2.0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Chronic Active | | | | | | | | | | | 1 | | | | | | | | | | | | | 2 | 1.0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|-----|
| Tooth | + | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Inflammation, Suppurative | 4 | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Aorta, Inflammation | | | 2 | | | | | | | | | | | | | | | | | | | | | 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
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 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
100 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | | |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----|
| | 0
6
5 | 0
4
6 | 0
1
1 | 0
3
3 | 0
3
1 | 0
3
2 | 0
9
2 | 0
3
2 | 0
5
8 | 0
3
1 | 0
7
5 | 0
3
1 | 0
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4 | 0
5
5 | 0
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7 | 0
4
9 | 0
7
3 | 0
3
2 | 0
4
0 | 0
6
8 | | 0
7
3 | 0
4
8 | 0
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3 | 0
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5 | 0
7
8 | 0
5
1 | |
| ANIMAL ID | 0
3
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6 | 0
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7 | 0
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8 | 0
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4 | 0
0
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4 | 0
0
3
5 | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cardiomyopathy | | | | | | | | 2 | | | | | | 1 | | | 2 | | | | | | | | | | | 12 |
| Lymphatic, Pericardium, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| ENDOCRINE SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Angiectasis | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | | | | | 4 |
| Degeneration, Cystic | | | | | 1 | | | | | 1 | | | | 1 | | | | | | | 1 | | | | | | | 12 |
| Hyperplasia | | | 3 | | | | | | | | | | 1 | | | | | | | | 1 | | 1 | | | | | 7 |
| Hypertrophy | | | 1 | | 1 | 1 | 1 | | | | | | | 1 | | | | | | | 1 | | 1 | | 3 | | | 17 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | | 3 | | | 1 | 2 | | 1 | | 2 | 2 | | | 1 | 1 | | | 2 | | | 3 | 25 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | M | M | + | + | 44 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pars Distalis, Hyperplasia | | | | | 1 | | 3 | | 2 | | 2 | | 2 | | 1 | | | | | | | 2 | | | | | | 14 |
| Pars Intermedia, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Ultimobranchial Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| C-cell, Hyperplasia | | | | | 1 | | 1 | | 1 | | | | | | 1 | | 2 | | | | | 1 | | | | 2 | | 15 |

* .. 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: 10472 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

p-Chloro-a,a,a-trifluorotoluene

CAS Number: 98-56-6

Date Report Requested: 05/16/2016

Time Report Requested: 11:15:09

First Dose M/F: 01/17/11 / 01/17/11

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|--|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | 6 | 4 | 1 | 3 | 3 | 3 | 9 | 3 | 5 | 3 | 9 | 3 | 7 | 8 | 3 | 7 | 5 | 3 | 3 | 4 | 3 | 4 | 7 | 5 |
| FEMALE | | 5 | 6 | 1 | 1 | 2 | 1 | 2 | 2 | 8 | 1 | 5 | 1 | 4 | 5 | 4 | 4 | 9 | 2 | 1 | 0 | 2 | 8 | 3 | 1 |
| 100 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 | 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 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | |

Follicular Cell, Hyperplasia

1 3.0

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 2.0 |
| Inflammation | | | | | 1 | 1 | 1 | | 1 | 2 | 1 | | 1 | 1 | 1 | | | | | | | | | | | 21 | 1.1 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst | | | 1 | 2 | | | 2 | | | | | | | | 2 | | | | | | | | | | | 7 | 1.7 |
| Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Dilatation | | | | | | | | | | | | | | | | | 4 | 3 | | | | 4 | | | | 3 | 3.7 |
| Inflammation, Chronic Active | | | 1 | | | | | | | | | | | | | | 3 | 3 | | | | | | | | 3 | 2.3 |
| Metaplasia, Squamous | | | | | | | | | | | 2 | 4 | | | | 3 | 4 | | | | | | | | | 6 | 3.0 |
| Cervix, Cyst, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Cervix, Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | 3 | | | | | | | | 2 | 3.5 |
| Endometrium, Erosion | | | | | | | | | | | | | | | | | 1 | | | | | | | | | 1 | 1.0 |
| Endometrium, Hyperplasia, Cystic | | | | 1 | 2 | 2 | 3 | 1 | | 2 | 2 | 2 | 2 | 3 | 1 | 2 | 3 | | | 3 | | | | 1 | | 34 | 1.9 |
| Serosa, Fibrosis | | | | | | | | | | | | | | | | | 4 | | | | | | | | | 1 | 4.0 |
| Vagina | + | + | M | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Hyperplasia, Stromal | | | | | | | | | | | | 3 | | | | | | | | | | | | | | 1 | 3.0 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | 4 | | 1 | 4.0 |
| Artery, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 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

| | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
100 ppm | DAY ON TEST | 0065 | 0077 | 0077 | 0076 | 0075 | 0073 | 0076 | 0057 | 0053 | 0076 | 0055 | 0056 | 0044 | 0077 | 0076 | 0067 | 0067 | 0066 | 0047 | 0047 | |
| | ANIMAL ID | 0032 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0044 | 0044 | 0044 | 0044 | 0044 | 0055 | 0055 | |
| | | 5 | 6 | 1 | 3 | 3 | 3 | 9 | 3 | 5 | 3 | 9 | 3 | 7 | 8 | 3 | 7 | 5 | 3 | 4 | 3 | 3 |
| | | 6 | 4 | 1 | 3 | 3 | 3 | 9 | 3 | 5 | 3 | 9 | 3 | 7 | 8 | 3 | 7 | 5 | 3 | 4 | 3 | 3 |
| | | 5 | 6 | 1 | 3 | 3 | 3 | 9 | 3 | 5 | 3 | 9 | 3 | 7 | 8 | 3 | 7 | 5 | 3 | 4 | 3 | 3 |
| | | 6 | 4 | 1 | 3 | 3 | 3 | 9 | 3 | 5 | 3 | 9 | 3 | 7 | 8 | 3 | 7 | 5 | 3 | 4 | 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 |
| | | 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 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | | | | | | | | | | | | | | | | | | | | | | * TOTALS |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Bone Marrow Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| | | | | | | | 4 | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Lymph Node Congestion | | | + | | + | | | | | | + | | + | | | | | | | | | | | | 6 | | |
| Hyperplasia | | | | | 1 | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Iliac, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Lumbar, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Lumbar, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Pancreatic, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Renal, Congestion | | | | | 2 | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Renal, Ectasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Lymph Node, Bronchial | M | M | M | + | + | + | + | + | + | M | M | + | M | M | + | M | + | M | + | + | M | + | + | + | + | 27 | |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Lymph Node, Mediastinal Congestion | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Spleen Hematopoietic Cell Proliferation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation | | | 1 | 1 | 1 | 1 | | | | 1 | 1 | | | | 1 | | 1 | 1 | 1 | 1 | | | | 1 | 1 | 31 | 1.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Thymus Atrophy | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| | | | 4 | 4 | 3 | 4 | 4 | 4 | | | 2 | 4 | 3 | 4 | 3 | 3 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 44 | 3.6 |

* .. 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
2) Mild 4) Marked

Experiment Number: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
100 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 |
| 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 |
| | 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 | 5 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Hyperplasia, Lymphoid

1 3.0

INTEGUMENTARY SYSTEM

Mammary Gland
Hyperplasia, Cystic

+ 50
 3 2 7 2.4

Skin

+ 50

MUSCULOSKELETAL SYSTEM

Bone

+ 50

Skeletal Muscle

+ + + + + + + + + + + + + + + + + 6

NERVOUS SYSTEM

Brain

+ 50

Hypothalamus, Compression
Unilateral, Inflammation, Granulomatous
Unilateral, Necrosis

4 3 3 7 3.3
 1 2.0
 1 2.0

Peripheral Nerve

+ + + + + + + + + + + + + + + + + 4

Spinal Cord

+ + + + + + + + + + + + + + + + + 4

Cyst Epithelial Inclusion
Axon, Nerve, Degeneration

1 1.0
 1 2.0

RESPIRATORY SYSTEM

Larynx

+ 50

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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| HARLAN SPRAGUE DAWLEY RATS
FEMALE
100 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 | | | | |
| | 6 | 4 | 1 | 3 | 3 | 3 | 9 | 3 | 5 | 3 | 9 | 3 | 7 | 6 | 5 | 5 | 6 | 4 | 7 | 7 | | 6 | 7 | 6 | 6 | 4 |
| 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 |
| | 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 |
| | 2 | 2 | 2 | 2 | 3 | 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 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 |

Inflammation

2 1.0

Lung

50

- Fibrosis
- Hemorrhage
- Inflammation, Chronic
- Metaplasia, Osseous
- Metaplasia, Squamous
- Alveolus, Infiltration Cellular, Histiocyte
- Mediastinum, Inflammation, Chronic

17 1.1
11 1.5
42 1.2
4 1.0
2 1.0
31 1.1
1 2.0

Nose

50

- Foreign Body
- Inflammation
- Inflammation, Acute
- Olfactory Epithelium, Accumulation, Hyaline Droplet
- Olfactory Epithelium, Degeneration

1 1.0
3 1.0
1 3.0
36 1.5
1 1.0

Trachea

50

SPECIAL SENSES SYSTEM

Eye

50

- Cornea, Inflammation

1 3.0

Harderian Gland

50

- Inflammation

1 1.0

Zymbal's Gland

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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 CAS Number: 98-56-6

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 Lab: BNW

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| | 0065 | 0064 | 0061 | 0073 | 0073 | 0077 | 0066 | 0077 | 0055 | 0073 | 0037 | 0067 | 0055 | 0066 | 0044 | 0077 | 0073 | 0064 | 0077 | 0066 | 0066 | 0044 | 0077 | 0064 | 0077 | |
| HARLAN SPRAGUE DAWLEY RATS FEMALE
100 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 | 50 |
| | 0 | 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 |
| | 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 | 49 |
| | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 1.5 |
| | 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 | 50 |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Nephropathy | | 1 | 4 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 3 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 1 | 49 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

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 I .. Insufficient tissue
 M .. Missing tissue
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Experiment Number: 10472 - 03

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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

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CAS Number: 98-56-6

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First Dose M/F: 01/17/11 / 01/17/11

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | 0714 | 058 | 072 | 064 | 066 | 077 | 077 | 043 | 073 | 065 | 076 | 067 | 053 | 078 | 066 | 076 | 054 | 074 | 067 | 057 | 045 | 073 | 052 | 059 | females
(cont...) |
| | ANIMAL ID | 0050 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | |
| | | 1234 | 56 | 78 | 90 | 12 | 34 | 56 | 78 | 90 | 12 | 34 | 56 | 78 | 90 | 12 | 34 | 56 | 78 | 90 | 12 | 34 | 56 | 78 | 90 | |

Centrilobular, Hepatocyte, Hypertrophy
Hepatocyte, Necrosis
Hepatocyte, Periportal, Hypertrophy

1 1

Mesentery

Pancreas
Acinus, Basophilic Focus
Artery, Inflammation

+
1
2

Salivary Glands

+ +

Stomach, Forestomach
Epithelium, Hyperplasia

+ +

Stomach, Glandular
Artery, Inflammation

+ +

CARDIOVASCULAR SYSTEM

Blood Vessel

+ +

Heart
Cardiomyopathy

+
1 1

ENDOCRINE SYSTEM

Adrenal Cortex
Angiectasis
Degeneration, Cystic
Hematopoietic Cell Proliferation

+
2 2 3 4 1 2 1 1

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+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
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| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | females
(cont...) | | | | | |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | | | | |
| | 7 | 5 | 7 | 6 | 6 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 6 | 7 | 5 | 7 | 6 | 6 | 7 | 5 | | 4 | 7 | 7 | 5 | 5 |
| ANIMAL ID | 1 | 5 | 3 | 4 | 5 | 3 | 0 | 3 | 5 | 3 | 6 | 3 | 9 | 3 | 8 | 3 | 6 | 0 | 3 | 4 | 5 | 3 | 3 | 2 | 9 | 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 |
| ANIMAL ID | 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 |
| 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 |
| ANIMAL ID | 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 | 5 |
| Hyperplasia | | | | 1 | | 1 | 2 | | | | 1 | 1 | | | | | | | | | 1 | | | | | |
| Hypertrophy | | | | 1 | | | | | | | 2 | | | 2 | 1 | | 2 | | | | 3 | | | | | |
| Necrosis | | | | | | | | | | | 3 | | | | | | | | | | | | | | | |
| Thrombosis | | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | 1 | | 1 | 1 | 1 | 1 | 2 | 1 | | | | | 1 | | 1 | | | 1 | 1 | | | + | + | 1 | 3 | 2 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| Pars Distalis, Hyperplasia | 3 | | 1 | | | | 2 | | | | 1 | | 2 | | | | | | | | | | | | 2 | |
| Pars Distalis, Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ultimobranchial Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ultimobranchial Cyst, Multiple | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C-cell, Hyperplasia | 2 | | 1 | 1 | | 2 | 1 | | | | 1 | 3 | | 2 | | | | | 1 | 1 | | | | | 3 | |
| Follicular Cell, Hyperplasia | | | | | | | 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

1-4 .. Lesion qualified as:
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| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | females
(cont...) | | | | | |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | | | | |
| | 7 | 5 | 7 | 6 | 6 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 6 | 7 | 5 | 7 | 6 | 6 | 7 | 5 | | 4 | 7 | 7 | 5 | 5 |
| ANIMAL ID | 1 | 5 | 3 | 4 | 5 | 3 | 0 | 3 | 5 | 3 | 6 | 3 | 9 | 3 | 8 | 3 | 6 | 0 | 3 | 4 | 5 | 3 | 3 | 2 | 9 | 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 |
| ANIMAL ID | 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 |
| 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 |
| ANIMAL ID | 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 | 5 |
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | 2 | | | | | | | | | | | 2 | | | | | | |
| Inflammation | | | 1 | | | 1 | | 1 | | 1 | | | | | | 1 | | 1 | 1 | | | | | | | 1 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | 1 | | 1 | | | 2 | | | | | 2 | | | | 2 | | 1 | | | | | | | |
| Inflammation, Suppurative | 3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenomyosis | 2 | | | | | | | | | | | | | | | | | | 2 | | | | | | | |
| Dilatation | | | 4 | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | 2 | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | 4 | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Metaplasia, Squamous | 1 | | 4 | | 3 | | | 1 | 3 | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | 3 | | | | | | | | | | | | | | | | | |
| Thrombosis | | | | | | 2 | | | | | | | | | | | | | | | | | | | | |
| Endometrium, Atypical Hyperplasia | | | | | | | 2 | | | | | | | | | | | | | | | | | | | |
| Endometrium, Hyperplasia, Cystic | 2 | 2 | | 2 | 2 | 2 | 2 | | 1 | | 2 | 1 | 1 | | 3 | 2 | | 2 | | 2 | | 2 | | | | |
| Vagina | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst, Squamous | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | 3 | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | 3 | | | | | | | | | | | | | | | | | |

HEMATOPOIETIC SYSTEM

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

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| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) | | | |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|----------------------|------------------|------------------|------------------|
| | 0
7
1
4 | 0
5
5
8 | 0
7
3
2 | 0
6
4
2 | 0
6
5
4 | 0
7
3
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2 | 0
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3 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00501 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00502 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00503 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00504 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00505 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00506 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00507 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00508 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00509 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00510 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00511 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00512 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00513 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00514 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00515 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00516 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00517 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00518 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00519 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00520 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00521 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00522 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00523 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00524 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00525 | |

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

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hypothalamus, Compression | | | | 4 | 4 | | | | | | | | 4 | | | | | | | | 3 | | |
| Peripheral Nerve Inflammation | | + | | + | | | | | | | | | | | | | | | | | | | |
| Spinal Cord | | | | | + | | | | | | | | | | | | | | | | | | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lung Fibrosis | | | | | 2 | 1 | 1 | 1 | | | | 1 | | 1 | | | 1 | | | | 1 | 1 | 3 |
| Lung Hemorrhage | | | | 1 | 2 | 1 | | 2 | | 1 | | 1 | | | | 1 | | | | | | 3 | |
| Lung Inflammation, Chronic | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 3 |
| Lung Metaplasia, Osseous | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | |
| Lung Metaplasia, Squamous | | | | | | 1 | | | | | | | | | | | | | | | | | |
| Lung Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Lung Alveolus, Infiltration Cellular, Histiocyte | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | | 1 | | 1 | | 1 | 1 | 1 | | 1 | 2 | | 1 | 2 | |
| Lung Bronchiole, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. 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: 10472 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

p-Chloro-a,a,a-trifluorotoluene

CAS Number: 98-56-6

Date Report Requested: 05/16/2016

Time Report Requested: 11:15:09

First Dose M/F: 01/17/11 / 01/17/11

Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) | |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---|-----------|----------------------|--|
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0 | | | | |
| Inflammation | 2 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Nasopharyngeal Duct, Inflammation,
Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Accumulation, Hyaline
Droplet | 1 | 1 | | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 3 | | 1 | 1 | 1 | 2 | 3 | 2 | | 1 | 2 | | 1 | 2 | 1 | | | |
| Olfactory Epithelium, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Harderian Gland
Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 2 | | |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | | | + | | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Infarct | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | |
| Nephropathy | 4 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | | 1 | 2 | 4 | 2 | | | |
| Interstitial, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | |
| Pelvis, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | |
| Renal Tubule, Hyperplasia | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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

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Experiment Number: 10472 - 03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/HSD

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p-Chloro-a,a,a-trifluorotoluene

CAS Number: 98-56-6

Date Report Requested: 05/16/2016

Time Report Requested: 11:15:09

First Dose M/F: 01/17/11 / 01/17/11

Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|
| | 0702 | 0703 | 0703 | 0703 | 0703 | 0706 | 0707 | 0707 | 0706 | 0706 | 0703 | 0707 | 0707 | 0706 | 0706 | 0703 | 0707 | 0707 | 0704 | 0704 | | 0707 | 0707 | 0707 | 0707 | 0707 |
| ANIMAL ID | 00526 | 00557 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 |
| | 0 | 0 | 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 | 5 | 7 | 7 | 6 | 7 | 7 | 6 | 6 | 3 | 7 | 7 | 6 | 7 | 4 | 4 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 0 | 3 | 3 | 3 | 3 | 6 | 1 | 3 | 4 | 3 | 3 | 0 | 6 | 9 | 3 | 3 | 4 | 3 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 2 | 2 | 1 | 2 | 2 | 4 | 7 | 1 | 3 | 1 | 1 | 5 | 6 | 5 | 1 | 2 | 0 | 1 | 8 | 7 | 2 | 1 | 1 | 1 | 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 | 0 | 0 | 0 |
| | 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 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 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 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Colon
Artery, Serosa, Inflammation | + | + | + | + | + | 2 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis | | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 | | 5 |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Clear Cell Focus | X | | X | | | | X | X | X | | | | X | | X | | X | X | | X | | X | | | | | 23 |
| Eosinophilic Focus | | | | X | | | | | | | | | | X | X | | | | | | | | | | | | 7 |
| Fatty Change | 1 | | | | | | 1 | | 1 | | | | | | | | | | | | | | 1 | | | | 11 |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | 4 |
| Hepatodiaphragmatic Nodule | X | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Mixed Cell Focus | | | | | | | X | X | | | | | | | | | | | | X | | | | | | | 8 |
| Bile Duct, Cyst | | | | | | | | | | | | | | | X | | | | | | | | | | | | 5 |
| Bile Duct, Cyst, Multiple | | | | | | | | | | | | | | | | | | | | | | | X | | | | 1 |
| Bile Duct, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Bile Duct, Hyperplasia | 1 | | 1 | | 1 | | | 1 | | | 1 | | 1 | | | | 1 | 1 | | 1 | | 1 | | 1 | | | 17 |

* .. 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: 10472 - 03
 Test Type: CHRONIC
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 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
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 Lab: BNW

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FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|----------|
| | 0702 | 0703 | 0704 | 0705 | 0706 | 0707 | 0708 | 0709 | 0710 | 0711 | 0712 | 0713 | 0714 | 0715 | 0716 | 0717 | 0718 | 0719 | 0720 | 0721 | 0722 | 0723 | 0724 | 0725 | |
| ANIMAL ID | 0056 | 0057 | 0058 | 0059 | 0060 | 0061 | 0062 | 0063 | 0064 | 0065 | 0066 | 0067 | 0068 | 0069 | 0070 | 0071 | 0072 | 0073 | 0074 | 0075 | 0076 | 0077 | 0078 | 0079 | |
| Centrilobular, Hepatocyte, Hypertrophy | | | 2 | | 1 | | | | | | | | | | | | | | | 1 | | | 1 | | |
| Hepatocyte, Necrosis | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Hepatocyte, Periportal, Hypertrophy | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Acinus, Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Artery, Inflammation | | 3 | 1 | 1 | 2 | | | | | | | | | | | | | | | | | | | 5 1.8 | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | 1 | | | | | | | | | | | 1 1.0 | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Artery, Inflammation | | | | | 2 | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| CARDIOVASCULAR SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cardiomyopathy | 1 | | 1 | | 1 | | | 1 | 2 | | | | 1 | | 1 | | | | | | | | | 15 1.1 | |
| ENDOCRINE SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Angiectasis | | | | | | | | | | 2 | | | | | | 1 | | | | 1 | 2 | | 1 | 8 2.0 | |
| Degeneration, Cystic | | 3 | | | 1 | | | 2 | | | 2 | 2 | 3 | | | | 2 | | | | | | 1 | 12 1.8 | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | 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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M .. Missing tissue
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|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|-----|
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| ANIMAL ID | 0
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7 | 0
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9 | 0
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0 | | |
| Hyperplasia | 1 | | | | | | | | | | | | | | 1 | | | | | | | | | | | | 8 | 1.1 |
| Hypertrophy | | | 1 | | | | | 2 | | | 1 | | | | | | | 2 | | | | | | | | 1 | 11 | 1.6 |
| Necrosis | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | 2 | 2.0 |
| Thrombosis | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | 1 | 1 | | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 34 | 1.1 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Parathyroid Gland | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Fibrosis | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | 1.0 |
| Hyperplasia | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Pars Distalis, Hyperplasia | | | 1 | 1 | | 2 | | | 2 | 1 | 1 | | | 3 | | | | | | | 3 | | | 1 | 2 | 16 | 1.8 | |
| Pars Distalis, Vacuolization Cytoplasmic | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | 1 | 1.0 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Ultimobranchial Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Ultimobranchial Cyst, Multiple | | | X | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| C-cell, Hyperplasia | 1 | | 2 | 1 | 1 | 1 | | | 2 | 1 | | | | 1 | | | 1 | | | | | | | | 1 | 21 | 1.4 | |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |

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

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

Experiment Number: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | * 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 | | | | |
| | | | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 6 | 6 | 3 | 7 | 7 | 6 | 7 | 4 | 4 | 7 | 7 | 7 | 7 | 7 | | |
| | | | 0 | 3 | 3 | 3 | 3 | 6 | 1 | 3 | 4 | 3 | 3 | 0 | 6 | 9 | 3 | 3 | 4 | 3 | 3 | 5 | 3 | 3 | 3 | 3 | 3 | | |
| | | | 2 | 2 | 1 | 2 | 2 | 4 | 7 | 1 | 3 | 1 | 1 | 5 | 6 | 5 | 1 | 2 | 0 | 1 | 8 | 7 | 2 | 1 | 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 | | |
| | | | 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 | | |
| | | | 2 | 2 | 2 | 2 | 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 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | | |
| Clitoral Gland | | | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 | |
| Inflammation | | | | | | | 1 | | 1 | | | 2 | | | | 1 | | | | | 1 | 1 | | | | 2 | 15 | 1.1 | |
| Ovary | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cyst | | | | | | | | | | | | | | | 2 | | | | | | | | | | | 2 | 8 | 1.6 | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Uterus | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Adenomyosis | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 | |
| Dilatation | | | | | | | | | | | | | | | | | | | | | | 4 | | 2 | | | 3 | 3.3 | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | 3 | | | | | 2 | 2.5 | |
| Inflammation, Suppurative | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | 2 | 3.0 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | 3 | | | | | 1 | 3.0 | |
| Metaplasia, Squamous | | | | | 2 | | | 1 | | | | | 4 | | | | | | | | | 3 | | | | 4 | 10 | 2.6 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Endometrium, Atypical Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Endometrium, Hyperplasia, Cystic | | | | | 3 | | | 1 | 2 | | | 2 | | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | | | | 2 | | 31 | 1.8 | |
| Vagina | | | + | + | + | + | + | M | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Cyst, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 3.0 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | 1 | 2.0 | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |

HEMATOPOIETIC SYSTEM

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

* .. 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
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

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

Experiment Number: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

p-Chloro-a,a,a-trifluorotoluene

CAS Number: 98-56-6

Date Report Requested: 05/16/2016

Time Report Requested: 11:15:09

First Dose M/F: 01/17/11 / 01/17/11

Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | |
|---|-------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|---|---|-----------|------------|--------------|
| | ANIMAL ID | | 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 | 5 | 7 | 7 | 6 | 7 | 7 | 6 | 6 | 3 | 7 | 7 | 6 | 7 | 4 | 4 | | 7 | 7 | 7 | 7 | 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 | | | |
| | | | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 6 | 6 | 3 | 7 | 7 | 6 | 7 | 4 | 4 | 7 | 7 | 7 | 7 | 7 | | |
| | | | 0 | 3 | 3 | 3 | 3 | 6 | 1 | 3 | 4 | 3 | 3 | 0 | 6 | 9 | 3 | 3 | 4 | 3 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | | |
| | | | 2 | 2 | 1 | 2 | 2 | 4 | 7 | 1 | 3 | 1 | 1 | 5 | 6 | 5 | 1 | 2 | 0 | 1 | 8 | 7 | 2 | 1 | 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 | | |
| | | | 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 | | |
| | | | 2 | 2 | 2 | 2 | 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 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | | |
| Lymph Node
Iliac, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 |
| Lymph Node
Iliac, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 |
| Lymph Node
Renal, Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 |
| Lymph Node, Bronchial | | | + | + | + | M | + | M | M | M | M | + | M | M | + | + | M | + | M | + | M | M | M | M | M | + | 22 | | |
| Lymph Node, Mandibular | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Lymph Node, Mediastinal | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Lymph Node, Mesenteric | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Spleen
Hematopoietic Cell Proliferation | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | 1 | 1 | 1 | 2 | 1 | | 1 | | 1 | 1 | 1 | | 1 | 1 | | 1 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 38 | 1.2 | |
| Thymus
Atrophy
Cyst | | | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| | | | 4 | 4 | | 4 | 4 | | 4 | 3 | 4 | 4 | 4 | 3 | 4 | | 4 | 4 | 4 | 4 | 3 | | 4 | 4 | 4 | 4 | 43 | 3.5 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| INTEGUMENTARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland
Cyst
Hyperplasia, Cystic | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Skin
Cyst Epithelial Inclusion | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 3 2.0 |
| MUSCULOSKELETAL 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|--------|
| | 0702 | 0703 | 0704 | 0705 | 0706 | 0707 | 0708 | 0709 | 0710 | 0711 | 0712 | 0713 | 0714 | 0715 | 0716 | 0717 | 0718 | 0719 | 0720 | 0721 | | 0722 |
| ANIMAL ID | 00526 | 00527 | 00528 | 00529 | 00530 | 00531 | 00532 | 00533 | 00534 | 00535 | 00536 | 00537 | 00538 | 00539 | 00540 | 00541 | 00542 | 00543 | 00544 | 00545 | 00546 | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | 1 |
| NERVOUS SYSTEM | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hypothalamus, Compression | | | | | | | | | 3 | | | | | | | | 2 | | | | | 6 3.3 |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | 2 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | 1 |
| RESPIRATORY SYSTEM | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Fibrosis | 2 | 2 | 2 | 2 | 1 | | | | 1 | 2 | | | | 2 | | | 1 | | 2 | | 1 1 1 1 | 24 1.4 |
| Hemorrhage | | | 1 | 1 | | | | | 2 | 2 | | | | 1 | | | 2 | | 1 | 1 | 1 | 18 1.4 |
| Inflammation, Chronic | 2 | 2 | 2 | 2 | 1 | | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 48 1.4 |
| Metaplasia, Osseous | | | | | | | | | | | | | 1 | | | | | | | | | 4 1.0 |
| Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | 1 | | | 2 1.0 |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Alveolus, Infiltration Cellular, Histiocyte | | | 1 | 1 | 1 | 2 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 1 1 | 36 1.1 |
| Bronchiole, Hyperplasia | | | | | | | | | | | | 1 | | | | | | | | | | 1 1.0 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
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Experiment Number: 10472 - 03
 Test Type: CHRONIC
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| HARLAN SPRAGUE DAWLEY RATS
FEMALE
300 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------|--------|
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| ANIMAL ID | 0
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| Inflammation | | | | 1 | | | 1 | | | | | | 1 | | | | | | | | | | | | | | | 1 | 6 1.2 |
| Nasopharyngeal Duct, Inflammation, Suppurative | | | | | | | | | | | | | 3 | | | | | | | | | | | | | | | | 1 3.0 |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | | | | 1 | | 1 | 2 | | 1 | | 1 | 2 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | | | | | 40 1.4 | |
| Olfactory Epithelium, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.0 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Inflammation | 1 | | | | | | | | | 2 | | | | | | | | | | | | | | | | | 1 | | 4 1.5 |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Infarct | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | 1 2.0 |
| Nephropathy | 2 | 3 | 2 | 2 | 3 | 1 | 2 | 1 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | | 49 1.6 |
| Interstitial, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Pelvis, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Renal Tubule, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | 2 1.0 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) | | | | |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|----------------------|---|---|---|--|
| | 0
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7
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1 | 0
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1
8 | 0
6
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2 | 0
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7
3
1 | 0
7
3
1 | 0
7
3
2 | 0
7
3
1 | | | | | | |
| Centrilobular, Hepatocyte, Hypertrophy | 3 | 2 | 3 | 1 | 2 | 1 | 1 | 1 | 3 | 3 | 1 | 2 | 1 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 3 | |
| Hepatocyte, Necrosis | | 2 | | | | | | 1 | | | | | | | | | 1 | | 1 | 1 | | | | | | |
| Serosa, Inflammation, Chronic Active | | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Vein, Thrombosis | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | + | | + | | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Inflammation, Chronic | | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinus, Hyperplasia | | | | | | | | | | | | | | 1 | | | | | | | 1 | | | 1 | | |
| Artery, Inflammation | | | | | | | | | | | | 1 | 1 | 2 | | | | | | | | 2 | | | | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Atrophy | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | 1 | 1 | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| Serosa, Inflammation, Chronic Active | | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| CARDIOVASCULAR SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Cardiomyopathy | | 1 | | | | | | | 1 | 1 | | 1 | 1 | | | | | 1 | 2 | | | 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
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Experiment Number: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | 0732 | 0626 | 0731 | 0646 | 0752 | 0769 | 0661 | 0668 | 0772 | 0666 | 0773 | 0677 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0676 | 0775 | 0759 | 0790 | females
(cont...) |
| | ANIMAL ID | 0070 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | |
| | | 1234567890123456789012345 | | | | | | | | | | | | | | | | | | | | | | | |

Artery, Inflammation

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | 1 | | 3 | | | | | | 2 | | | | | | 2 | | |
| Degeneration, Cystic | | | 2 | | | | | | | | | | 1 | 1 | | 1 | 2 | | 1 | | | | | |
| Hyperplasia | | | | | | | | | 1 | | 1 | | 1 | 1 | | | | | 1 | | | | | |
| Hypertrophy | | | | | 1 | 1 | 2 | 1 | | | | | | 1 | 1 | | | 1 | 1 | | | 2 | | |
| Necrosis | | | | | | | | | | 3 | | | | | | | | | | | | | | |
| Thrombosis | | | | | | | | | | | 3 | | | | | | | | | | | | 1 | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | 2 | 1 | | 2 | | 2 | 4 | | | 1 | 3 | | 1 | | | | 2 | 1 | 1 | 3 | 1 | 1 | 1 | 2 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland | + | + | + | M | + | + | + | + | + | + | M | + | + | + | + | M | + | M | + | M | + | M | + | + |
| Fibrosis | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pars Distalis, Hyperplasia | | | | | 1 | | | | 3 | | | 3 | 1 | 1 | | | 2 | 2 | | | | 2 | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ultimobranchial Cyst | | | | | | | | | | | | | | | | | | | | | | | | |
| C-cell, Hyperplasia | 4 | | | | | | | 2 | | | | 1 | | | 3 | 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
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 Species/Strain: RATS/HSD

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 CAS Number: 98-56-6

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 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
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5 | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | 2 | | 2 | | | | | | | 2 | | | | | | | | | | | | | | | 1 |
| Inflammation | | | | 1 | | | | | | | 1 | 1 | 1 | | | 2 | | 1 | 2 | 2 | | 1 | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | 2 | | | 2 | | | | | 2 | | | | 2 | | 2 | | | | 2 | | 1 | | |
| Granulosa Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenomyosis | 2 | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | 4 | | | | | | | | | | | | | | | | | | | | | | | |
| Metaplasia, Squamous | | | | | | | | | | | 2 | | | | | | | | | | | | | | |
| Artery, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Artery, Necrosis, Fibrinoid | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Cervix, Cyst, Squamous | | | | | | | | | | X | | | | | | | | | | | | | | | |
| Cervix, Hypertrophy, Stromal | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endometrium, Atypical Hyperplasia | | | | | | | | | | | | 2 | | | | 2 | | | | | | | | | |
| Endometrium, Hyperplasia, Cystic | 4 | | 2 | | 1 | 2 | | | | | | 2 | 1 | | | 1 | 1 | | | 1 | 1 | | 1 | | |
| Serosa, Inflammation, Chronic Active | | 4 | | | | | | | | | | | | | | | | | | | | | | | |
| Vagina | + | + | + | M | + | + | + | + | M | + | + | M | M | + | + | M | + | M | + | M | + | + | + | + | + |
| Inflammation, Suppurative | | 3 | | | | | | | | | | | | | | | | | | | | | | | |

HEMATOPOIETIC 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
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 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
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Experiment Number: 10472 - 03
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 CAS Number: 98-56-6

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 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females
(cont...) |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|
| | 0732 | 0626 | 0731 | 0646 | 0752 | 0779 | 0663 | 0666 | 0772 | 0667 | 0669 | 0773 | 0774 | 0777 | 0778 | 0779 | 0781 | 0782 | 0783 | 0784 | 0785 | 0786 | 0787 | 0788 | 0789 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0077 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0078 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 0079 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0080 | |
| | 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 | 0081 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Lymph Node
Iliac, Ectasia | | | | + | | | | | | | | | | | | | | | | | | | | | | + |
| Lymph Node, Bronchial | + | M | + | + | + | + | M | + | M | + | M | M | M | M | M | M | M | M | M | + | + | + | + | + | M | |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Lymph Node, Mediastinal | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Lymph Node, Mesenteric
Artery, Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Spleen
Hematopoietic Cell Proliferation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Capsule, Fibrosis | 1 | 3 | 1 | | 1 | | 1 | 1 | | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | |
| Red Pulp, Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus
Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | 4 | 4 | 4 | 2 | 4 | 4 | 4 | 3 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland
Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Skin
Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 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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 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

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

MUSCULOSKELETAL SYSTEM

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

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hypothalamus, Compression | | | | | | | | | | | | | | | | | | | | | | | | |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Bacterium | | | | | | | | | | X | | | | | | | | | | | | | | | |
| Fibrosis | | | | | | | | | | 4 | | | | | | | | | | | | | | | |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | 3 | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | 3 | | | | | | | | | | | | | | | |
| Squamous Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Fibrosis | 2 | | 2 | | 1 | 1 | 2 | 1 | 1 | | 1 | | 1 | 2 | 1 | | 1 | | 1 | | | 1 | 2 | 1 | |
| Hemorrhage | 2 | | 2 | | | | 2 | | | 2 | 1 | 1 | | 2 | 1 | | 1 | | | | | 1 | 1 | | |
| Inflammation, Chronic | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | | 2 | 1 | 2 | 1 | 1 | 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | females
(cont...) |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|
| | 0732 | 0661 | 0731 | 0664 | 0750 | 0754 | 0663 | 0668 | 0666 | 0766 | 0667 | 0667 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0667 | 0776 | 0773 | 0779 | 0759 | |
| ANIMAL ID | 0070 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | |
| Kidney Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Nephropathy Artery, Inflammation | 1 | 1 | 1 | 1 | | 1 | 1 | 2 | 3 | 2 | 2 | 3 | 2 | 1 | | 1 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | |
| Urinary Bladder Polyp, Inflammatory | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

* .. 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: 10472 - 03
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 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
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 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS FEMALE | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|-------------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|------|
| | 0732 | 0650 | 0731 | 0558 | 0654 | 0570 | 0762 | 0670 | 0772 | 0773 | 0773 | 0773 | 0773 | 0773 | 0599 | 0734 | 0672 | 0773 | 0575 | 0773 | | 0773 | 0773 | 0773 | 0676 |
| ANIMAL ID | 00726 | 00727 | 00728 | 00729 | 00730 | 00731 | 00732 | 00733 | 00734 | 00735 | 00736 | 00737 | 00738 | 00739 | 00740 | 00741 | 00742 | 00743 | 00744 | 00745 | 00746 | 00747 | 00748 | 00749 | |
| | 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 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Intestine Small, Jejunum Artery, Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 | 4.0 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 | 1.0 |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | X | X | X | | 7 | |
| Clear Cell Focus | X | X | X | | X | X | X | X | X | X | | X | X | X | | X | | X | X | X | X | X | X | X | | 38 | |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | X | X | X | | 15 | |
| Fatty Change | 1 | | | | | 1 | | | | | | | 1 | | 1 | | | | | | | | | | | 10 | 1.3 |
| Fibrosis | | | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Hematopoietic Cell Proliferation | | | | | 1 | | | | | | | | | | | 1 | | 1 | | | | | | | | 3 | 1.0 |
| Inflammation, Chronic Active | | | | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Mixed Cell Focus | | | X | | X | | | | | | | X | X | | | | | X | | X | | X | X | | 18 | | |
| Bile Duct, Cyst | | | | | | X | | | | | | | X | | | | | | | | | | | | | 5 | |
| Bile Duct, Cyst, Multiple | | | | | | | | | | | | | | | | | | | X | X | | | | | | 2 | |
| Bile Duct, Hyperplasia | 1 | | 1 | | 1 | | | | | | | 1 | 1 | | | | | 1 | 1 | 1 | | 1 | 1 | | 13 | 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: 10472 - 03
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 p-Chloro-a,a,a-trifluorotoluene
 CAS Number: 98-56-6

Date Report Requested: 05/16/2016
 Time Report Requested: 11:15:09
 First Dose M/F: 01/17/11 / 01/17/11
 Lab: BNW

| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-----------|--|--|
| | 0732 | 0735 | 0738 | 0741 | 0744 | 0747 | 0750 | 0753 | 0756 | 0759 | 0802 | 0805 | 0808 | 0811 | 0814 | 0817 | 0820 | 0823 | 0826 | 0829 | 0832 | 0835 | 0838 | 0841 | | 0844 | | |
| ANIMAL ID | 00726 | 00727 | 00728 | 00729 | 00730 | 00731 | 00732 | 00733 | 00734 | 00735 | 00736 | 00737 | 00738 | 00739 | 00740 | 00741 | 00742 | 00743 | 00744 | 00745 | 00746 | 00747 | 00748 | 00749 | 00750 | | | |
| Centrilobular, Hepatocyte, Hypertrophy
Hepatocyte, Necrosis
Serosa, Inflammation, Chronic Active
Vein, Thrombosis | 2 | 2 | 2 | | 3 | | 2 | | 2 | 2 | 2 | 2 | 2 | | | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 45 | 1.9 | |
| Mesentery
Artery, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 3.0 | |
| Pancreas
Inflammation, Chronic
Acinus, Atrophy
Acinus, Hyperplasia
Artery, Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 3.0
2 1.0
4 1.3
5 1.4 | |
| Salivary Glands
Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 1.0 | |
| Stomach, Forestomach
Inflammation, Chronic Active
Epithelium, Hyperplasia
Serosa, Inflammation, Chronic Active | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 1.0
3 1.0
1 2.0 | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| CARDIOVASCULAR SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Heart
Cardiomyopathy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 17 1.1 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
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| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | 0
7
3
2 | 0
6
5
0 | 0
7
3
1 | 0
5
5
8 | 0
6
7
4 | 0
5
9
0 | 0
7
3
2 | 0
6
9
0 | 0
7
3
2 | 0
7
9
2 | 0
7
3
2 | 0
7
3
2 | 0
7
3
2 | 0
7
3
2 | 0
5
9
2 | 0
7
3
2 | 0
6
4
6 | 0
7
3
2 | 0
7
3
2 | 0
7
3
2 | 0
7
3
2 | 0
7
3
2 | 0
6
7
4 | * TOTALS |
| | ANIMAL ID | 0
0
7
2
6 | 0
0
7
2
7 | 0
0
7
2
8 | 0
0
7
2
9 | 0
0
7
3
0 | 0
0
7
3
1 | 0
0
7
3
2 | 0
0
7
3
3 | 0
0
7
3
3 | 0
0
7
3
3 | 0
0
7
3
4 | 0
0
7
3
5 | 0
0
7
3
6 | 0
0
7
3
7 | 0
0
7
3
8 | 0
0
7
4
0 | 0
0
7
4
1 | 0
0
7
4
2 | 0
0
7
4
3 | 0
0
7
4
4 | 0
0
7
4
5 | 0
0
7
4
6 | 0
0
7
4
7 | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|-----|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cyst | | | | 2 | | | | 2 | | | | | 2 | | | | | | | | | | | | | 7 | 1.9 |
| Inflammation | | | | | | 1 | | | | 1 | | 1 | | | | 2 | | | | 1 | 1 | | 1 | | 16 | 1.3 | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Cyst | | | | | | | | | 2 | | | | | | 2 | | | | 2 | | | | | | 10 | 1.9 | |
| Granulosa Cell, Hyperplasia | | | | 4 | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Adenomyosis | | | 4 | | | | | | | | | | | | | | | | | | | | | | 3 | 2.7 | |
| Inflammation, Suppurative | | | | | | | | | | | 2 | | | | | | | | | | | | | | 2 | 3.0 | |
| Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Artery, Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Artery, Necrosis, Fibrinoid | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Cervix, Cyst, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Cervix, Hypertrophy, Stromal | | | | 3 | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Endometrium, Atypical Hyperplasia | | | 3 | | | | | | | | | | | | | | | | | | | | | | 3 | 2.3 | |
| Endometrium, Hyperplasia, Cystic | 1 | | 2 | 1 | | | | | 3 | 3 | 1 | | 3 | | | 3 | | 2 | 1 | | | | 1 | | 22 | 1.7 | |
| Serosa, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Vagina | + | M | + | + | + | M | + | M | + | M | + | + | + | + | + | + | M | + | + | + | + | + | + | 38 | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | 2 | | 2 | 2.5 | |

HEMATOPOIETIC 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: 10472 - 03
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| HARLAN SPRAGUE DAWLEY RATS
FEMALE
1000 ppm | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------------|
| | 0732 | 0650 | 0731 | 0558 | 0654 | 0570 | 0762 | 0670 | 0722 | 0772 | 0773 | 0773 | 0773 | 0773 | 0599 | 0733 | 0644 | 0733 | 0733 | 0570 | | 0773 | 0773 | 0773 | 0773 |
| ANIMAL ID | 00726 | 00727 | 00728 | 00729 | 00730 | 00731 | 00732 | 00733 | 00734 | 00735 | 00736 | 00737 | 00738 | 00739 | 00740 | 00741 | 00742 | 00743 | 00744 | 00745 | 00746 | 00747 | 00748 | 00749 | 00750 |
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node
Iliac, Ectasia | | | | + | | | | | | | | | | | | | | | | | | | | | 3
1 2.0 |
| Lymph Node, Bronchial | M | M | M | + | + | M | M | M | M | + | + | + | M | M | + | M | M | M | M | M | M | M | + | + | 20 |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node, Mediastinal | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Lymph Node, Mesenteric
Artery, Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50
1 4.0 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hematopoietic Cell Proliferation | 1 | | 1 | | | | 1 | 1 | | 1 | 1 | 1 | | 1 | 1 | | 2 | 1 | 1 | | 1 | | 1 | 1 | 36 1.1 |
| Capsule, Fibrosis | | | | | | | | | | | | | | | | 1 | | | | | | | | | 1 1.0 |
| Red Pulp, Infiltration Cellular, Histiocyte | | | | | | | 4 | | | | | | | | | | | | | | | | | | 1 4.0 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Atrophy | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | 4 | 4 | 3 | 4 | 4 | 4 | | 4 | 3 | 4 | 3 | 4 | 48 3.8 |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Mammary Gland
Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia, Cystic | | | | | | | | | | | | | | | | 2 | | | | | | | | | 1 2.0 |
| Skin
Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |

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FEMALE
1000 ppm | DAY ON TEST | | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | | | |
|--|-------------|------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|------|------|------|------|------|----|-----|
| | 0732 | 0650 | 0731 | 0558 | 0654 | 0570 | 0772 | 0660 | 0772 | 0772 | 0772 | 0772 | 0772 | 0772 | 0579 | 0734 | 0672 | 0771 | 0570 | 0772 | 0773 | 0773 | 0773 | 0773 | 0773 | 0773 | 0773 | 0773 | | 0773 | 0773 | 0773 | 0773 | 0773 | 0773 | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Nephropathy | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | | 1 | 1 | 2 | 1 | 1 | 2 | 1 | | | | | | | | | | | | 47 | |
| Artery, Inflammation | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | 1.4 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Polyp, Inflammatory | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

*** 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