

**TDMS No.** 20304 - 01  
**Test Type:** CHRONIC  
**Route:** GAVAGE  
**Species/Strain:** RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

TEF evaluation (PCB 118)  
**CAS Number:** 31508-00-6

**Date Report Requested:** 06/26/2008  
**Time Report Requested:** 12:05:16  
**First Dose M/F:** NA / 03/26/04  
**Lab:** BAT

F1\_R8

**C Number:** C20304

**Lock Date:** 10/12/2006

**Cage Range:** ALL

**Date Range:** ALL

**Reasons For Removal:** 25022 ACCK                      25021 TSAC                      25020 NATD  
25019 MSAC                      25018 DACC

**Removal Date Range:** ALL

**Treatment Groups:** Include 001 0 UG/KG                      Include 004 100 UG/KG                      Include 005 220 UG/KG  
Include 006 460 UG/KG                      Include 007 1000 UG/KG                      Include 008 4600 UG/KG  
Include 009 4600 UG/KG STOP

**Study Gender:** Female

**TDMSE Version:** 2.0.0





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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	7	6	7	6	6	5	7	7	6	7	3	6	7	6	2	6	5	7	7	5	7	7	7	4
	1	3	5	3	5	6	1	3	3	9	3	2	6	3	5	9	2	7	3	3	0	3	0	3	9
	9	3	8	5	1	9	6	4	3	2	3	0	2	3	2	1	4	5	3	4	3	5	1	5	5
<b>SPRAGUE-DAWLEY RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>0 UG/KG</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4	4	4
	1	6	7	8	9	0	1	2	3	4	5	6	6	7	8	9	0	6	7	8	9	0	1	2	3

females (cont...)

Stomach, Glandular Cyst	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		2																							
Tooth Peridontal Tissue, Inflammation	+	+		+		+		+		+						+	+		+						
		2		2		3										3	2		1						

**CARDIOVASCULAR SYSTEM**

Blood Vessel	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Heart Cardiomyopathy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
				1					1					1			1	1							

**ENDOCRINE SYSTEM**

Adrenal Cortex Atrophy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Degeneration, Cystic			1			3			3			3			1		3								
Hematopoietic Cell Proliferation																	1								
Hyperplasia		2		2		3										1	3								
Hypertrophy		1	2	2	2		4	2		2		1	1	1		1	2	1		2	2	1			
Vacuolization Cytoplasmic						2	2	2								1	2								
Adrenal Medulla Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		3		2	1											3	1								
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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	1	7	6	7	6	6	5	7	7	6	7	3	6	7	6	2	6	5	7	7	5	7	7	7	4
	1	3	5	3	5	6	1	3	3	9	3	2	6	3	5	9	2	7	3	3	0	3	0	3	9
	9	3	8	5	1	9	6	4	3	2	3	0	2	3	2	1	4	5	3	4	3	5	1	5	5
<b>SPRAGUE-DAWLEY RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>0 UG/KG</b>	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4	4	4
	1	6	7	8	9	0	1	2	3	4	5	6	6	7	8	9	0	6	7	8	9	0	1	2	3

females (cont...)

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Cyst																									
Hyperplasia																									2
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

**MUSCULOSKELETAL SYSTEM**

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gliosis																									2
Hemorrhage																									
Hydrocephalus																									2
Necrosis																									3

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inflammation																									
Metaplasia, Squamous																									

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DAY ON TEST	0																								
	4	7	4	3	5	6	7	7	5	5	7	7	7	4	7	5	6	5	5	7	5	7	7	4	
SPRAGUE-DAWLEY RATS FEMALE 0 UG/KG	0																								
	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	7	7	7	
ANIMAL ID	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	6	7	8	9	0	6	7	8

females  
(cont...)

Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+
Pituitary Gland Angiectasis Pars Distalis, Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
									2				2										2	
Thyroid Gland Inflammation C-cell, Hyperplasia Follicular Cell, Hypertrophy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		1			2												2					1	2	
						2				1						1								3

**GENERAL BODY SYSTEM**  
NONE

**GENITAL SYSTEM**

Clitoral Gland Inflammation Duct, Cyst	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1	2		1		1		1	3	2		3	1	1		1	1	2	1	2	1	1	3	1
		2						1					2					1	2	1	1	3	3	2
Ovary Cyst	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
																					2	3	3	
																								3
Uterus Inflammation Metaplasia, Squamous	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	2	1	3			3	2	1	4	2	1	1	3	1		1		2			3		1	
																		1	4	1	4	2		1

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DAY ON TEST		0	0
		5	7
		1	0
		2	1
.....			
<b>SPRAGUE-DAWLEY RATS</b>		0	0
<b>FEMALE</b>		0	0
		0	0
ANIMAL ID		7	8
<b>0 UG/KG</b>		9	0
			<b>* TOTALS</b>

**ALIMENTARY SYSTEM**

Esophagus	+	+			51
Intestine Large, Cecum	+	+			52
Intestine Large, Colon	+	+			52
Parasite Metazoan					1
Intestine Large, Rectum	+	+			52
Parasite Metazoan					2
Artery, Inflammation, Chronic Active					1 3.0
Intestine Small, Duodenum	+	+			52
Intestine Small, Ileum	+	+			52
Intestine Small, Jejunum	+	+			52
Liver	+	+			52
Basophilic Focus					11
Basophilic Focus, Multiple		X			4
Clear Cell Focus					6
Clear Cell Focus, Multiple					9
Degeneration, Cystic					1 1.0
Eosinophilic Focus					5
Fatty Change, Focal					2 1.0

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DAY ON TEST		0	0	
		5	7	
		1	0	
		2	1	
<hr/>				
<b>SPRAGUE-DAWLEY RATS</b>		0	0	
<b>FEMALE</b>		0	0	
		0	0	
	ANIMAL ID	7	8	
<b>0 UG/KG</b>		9	0	
				<b>* TOTALS</b>
Fatty Change, Diffuse				1 1.0
Hematopoietic Cell Proliferation	1			19 1.0
Inflammation				21 1.0
Mixed Cell Focus				6
Mixed Cell Focus, Multiple	X			15
Necrosis				1 1.0
Pigmentation				1 1.0
Bile Duct, Cyst				2 2.5
Bile Duct, Fibrosis				2 1.5
Bile Duct, Hyperplasia				5 1.0
Capsule, Inflammation				1 2.0
Centrilobular, Degeneration				1 2.0
<hr/>				
Mesentery				2
Artery, Inflammation, Chronic Active				1 3.0
<hr/>				
Oral Mucosa				1
<hr/>				
Pancreas		+	+	52
Degeneration				1 2.0
Acinus, Atrophy, Focal				4 1.3
Artery, Inflammation, Chronic Active				1 3.0
<hr/>				
Salivary Glands		+	+	51
<hr/>				
Stomach, Forestomach		+	+	52
Inflammation				2 2.5
Ulcer				2 2.5

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DAY ON TEST	0	0		
	5	7		
	1	0		
	2	1		
<hr/>				
<b>SPRAGUE-DAWLEY RATS</b>	0	0		
<b>FEMALE</b>	0	0		
	0	0		
ANIMAL ID	7	8		
<b>0 UG/KG</b>	9	0		
				<b>* TOTALS</b>
<hr/>				
Stomach, Glandular Cyst	+	+	52	1 2.0
<hr/>				
Tooth Peridental Tissue, Inflammation			10	7 2.1
<hr/>				
<b>CARDIOVASCULAR SYSTEM</b>				
<hr/>				
Blood Vessel	+	+	52	
<hr/>				
Heart Cardiomyopathy	+	+	52	13 1.0
<hr/>				
<b>ENDOCRINE SYSTEM</b>				
<hr/>				
Adrenal Cortex Atrophy	+	+	52	1 2.0
Adrenal Cortex Degeneration, Cystic				9 2.1
Adrenal Cortex Hematopoietic Cell Proliferation				1 1.0
Adrenal Cortex Hyperplasia		2		14 2.1
Adrenal Cortex Hypertrophy		2		37 1.7
Adrenal Cortex Vacuolization Cytoplasmic				10 1.4
<hr/>				
Adrenal Medulla Hyperplasia	+	+	52	11 1.7
<hr/>				
Islets, Pancreatic	+	+	52	

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DAY ON TEST	0	0	5	7	1	0	2	1	
<hr/>									
<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	0	0	7	8	
<b>FEMALE</b>	0	0	0	0	0	0	7	8	
<b>0 UG/KG</b>	0	0	0	0	0	0	9	0	
								<b>* TOTALS</b>	

Parathyroid Gland	+	+							<b>47</b>
Pituitary Gland	+	+							<b>52</b>
Angiectasis									<b>1 3.0</b>
Pars Distalis, Hyperplasia									<b>10 2.0</b>
Thyroid Gland	+	+							<b>51</b>
Inflammation	1								<b>1 1.0</b>
C-cell, Hyperplasia									<b>10 1.6</b>
Follicular Cell, Hypertrophy									<b>6 1.5</b>

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Clitoral Gland	+	+							<b>52</b>
Inflammation	1	2							<b>41 1.6</b>
Duct, Cyst	2	2							<b>26 2.0</b>
Ovary	+	+							<b>52</b>
Cyst									<b>8 2.5</b>
Uterus	+	+							<b>52</b>
Inflammation									<b>4 1.8</b>
Metaplasia, Squamous	3								<b>29 1.9</b>

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<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	0	0	7	8	
<b>FEMALE</b>	0	0	0	0	0	0	7	8	
<b>0 UG/KG</b>	0	0	0	0	0	0	9	0	
								<b>* TOTALS</b>	
Thrombosis								1	1.0
Endometrium, Hyperplasia, Cystic								28	1.6
Vagina								7	

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+			52		
Atrophy						4	2.5
Hyperplasia	2	2				31	3.0
Lymph Node, Mandibular	+	+			51		
Hyperplasia, Plasma Cell	2					24	2.0
Lymph Node, Mesenteric	+	+			52		
Atrophy						1	3.0
Hyperplasia, Plasma Cell						1	2.0
Spleen	+	+			52		
Hematopoietic Cell Proliferation		3				42	2.0
Hemorrhage						1	3.0
Necrosis						1	3.0
Pigmentation	3	1				39	1.8
Lymphoid Follicle, Atrophy	2					3	2.0
Thymus	+	+			51		
Atrophy	2	2				41	2.6

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<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	0	0	7	8	
<b>FEMALE</b>	0	0	0	0	0	0	7	8	
<b>0 UG/KG</b>	0	0	0	0	0	0	9	0	
								<b>* TOTALS</b>	

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+							52	
Cyst										1 2.0
Hyperplasia			2							4 2.0
<hr/>										
Skin	+	+							52	

**MUSCULOSKELETAL SYSTEM**

Bone	+	+							52	
------	---	---	--	--	--	--	--	--	----	--

**NERVOUS SYSTEM**

Brain	+	+							52	
Gliosis										1 2.0
Hemorrhage			2							3 2.0
Hydrocephalus										1 2.0
Necrosis										2 3.0

**RESPIRATORY SYSTEM**

Lung	+	+							51	
Inflammation										5 1.0
Metaplasia, Squamous										1 1.0

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<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	0	0	7	8	
<b>FEMALE</b>	0	0	0	0	0	0	9	0	
<b>0 UG/KG</b>									<b>* TOTALS</b>

Proteinosis									<b>1 1.0</b>
Alveolar Epithelium, Hyperplasia									<b>4 1.5</b>
Alveolar Epithelium, Metaplasia, Bronchiolar									<b>6 1.2</b>
Alveolus, Infiltration Cellular, Histiocyte									<b>36 1.8</b>
<hr/>									
Nose	+	+							<b>52</b>
Cyst									<b>1 2.0</b>
Inflammation									<b>1 2.0</b>
Olfactory Epithelium, Degeneration									<b>1 2.0</b>
Respiratory Epithelium, Degeneration, Focal									<b>1 2.0</b>
Respiratory Epithelium, Hyperplasia									<b>5 1.2</b>
<hr/>									
Trachea	+	+							<b>51</b>

**SPECIAL SENSES SYSTEM**

Eye	+	+							<b>52</b>
Cornea, Inflammation									<b>1 3.0</b>
Retina, Atrophy									<b>1 2.0</b>
<hr/>									
Harderian Gland	+	+							<b>52</b>
Infiltration Cellular, Mononuclear Cell									<b>7 1.0</b>

**URINARY SYSTEM**

\* .. 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  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked  
 Page 24



TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0	5	7	1	0	2	1		
<hr/>										
<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	0	0	7	8		
<b>FEMALE</b>	0	0	0	0	0	0	9	0		
<b>0 UG/KG</b>									<b>* TOTALS</b>	
Kidney	+	+							<b>52</b>	
Accumulation, Hyaline Droplet								<b>1</b>	<b>2.0</b>	
Calculus Micro Observation Only								<b>3</b>		
Mineralization	1								<b>25</b>	<b>1.0</b>
Nephropathy	1	1							<b>42</b>	<b>1.5</b>
Pigmentation								<b>2</b>	<b>1.0</b>	
Artery, Inflammation, Chronic Active								<b>1</b>	<b>2.0</b>	
<hr/>										
Urinary Bladder	+	+							<b>52</b>	

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+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 25

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0 0																							
	0 7 6 3 6 2 6 7 7 6 3 6 7 3 5 7 7 7 4 4 7 7 6 7 6																							
ANIMAL ID	2 3 3 0 0 6 7 3 3 0 4 6 0 8 7 3 3 3 9 8 3 3 2 0 0																							
	8 3 7 2 8 5 4 3 4 2 1 5 6 6 1 3 3 3 5 4 4 3 0 8 2																							
<b>SPRAGUE-DAWLEY RATS</b>	0 0																							
<b>FEMALE</b>	0 0																							
<b>100 UG/KG</b>	3 3																							
	0 0 0 0 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2																							
	2 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9																							
Eosinophilic Focus, Multiple																								
Fatty Change, Focal																								
Fatty Change, Diffuse																								
Hematopoietic Cell Proliferation	1																							
Hepatodiaphragmatic Nodule	1 1																							
Inflammation	1 1																							
Mixed Cell Focus																								
Mixed Cell Focus, Multiple	X																							
Necrosis																								
Pigmentation	2																							
Bile Duct, Cyst	2																							
Bile Duct, Fibrosis	2																							
Bile Duct, Hyperplasia	1																							
Centrilobular, Degeneration	2																							
Hepatocyte, Hypertrophy	2																							
Hepatocyte, Multinucleated	1																							
Oval Cell, Hyperplasia	1																							
Mesentery																								
Pancreas	+ +																							
Inflammation, Chronic Active	2																							
Acinus, Atrophy, Focal	2																							
Acinus, Hyperplasia	2																							
Artery, Inflammation, Chronic Active	2																							
Salivary Glands	+ +																							
Stomach, Forestomach	+ +																							
Hyperplasia, Squamous	3																							

females (cont...)

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**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

TEF evaluation (PCB 118)

CAS Number: 31508-00-6

Date Report Requested: 06/26/2008

Time Report Requested: 12:05:16

First Dose M/F: NA / 03/26/04

Lab: BAT

DAY ON TEST	0 0																							
	0 7 6 3 6 2 6 7 7 6 3 6 7 3 5 7 7 7 4 4 7 7 6 7 6																							
ANIMAL ID	2 3 3 0 0 6 7 3 3 0 4 6 0 8 7 3 3 3 9 8 3 3 2 0 0																							
	8 3 7 2 8 5 4 3 4 2 1 5 6 6 1 3 3 3 5 4 4 3 0 8 2																							
<b>SPRAGUE-DAWLEY RATS</b>	0 0																							
<b>FEMALE</b>	0 0																							
<b>100 UG/KG</b>	3 3																							
	0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2																							
	2 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9																							
Hyperplasia	2 2 1 2 2 2 3 1 3 1 2 3 2 2 3 2 2																							
Hypertrophy	2 2 2 2 3 1 3 1 3 1 2 1 2 1 1 2 3																							
Necrosis	2 1 2 1																							
Vacuolization Cytoplasmic	1 1 1 2 1 2 1																							
Adrenal Medulla	+ +																							
Hyperplasia	2 1 1 2 1 4 2																							
Islets, Pancreatic	+ +																							
Hyperplasia																								
Parathyroid Gland	+ +																							
Hyperplasia	M																							
Pituitary Gland	+ +																							
Angiectasis	1																							
Cyst																								
Pars Distalis, Hyperplasia	3 3 1 2																							
Thyroid Gland	+ +																							
C-cell, Hyperplasia	2 2 4 2 3 1 2 3 1 2																							
Follicular Cell, Hypertrophy	2 1 1 2																							

females (cont...)

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

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TDMS No. 20304 - 01  
 Test Type: CHRONIC  
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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	7	6	3	6	2	6	7	7	6	3	6	7	3	5	7	7	7	4	4	7	7	6	7	6
	2	3	3	0	0	6	7	3	3	0	4	6	0	8	7	3	3	3	9	8	3	3	2	0	0
	8	3	7	2	8	5	4	3	4	2	1	5	6	6	1	3	3	3	5	4	4	3	0	8	2
<b>SPRAGUE-DAWLEY RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>100 UG/KG</b>	0	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	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2
	2	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9

females (cont...)

Skeletal Muscle

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hydrocephalus							1						2											
Vacuolization Cytoplasmic																							3	

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inflammation						3										1							1	
Alveolar Epithelium, Hyperplasia																								
Alveolar Epithelium, Metaplasia, Bronchiolar								1																
Alveolus, Infiltration Cellular, Histocyte		1	2		1			2		2	1	1	2				2	1		1	2	1	1	2
Serosa, Inflammation																								
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inflammation						3						3			2									1
Olfactory Epithelium, Degeneration						3																		
Respiratory Epithelium, Hyperplasia		3								1					1						1			
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

**SPECIAL SENSES SYSTEM**

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	6	5	6	6	7	7	7	0	7	7	7	3	7	6	7	2	7	5	4	6	7	7	7	5
	2	5	7	5	7	3	3	3	5	2	3	3	5	3	9	3	9	3	7	8	7	3	3	3	0
	8	8	5	8	2	4	4	4	3	3	3	4	7	5	2	4	8	3	9	2	2	3	4	5	3
<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>100 UG/KG</b>	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
<b>ANIMAL ID</b>	3	3	3	3	3	4	4	4	4	4	5	5	5	5	5	5	6	6	6	6	6	7	7	7	7
	0	6	7	8	9	0	6	7	8	9	0	1	2	3	4	5	8	6	7	8	9	0	1	2	3

females  
(cont...)

**ALIMENTARY SYSTEM**

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Muscularis, Inflammation																	1	2						
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inflammation																								
Parasite Metazoan						X												X						
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Angiectasis																								
Basophilic Focus		X							X							X								
Basophilic Focus, Multiple			X																			X		
Cholangiofibrosis																								
Clear Cell Focus		X									X				X									
Clear Cell Focus, Multiple			X			X	X	X											X					
Eosinophilic Focus																X								

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Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	6	5	6	6	7	7	7	0	7	7	7	3	7	6	7	2	7	5	4	6	7	7	7	5
	2	5	7	5	7	3	3	3	5	2	3	3	5	3	9	3	9	3	7	8	7	3	3	3	0
	8	8	5	8	2	4	4	4	3	3	3	4	7	5	2	4	8	3	9	2	2	3	4	5	3
<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>100 UG/KG</b>	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
<b>ANIMAL ID</b>	3	3	3	3	3	4	4	4	4	5	5	5	5	5	5	6	6	6	6	6	7	7	7	7	7
	0	6	7	8	9	0	6	7	8	9	0	1	2	3	4	5	8	6	7	8	9	0	1	2	3
Eosinophilic Focus, Multiple		X												X											
Fatty Change, Focal		1																							
Fatty Change, Diffuse									2																
Hematopoietic Cell Proliferation			1	1			1		1		1		1							1					
Hepatodiaphragmatic Nodule									X																
Inflammation	1		1	1		1		1		1			1		1		1		1	1	1	1	1		1
Mixed Cell Focus					X							X													X
Mixed Cell Focus, Multiple				X		X		X			X				X		X			X					X
Necrosis									3										3						
Pigmentation	1											1													
Bile Duct, Cyst																									
Bile Duct, Fibrosis																									
Bile Duct, Hyperplasia						2							1		1										
Centrilobular, Degeneration																									
Hepatocyte, Hypertrophy	1														1				2						2
Hepatocyte, Multinucleated												1													
Oval Cell, Hyperplasia				1		1						1		1		1		1							
Mesentery																									
Pancreas																									
Inflammation, Chronic Active	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Acinus, Atrophy, Focal													1												
Acinus, Hyperplasia																									2
Artery, Inflammation, Chronic Active									2																
Salivary Glands																									
Hyperplasia, Squamous	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
						3	2																		

females (cont...)

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Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	6	5	6	6	7	7	7	0	7	7	7	3	7	6	7	2	7	5	4	6	7	7	7	5
	2	5	7	5	7	3	3	3	5	2	3	3	5	3	9	3	9	3	7	8	7	3	3	3	0
	8	8	5	8	2	4	4	4	3	3	3	4	7	5	2	4	8	3	9	2	2	3	4	5	3
<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>100 UG/KG</b>	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
ANIMAL ID	3	3	3	3	3	4	4	4	4	4	5	5	5	5	5	5	6	6	6	6	6	7	7	7	7
	0	6	7	8	9	0	6	7	8	9	0	1	2	3	4	5	8	6	7	8	9	0	1	2	3

females  
(cont...)

Inflammation																											
Stomach, Glandular Erosion	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Artery, Mineralization																											
2																											
Tooth Peridontal Tissue, Inflammation														+													+
2																											

**CARDIOVASCULAR SYSTEM**

Blood Vessel Aorta, Mineralization	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Heart Cardiomyopathy	2					1	1	1					1	1			2			1						
Artery, Mineralization																										
Coronary Artery, Thrombosis																										
Endocardium, Hyperplasia																										
Endocardium, Infiltration Cellular																										
Epicardium, Inflammation																										
Myocardium, Mineralization																										
3																										

**ENDOCRINE SYSTEM**

Adrenal Cortex Degeneration, Cystic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
2																										
1																										
1																										

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	6	5	6	6	7	7	7	0	7	7	7	3	7	6	7	2	7	5	4	6	7	7	7	5
	2	5	7	5	7	3	3	3	5	2	3	3	5	3	9	3	9	3	7	8	7	3	3	3	0
	8	8	5	8	2	4	4	4	3	3	3	4	7	5	2	4	8	3	9	2	2	3	4	5	3
<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>100 UG/KG</b>	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
<b>ANIMAL ID</b>	3	3	3	3	3	4	4	4	4	4	4	5	5	5	5	5	5	6	6	6	6	7	7	7	7
	0	6	7	8	9	0	6	7	8	9	0	1	2	3	4	5	8	6	7	8	9	0	1	2	3

females  
(cont...)

Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Hematopoietic Cell Proliferation		1	2	2	2	2	1	1		3	2	2		1	2	1		2		2	2	3	1	1	2
Pigmentation		3	1	1	3	1	2	1			2	1	3	1	1		2	1	1	1		2	1	1	
Lymphoid Follicle, Atrophy	3																			2					
Red Pulp, Atrophy	3																								
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+
Atrophy	4	2	4	2	2	3	4			4		3	2		3	2			3	2	2	3	3	3	
Cyst								3																	3
Hemorrhage																				3					
Inflammation																				2					

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst	3						3																		
Hyperplasia						1										1									
Inflammation, Chronic Active																									
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperkeratosis							2																		
Hyperplasia, Squamous							2	2																	
Inflammation							2	2		4															

**MUSCULOSKELETAL SYSTEM**

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

\* .. 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







TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST		0	0
		5	7
		7	3
		1	3
.....			
SPRAGUE-DAWLEY RATS FEMALE		0	0
		0	0
		3	3
		7	7
100 UG/KG		4	5
			<b>* TOTALS</b>

**ALIMENTARY SYSTEM**

Esophagus	+	+	52	
Muscularis, Inflammation		2		3 1.7
Intestine Large, Cecum	+	+	51	
Intestine Large, Colon	+	+	52	
Intestine Large, Rectum	+	+	52	
Inflammation				1 2.0
Parasite Metazoan				2
Intestine Small, Duodenum	+	+	52	
Intestine Small, Ileum	+	+	51	
Intestine Small, Jejunum	+	+	52	
Liver	+	+	51	
Angiectasis				1 3.0
Basophilic Focus				5
Basophilic Focus, Multiple				2
Cholangiofibrosis				2 1.0
Clear Cell Focus				3
Clear Cell Focus, Multiple				7
Eosinophilic Focus				5

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+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 42

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

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 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST		0	0	
		5	7	
		7	3	
		1	3	
.....				
<b>SPRAGUE-DAWLEY RATS</b>		0	0	
<b>FEMALE</b>		0	0	
	ANIMAL ID	3	3	
		7	7	
<b>100 UG/KG</b>		4	5	
				<b>* TOTALS</b>
Eosinophilic Focus, Multiple				3
Fatty Change, Focal				1 1.0
Fatty Change, Diffuse	1			2 1.5
Hematopoietic Cell Proliferation				20 1.0
Hepatodiaphragmatic Nodule				1
Inflammation	1	1		30 1.0
Mixed Cell Focus				5
Mixed Cell Focus, Multiple				14
Necrosis				2 3.0
Pigmentation				5 1.2
Bile Duct, Cyst				3 2.3
Bile Duct, Fibrosis				1 2.0
Bile Duct, Hyperplasia				6 1.2
Centrilobular, Degeneration				2 1.5
Hepatocyte, Hypertrophy	2			12 1.3
Hepatocyte, Multinucleated				1 1.0
Oval Cell, Hyperplasia				12 1.1
.....				
Mesentery				1
.....				
Pancreas		+	+	52
Inflammation, Chronic Active				1 2.0
Acinus, Atrophy, Focal				2 1.5
Acinus, Hyperplasia				2 2.0
Artery, Inflammation, Chronic Active				2 2.0
.....				
Salivary Glands		+	+	51
.....				
Stomach, Forestomach		+	+	52
Hyperplasia, Squamous				3 2.7

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TDMS No. 20304 - 01  
 Test Type: CHRONIC  
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 Species/Strain: RATS/SD

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 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0	5	7	7	3	1	3
<hr/>								
<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	3	3	7	7
<b>FEMALE</b>	0	0	0	0	3	3	7	7
<b>100 UG/KG</b>	0	0	0	0	3	3	7	7
ANIMAL ID	0	0	0	0	3	3	7	7
	4	5						
								<b>* TOTALS</b>

Inflammation									<b>1 2.0</b>
<hr/>									
Stomach, Glandular	+	+							<b>52</b>
Erosion									<b>1 2.0</b>
Artery, Mineralization									<b>1 1.0</b>
<hr/>									
Tooth									<b>5</b>
Peridental Tissue, Inflammation									<b>5 2.2</b>

**CARDIOVASCULAR SYSTEM**

Blood Vessel	+	+							<b>52</b>
Aorta, Mineralization									<b>1 1.0</b>
<hr/>									
Heart	+	+							<b>52</b>
Cardiomyopathy					1				<b>19 1.2</b>
Artery, Mineralization									<b>1 1.0</b>
Coronary Artery, Thrombosis									<b>1 2.0</b>
Endocardium, Hyperplasia									<b>1 2.0</b>
Endocardium, Infiltration Cellular									<b>1 1.0</b>
Epicardium, Inflammation									<b>1 3.0</b>
Myocardium, Mineralization									<b>1 1.0</b>

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+							<b>52</b>
Degeneration, Cystic									<b>8 2.1</b>

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 M .. Missing tissue  
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TDMS No. 20304 - 01  
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 Lab: BAT

DAY ON TEST	0	0		
	5	7		
	7	3		
	1	3		
<hr/>				
<b>SPRAGUE-DAWLEY RATS</b>	0	0		
<b>FEMALE</b>	0	0		
	3	3		
ANIMAL ID	7	7		
<b>100 UG/KG</b>	4	5		
				<b>* TOTALS</b>
Hyperplasia		2		<b>18 2.2</b>
Hypertrophy		2		<b>37 1.8</b>
Necrosis				<b>1 2.0</b>
Vacuolization Cytoplasmic				<b>12 1.4</b>
<hr/>				
Adrenal Medulla	+	+		<b>52</b>
Hyperplasia				<b>12 1.8</b>
<hr/>				
Islets, Pancreatic	+	+		<b>52</b>
Hyperplasia				<b>1 3.0</b>
<hr/>				
Parathyroid Gland	+	M		<b>46</b>
Hyperplasia				<b>1 3.0</b>
<hr/>				
Pituitary Gland	+	+		<b>52</b>
Angiectasis				<b>1 1.0</b>
Cyst				<b>1 2.0</b>
Pars Distalis, Hyperplasia				<b>6 2.2</b>
<hr/>				
Thyroid Gland	+	+		<b>51</b>
C-cell, Hyperplasia				<b>14 2.0</b>
Follicular Cell, Hypertrophy				<b>7 1.9</b>

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

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+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

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BLANK .. Not examined microscopically

Page 45

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
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 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0	5	7	7	3	1	3	
<hr/>									
<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	3	3	7	7	
<b>FEMALE</b>	0	0	3	3	7	7	4	5	
<b>100 UG/KG</b>								<b>* TOTALS</b>	

Clitoral Gland	+	+						52	
Inflammation	1	2						38	1.8
Duct, Cyst	2	2						39	2.0
<hr/>									
Ovary	+	+						52	
Cyst	1	2						10	2.0
<hr/>									
Uterus	+	+						52	
Inflammation								6	2.0
Metaplasia, Squamous	2							26	1.7
Endometrium, Hyperplasia, Cystic		1						27	1.7

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+						52	
Atrophy								1	2.0
Hyperplasia	3	2						30	2.8
<hr/>									
Lymph Node	+							2	
Mediastinal, Hemorrhage	2							1	2.0
<hr/>									
Lymph Node, Mandibular	+	+						51	
Hyperplasia, Plasma Cell		2						34	1.8
<hr/>									
Lymph Node, Mesenteric	+	+						51	
Atrophy								1	2.0

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BLANK .. Not examined microscopically

Page 46

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
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 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST		0	0		
		5	7		
		7	3		
		1	3		
<b>SPRAGUE-DAWLEY RATS</b>		0	0		
<b>FEMALE</b>		0	0		
<b>100 UG/KG</b>		3	3		
<b>ANIMAL ID</b>		7	7		
		4	5		
				<b>* TOTALS</b>	
Spleen		+	+	<b>52</b>	
Hematopoietic Cell Proliferation		3	2	<b>39 2.0</b>	
Pigmentation		1	3	<b>35 1.7</b>	
Lymphoid Follicle, Atrophy				<b>4 2.5</b>	
Red Pulp, Atrophy				<b>2 3.0</b>	
Thymus		+	+	<b>51</b>	
Atrophy		4	2	<b>38 2.7</b>	
Cyst				<b>2 3.0</b>	
Hemorrhage				<b>1 3.0</b>	
Inflammation				<b>1 2.0</b>	
<b>INTEGUMENTARY SYSTEM</b>					
Mammary Gland		+	+	<b>51</b>	
Cyst				<b>2 3.0</b>	
Hyperplasia			2	<b>5 1.6</b>	
Inflammation, Chronic Active		3		<b>1 3.0</b>	
Skin		+	+	<b>51</b>	
Hyperkeratosis				<b>1 2.0</b>	
Hyperplasia, Squamous				<b>2 2.0</b>	
Inflammation				<b>3 2.7</b>	
<b>MUSCULOSKELETAL SYSTEM</b>					
Bone		+	+	<b>52</b>	

\* .. 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

Page 47

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
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DAY ON TEST	0	0	5	7	7	3	1	3	
<b>SPRAGUE-DAWLEY RATS</b>									
<b>FEMALE</b>									
<b>100 UG/KG</b>									
ANIMAL ID	0	0	0	0	3	3	7	7	
	4	5							<b>* TOTALS</b>

Skeletal Muscle 1

**NERVOUS SYSTEM**

Brain	+	+							52
Hydrocephalus								2	1.5
Vacuolization Cytoplasmic								1	3.0

**RESPIRATORY SYSTEM**

Lung	+	+							52	
Inflammation								3	1.7	
Alveolar Epithelium, Hyperplasia								2	1.0	
Alveolar Epithelium, Metaplasia, Bronchiolar								7	1.4	
Alveolus, Infiltration Cellular, Histiocyte	1	2							35	1.7
Serosa, Inflammation								1	3.0	
Nose	+	+							52	
Inflammation								5	2.0	
Olfactory Epithelium, Degeneration								1	3.0	
Respiratory Epithelium, Hyperplasia								5	1.4	
Trachea	+	+							52	

**SPECIAL SENSES SYSTEM**

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x .. Lesion present

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Page 48

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked



TDMS No. 20304 - 01  
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 Species/Strain: RATS/SD

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

DAY ON TEST		0	0		
		5	7		
		7	3		
		1	3		
<b>SPRAGUE-DAWLEY RATS</b>		0	0		
<b>FEMALE</b>		0	0		
<b>100 UG/KG</b>		3	3		
ANIMAL ID		7	7		
		4	5		
				<b>* TOTALS</b>	
Eye		+	+	52	
Cornea, Inflammation					1 1.0
Harderian Gland		+	+	52	
Hyperplasia					1 1.0
Infiltration Cellular, Mononuclear Cell					10 1.0
<b>URINARY SYSTEM</b>					
Kidney		+	+	52	
Cyst					2 2.5
Mineralization		1			28 1.1
Nephropathy		1	2		40 1.6
Pigmentation					3 1.0
Pelvis, Dilatation					1 2.0
Pelvis, Inflammation					1 1.0
Urinary Bladder		+	+	52	
Hyperplasia					1 2.0
Inflammation					1 2.0

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x .. Lesion present

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M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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1-4 .. Lesion qualified as:

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First Dose M/F: NA / 03/26/04

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	5	7	3	7	7	7	1	7	1	1	7	6	7	4	6	7	7	6	4	5	5	4	4	7
	9	7	3	9	3	0	3	8	3	6	9	3	8	3	1	5	3	3	5	3	4	8	6	5	3
	4	5	3	3	3	7	5	3	3	3	7	3	7	5	2	8	4	3	2	3	5	9	9	3	5
<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>220 UG/KG</b>	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
ANIMAL ID	0	0	0	0	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	4	4	4	4	4	4
	6	7	8	9	0	1	2	3	4	5	8	1	2	3	4	5	6	7	8	9	0	1	2	3	4

females  
(cont...)

**ALIMENTARY SYSTEM**

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Cecum Inflammation Ulcer	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Rectum Parasite Metazoan	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	X	+	+	+	+	X
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Angiectasis																									
Basophilic Focus			X											X					X						X
Basophilic Focus, Multiple																									
Cholangiofibrosis																							2		
Clear Cell Focus	X								X					X				X							
Clear Cell Focus, Multiple																									
Degeneration, Cystic																									

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 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
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 2) Mild 4) Marked









TDMS No. 20304 - 01  
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 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

TEF evaluation (PCB 118)

CAS Number: 31508-00-6

Date Report Requested: 06/26/2008

Time Report Requested: 12:05:16

First Dose M/F: NA / 03/26/04

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	5	7	3	7	7	7	1	7	1	1	7	6	7	4	6	7	7	6	4	5	5	4	4	7
	9	7	3	9	3	0	3	8	3	6	9	3	8	3	1	5	3	3	5	3	4	8	6	5	3
	4	5	3	3	3	7	5	3	3	3	7	3	7	5	2	8	4	3	2	3	5	9	9	3	5
<b>SPRAGUE-DAWLEY RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	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
<b>220 UG/KG</b>	0	0	0	0	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	4	4	4	4	4	4
	6	7	8	9	0	1	2	3	4	5	8	1	2	3	4	5	6	7	8	9	0	1	2	3	4
Atrophy	3	4	4	2	3	4	2	2	2			2	3	2	2	3	4	2	4	2	3			3	
Cyst																									2
Hemorrhage																									

females (cont...)

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia																			1						
Inflammation, Granulomatous							3													3					
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst Epithelial Inclusion																									

**MUSCULOSKELETAL SYSTEM**

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Angiectasis																									
Hydrocephalus																									
Spinal Cord																									+

\* .. 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  
 Page 55

























TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0	
	7	7	
	3	3	
	5	3	
.....			
SPRAGUE-DAWLEY RATS	0	0	
FEMALE	0	0	
	4	4	
ANIMAL ID	7	8	
220 UG/KG	9	0	
			<b>* TOTALS</b>

**ALIMENTARY SYSTEM**

Esophagus	+	+	52	
Intestine Large, Cecum	+	+	51	
Inflammation				1 2.0
Ulcer				1 2.0
Intestine Large, Colon	+	+	52	
Intestine Large, Rectum	+	+	52	
Parasite Metazoan				3
Intestine Small, Duodenum	+	+	52	
Intestine Small, Ileum	+	+	50	
Intestine Small, Jejunum	+	+	50	
Liver	+	+	52	
Angiectasis				1 2.0
Basophilic Focus				8
Basophilic Focus, Multiple				3
Cholangiofibrosis				2 1.5
Clear Cell Focus				4
Clear Cell Focus, Multiple				3
Degeneration, Cystic				1 1.0

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

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

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

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0		
	7	7		
	3	3		
	5	3		
<hr/>				
<b>SPRAGUE-DAWLEY RATS</b>	0	0		
<b>FEMALE</b>	0	0		
	4	4		
ANIMAL ID	7	8		
<b>220 UG/KG</b>	9	0		
				<b>* TOTALS</b>
Eosinophilic Focus				4
Eosinophilic Focus, Multiple				5
Fatty Change, Focal				6 1.0
Fatty Change, Diffuse				1 1.0
Hematopoietic Cell Proliferation				21 1.0
Hepatodiaphragmatic Nodule	X			2
Inflammation	1	1		35 1.1
Mixed Cell Focus		X		7
Mixed Cell Focus, Multiple	X			22
Necrosis				1 1.0
Pigmentation		1		12 1.3
Toxic Hepatopathy				3 1.0
Bile Duct, Cyst				5 2.8
Bile Duct, Hyperplasia				7 1.3
Centrilobular, Degeneration				4 1.3
Hepatocyte, Hypertrophy				15 1.6
Hepatocyte, Multinucleated				3 1.0
Oval Cell, Hyperplasia				9 1.2
<hr/>				
Mesentery				3
<hr/>				
Oral Mucosa				1
<hr/>				
Pancreas	+	+		52
Inflammation, Chronic Active				2 1.0
Acinus, Atrophy, Focal				3 1.3
Artery, Inflammation, Chronic Active				1 2.0
<hr/>				
Salivary Glands	+	+		52
<hr/>				

\* .. 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

Page 67

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0	7	7	3	3	5	3
<b>SPRAGUE-DAWLEY RATS</b>								
<b>FEMALE</b>								
<b>220 UG/KG</b>								
ANIMAL ID	0	0	0	0	4	4	7	8
	9	0						
								<b>* TOTALS</b>
Stomach, Forestomach	+	+						<b>52</b>
Stomach, Glandular Glands, Cyst	+	+						<b>52</b> <b>1 1.0</b>
Tooth Peridental Tissue, Inflammation	+		3					<b>5</b> <b>5 2.6</b>

**CARDIOVASCULAR SYSTEM**

Blood Vessel	+	+						<b>52</b>
Heart Cardiomyopathy Artery, Mineralization	+	+		1				<b>52</b> <b>14 1.1</b> <b>1 1.0</b>

**ENDOCRINE SYSTEM**

Adrenal Cortex Degeneration, Cystic Hyperplasia Hypertrophy Inflammation Necrosis Vacuolization Cytoplasmic	+	+		2				<b>52</b> <b>9 2.1</b> <b>13 2.3</b> <b>39 1.8</b> <b>1 2.0</b> <b>2 3.0</b> <b>13 1.5</b>
Adrenal Medulla	+	+						<b>52</b>

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

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x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 68

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
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 CAS Number: 31508-00-6

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 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST		0	0		
		7	7		
		3	3		
		5	3		
<b>SPRAGUE-DAWLEY RATS</b>		0	0		
<b>FEMALE</b>		0	0		
<b>220 UG/KG</b>		4	4		
ANIMAL ID		7	8		
		9	0		
				<b>* TOTALS</b>	
Hyperplasia		3		14	1.4
Islets, Pancreatic		+	+	52	
Parathyroid Gland		+	+	47	
Pituitary Gland		+	+	52	
Pars Distalis, Hyperplasia				13	2.1
Thyroid Gland		+	+	51	
C-cell, Hyperplasia				10	1.8
Follicular Cell, Hypertrophy				13	1.6

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Clitoral Gland		+	+	51	
Hyperplasia, Squamous				1	3.0
Inflammation		2	2	39	1.7
Duct, Cyst		1	2	31	1.9
Ovary		+	+	52	
Cyst		2	2	13	2.3
Bilateral, Cyst				1	4.0

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+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 69

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
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 Lab: BAT

DAY ON TEST			
	0	0	
	7	7	
	3	3	
	5	3	
.....			
<b>SPRAGUE-DAWLEY RATS</b>	0	0	
<b>FEMALE</b>	0	0	
	4	4	
ANIMAL ID	7	8	
<b>220 UG/KG</b>	9	0	
			<b>* TOTALS</b>
Uterus	+	+	52
Cyst			1 3.0
Inflammation			6 2.3
Metaplasia, Squamous	1		27 2.0
Endometrium, Hyperplasia, Cystic	3	1	22 1.5

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	52	
Atrophy				1 2.0
Hyperplasia		2		30 3.1
Myelofibrosis				1 1.0
Lymph Node			1	
Lymph Node, Mandibular	+	+	52	
Hyperplasia, Lymphoid				1 2.0
Hyperplasia, Plasma Cell	1	2		36 1.6
Lymph Node, Mesenteric	+	+	52	
Spleen	+	+	52	
Hematopoietic Cell Proliferation	2			39 1.9
Pigmentation	2			31 1.6
Lymphoid Follicle, Atrophy				2 1.5
Red Pulp, Atrophy				2 1.5
Thymus	+	+	51	

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+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 70

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
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 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST		0	0	
		7	7	
		3	3	
		5	3	
.....				
<b>SPRAGUE-DAWLEY RATS</b>		0	0	
<b>FEMALE</b>		0	0	
	ANIMAL ID	4	4	
		7	8	
<b>220 UG/KG</b>		9	0	
				<b>* TOTALS</b>

Atrophy	4	2			<b>44 2.6</b>
Cyst					<b>1 2.0</b>
Hemorrhage					<b>1 3.0</b>

**INTEGUMENTARY SYSTEM**

Mammary Gland					<b>52</b>
Hyperplasia	+	+			<b>4 1.3</b>
Inflammation, Granulomatous					<b>2 3.0</b>
.....					
Skin					<b>52</b>
Cyst Epithelial Inclusion	+	+			<b>1</b>

**MUSCULOSKELETAL SYSTEM**

Bone					<b>52</b>
	+	+			

**NERVOUS SYSTEM**

Brain					<b>52</b>
Angiectasis	+	+			<b>1 1.0</b>
Hydrocephalus					<b>1 1.0</b>
.....					
Spinal Cord					<b>1</b>

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 + .. Tissue examined microscopically  
 x .. Lesion present  
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 1-4 .. Lesion qualified as:  
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TDMS No. 20304 - 01  
 Test Type: CHRONIC  
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 Species/Strain: RATS/SD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0	7	7	3	3	5	3	
<hr/>									
<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	4	4	7	8	
<b>FEMALE</b>	0	0	4	4	7	8	9	0	
<b>220 UG/KG</b>								<b>* TOTALS</b>	

**RESPIRATORY SYSTEM**

Lung	+	+					52	
Inflammation							5	1.4
Pigmentation							1	1.0
Alveolar Epithelium, Metaplasia, Bronchiolar							14	1.3
Alveolus, Infiltration Cellular, Histiocyte			1				37	1.6
<hr/>								
Nose	+	+					52	
Inflammation							5	1.8
Respiratory Epithelium, Hyperplasia							7	1.4
<hr/>								
Trachea	+	+					52	

**SPECIAL SENSES SYSTEM**

Eye	+	+					52	
Cornea, Inflammation							1	3.0
<hr/>								
Harderian Gland	+	+					52	
Hyperplasia							2	2.0
Infiltration Cellular, Mononuclear Cell			2				3	1.3

**URINARY SYSTEM**

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

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked



TDMS No. 20304 - 01  
 Test Type: CHRONIC  
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 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST		0	0	
		7	7	
		3	3	
		5	3	
.....				
<b>SPRAGUE-DAWLEY RATS</b> <b>FEMALE</b>		0	0	
		0	0	
		4	4	
		7	8	
	<b>220 UG/KG</b>	9	0	
				<b>* TOTALS</b>
Kidney		+	+	<b>52</b>
Accumulation, Hyaline Droplet				<b>1 1.0</b>
Mineralization		1		<b>30 1.1</b>
Necrosis				<b>1 3.0</b>
Nephropathy		1	2	<b>46 1.3</b>
Pigmentation				<b>3 1.3</b>
.....				
Urinary Bladder		+	+	<b>52</b>

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+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 73

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked





TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

TEF evaluation (PCB 118)  
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 Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	6	7	7	7	7	7	7	7	7	4	7	4	7	2	5	7	7	5	7	7	6	7	7
	2	3	5	3	3	3	3	3	3	3	3	8	3	5	3	3	7	2	3	9	3	3	0	3	3
	7	4	8	5	5	5	5	4	5	3	5	4	1	7	5	8	5	9	4	3	3	5	7	3	3
<b>SPRAGUE-DAWLEY RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	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
<b>460 UG/KG</b>	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3	3
<b>ANIMAL ID</b>	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	2	6	7	8	9	0	1	2	3	4

females (cont...)

Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inflammation, Chronic Active Acinus, Atrophy, Focal Artery, Inflammation, Chronic Active					3		3	2									3		2	3					
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, Glandular Erosion	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Tooth	+	+																							
Peridontal Tissue, Inflammation	2	2																							2

**CARDIOVASCULAR SYSTEM**

Blood Vessel	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cardiomyopathy					1	1				1	3						2	1						1	1
Artery, Mineralization																									

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Angiectasis																								A	+	+

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 + .. Tissue examined microscopically  
 x .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
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 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked  
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TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0
	7	6
	3	2
	4	7
.....		
<b>SPRAGUE-DAWLEY RATS</b>	0	0
<b>FEMALE</b>	0	0
	5	5
ANIMAL ID	7	8
<b>460 UG/KG</b>	9	0
		<b>* TOTALS</b>

**ALIMENTARY SYSTEM**

Esophagus	+	+	52	
Ulcer				1 2.0
Muscularis, Inflammation				1 3.0
.....				
Intestine Large, Cecum	+	+	52	
Inflammation		3		1 3.0
Artery, Inflammation, Chronic Active				1 3.0
.....				
Intestine Large, Colon	+	+	52	
Artery, Inflammation, Chronic Active				1 3.0
.....				
Intestine Large, Rectum	+	+	52	
Parasite Metazoan				2
Artery, Inflammation, Chronic Active				2 2.5
.....				
Intestine Small, Duodenum	+	+	52	
.....				
Intestine Small, Ileum	+	+	52	
.....				
Intestine Small, Jejunum	+	+	52	
.....				
Liver	+	+	52	
Angiectasis				2 2.5
Basophilic Focus	X			4
Basophilic Focus, Multiple				2

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

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x .. Lesion present

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M .. Missing tissue

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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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TDMS No. 20304 - 01  
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 Lab: BAT

DAY ON TEST		0	0	
		7	6	
		3	2	
		4	7	
.....				
<b>SPRAGUE-DAWLEY RATS</b>		0	0	
<b>FEMALE</b>		0	0	
	ANIMAL ID	5	5	
		7	8	
<b>460 UG/KG</b>		9	0	
				<b>* TOTALS</b>
.....				
Cholangiofibrosis				3 1.7
Clear Cell Focus				5
Clear Cell Focus, Multiple	X			9
Eosinophilic Focus				4
Eosinophilic Focus, Multiple				11
Fatty Change, Focal				4 1.0
Fatty Change, Diffuse				9 1.7
Hematopoietic Cell Proliferation		1		28 1.0
Hepatodiaphragmatic Nodule				1
Inflammation		1	2	36 1.1
Mixed Cell Focus				6
Mixed Cell Focus, Multiple	X			30
Necrosis				2 2.5
Pigmentation		1	2	41 1.4
Toxic Hepatopathy			1	14 1.0
Bile Duct, Cyst			2	6 2.3
Bile Duct, Fibrosis				3 1.0
Bile Duct, Hyperplasia				8 1.4
Centrilobular, Degeneration				3 1.0
Hepatocyte, Hypertrophy		1	2	20 1.6
Hepatocyte, Multinucleated			1	21 1.2
Oval Cell, Hyperplasia		1	1	29 1.2
.....				
Mesentery				3
Hemorrhage				1 3.0
Artery, Inflammation, Chronic Active				2 3.0
.....				
Oral Mucosa				1
Gingival, Hyperplasia, Squamous				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

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0	7	6	3	2	4	7
<b>SPRAGUE-DAWLEY RATS</b>								
<b>FEMALE</b>								
<b>460 UG/KG</b>								
ANIMAL ID	0	0	0	0	5	5	7	8
	9	0						
								<b>* TOTALS</b>

Pancreas	+	+							52		
Inflammation, Chronic Active										2	1.0
Acinus, Atrophy, Focal										4	1.3
Artery, Inflammation, Chronic Active										7	2.4
Salivary Glands	+	+								51	
Stomach, Forestomach	+	+								52	
Stomach, Glandular	+	+								52	
Erosion											1 1.0
Tooth										5	
Peridental Tissue, Inflammation											5 2.0

**CARDIOVASCULAR SYSTEM**

Blood Vessel	+	+								52	
Heart	+	+								52	
Cardiomyopathy											16 1.2
Artery, Mineralization											1 1.0

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+								51	
Angiectasis											1 3.0

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 + .. 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  
 Page 92



TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST		0	0		
		7	6		
		3	2		
		4	7		
<b>SPRAGUE-DAWLEY RATS</b>		0	0		
<b>FEMALE</b>		0	0		
ANIMAL ID		5	5		
		7	8		
<b>460 UG/KG</b>		9	0		
				<b>* TOTALS</b>	
Duct, Cyst		2	1	<b>35</b>	<b>2.2</b>
Ovary		+	+	<b>52</b>	
Cyst			3	<b>14</b>	<b>2.2</b>
Fibrosis			3	<b>1</b>	<b>3.0</b>
Inflammation				<b>2</b>	<b>3.5</b>
Pigmentation			3	<b>1</b>	<b>3.0</b>
Uterus		+	+	<b>52</b>	
Adenomyosis				<b>1</b>	<b>2.0</b>
Cyst				<b>1</b>	<b>3.0</b>
Inflammation			3	<b>8</b>	<b>2.3</b>
Metaplasia, Squamous		2	3	<b>34</b>	<b>1.8</b>
Thrombosis				<b>2</b>	<b>2.5</b>
Artery, Inflammation, Chronic Active				<b>1</b>	<b>3.0</b>
Endometrium, Hyperplasia, Cystic		2		<b>23</b>	<b>2.0</b>
Vagina				<b>1</b>	

**HEMATOPOIETIC SYSTEM**

Bone Marrow		+	+	<b>52</b>	
Hyperplasia			4	<b>32</b>	<b>2.7</b>
Lymph Node				<b>1</b>	
Lymph Node, Mandibular		+	+	<b>51</b>	
Hyperplasia, Lymphoid				<b>1</b>	<b>2.0</b>

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+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

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BLANK .. Not examined microscopically

Page 94

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST				
	0	0		
	7	6		
	3	2		
	4	7		
<hr/>				
<b>SPRAGUE-DAWLEY RATS</b>	0	0		
<b>FEMALE</b>	0	0		
	5	5		
ANIMAL ID	7	8		
<b>460 UG/KG</b>	9	0		
				<b>* TOTALS</b>
Hyperplasia, Plasma Cell	3	2		<b>33 1.7</b>
Lymph Node, Mesenteric	+	+		<b>52</b>
Spleen	+	+		<b>52</b>
Hematopoietic Cell Proliferation				<b>39 1.7</b>
Necrosis				<b>1 2.0</b>
Pigmentation	1	1		<b>36 1.5</b>
Capsule, Hemorrhage				<b>1 3.0</b>
Lymphoid Follicle, Atrophy				<b>2 2.0</b>
Red Pulp, Atrophy				<b>1 2.0</b>
Thymus	+	+		<b>50</b>
Atrophy	2	4		<b>44 2.8</b>

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+		<b>52</b>
Cyst				<b>2 3.0</b>
Hyperplasia		1		<b>5 1.4</b>
Inflammation, Granulomatous				<b>1 3.0</b>
Skin	+	+		<b>52</b>
Cyst Epithelial Inclusion				<b>1</b>

**MUSCULOSKELETAL SYSTEM**

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+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 95

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0	7	6	3	2	4	7	
<b>SPRAGUE-DAWLEY RATS</b>									
<b>FEMALE</b>									
<b>460 UG/KG</b>									
ANIMAL ID	0	0	0	0	5	5	7	8	
	9	0							<b>* TOTALS</b>
Bone	+	+							<b>52</b>

**NERVOUS SYSTEM**

Brain	+	+							<b>52</b>
Gliosis								<b>1 3.0</b>	
Hemorrhage								<b>1 2.0</b>	
Meninges, Inflammation								<b>1 2.0</b>	

**RESPIRATORY SYSTEM**

Lung	+	+							<b>52</b>
Hemorrhage								<b>1 2.0</b>	
Inflammation								<b>3 1.0</b>	
Metaplasia, Squamous								<b>1 1.0</b>	
Alveolar Epithelium, Metaplasia, Bronchiolar	2								<b>18 1.4</b>
Alveolus, Infiltration Cellular, Histiocyte	2	2							<b>39 1.6</b>
Nose	+	+							<b>52</b>
Inflammation								<b>3 1.7</b>	
Respiratory Epithelium, Hyperplasia								<b>7 1.3</b>	
Respiratory Epithelium, Necrosis								<b>1 2.0</b>	
Trachea	+	+							<b>52</b>

**SPECIAL SENSES SYSTEM**

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x .. Lesion present

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Page 96

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked



TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

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

DAY ON TEST				
	0	0		
	7	6		
	3	2		
	4	7		
<hr/>				
<b>SPRAGUE-DAWLEY RATS</b>	0	0		
<b>FEMALE</b>	0	0		
	5	5		
ANIMAL ID	7	8		
<b>460 UG/KG</b>	9	0		
				<b>* TOTALS</b>
<hr/>				
Eye	+	+		<b>52</b>
Cornea, Inflammation				<b>1 3.0</b>
<hr/>				
Harderian Gland	+	+		<b>52</b>
Infiltration Cellular, Mononuclear Cell				<b>10 1.0</b>
<hr/>				
<b>URINARY SYSTEM</b>				
<hr/>				
Kidney	+	+		<b>52</b>
Calculus Micro Observation Only				<b>2</b>
Dilatation				<b>1 3.0</b>
Mineralization				<b>18 1.1</b>
Nephropathy	2	3		<b>44 1.6</b>
Pigmentation				<b>4 1.3</b>
Pelvis, Dilatation		3		<b>1 3.0</b>
Renal Tubule, Hyperplasia				<b>1 2.0</b>
<hr/>				
Urinary Bladder	+	+		<b>52</b>
<hr/>				

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Page 97

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked









































TDMS No. 20304 - 01  
 Test Type: CHRONIC  
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
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 Lab: BAT

DAY ON TEST	0	0	4	5	2	3	1	0
<hr/>								
<b>SPRAGUE-DAWLEY RATS</b>	0	0						
<b>FEMALE</b>	0	0						
ANIMAL ID	6	6						
<b>1000 UG/KG</b>	7	7						
	4	5						
								<b>* TOTALS</b>

**ALIMENTARY SYSTEM**

Esophagus	+	+						52		
Muscularis, Degeneration									1	2.0
Intestine Large, Cecum	+	+						52		
Degeneration, Fatty									1	3.0
Artery, Inflammation, Chronic Active									3	2.3
Intestine Large, Colon	+	+						52		
Parasite Metazoan									1	
Artery, Inflammation, Chronic Active									3	2.7
Intestine Large, Rectum	+	+						52		
Parasite Metazoan									1	
Artery, Inflammation, Chronic Active									5	2.8
Intestine Small, Duodenum	+	+						52		
Inflammation									1	3.0
Ulcer									1	3.0
Intestine Small, Ileum	+	+						52		
Artery, Inflammation, Chronic Active									1	2.0
Intestine Small, Jejunum	+	+						52		
Inflammation, Chronic Active			3						1	3.0
Artery, Inflammation, Chronic Active									1	2.0

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Page 116

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
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Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST		0	0		
		4	5		
		2	3		
		1	0		
<b>SPRAGUE-DAWLEY RATS</b>		0	0		
<b>FEMALE</b>		0	0		
		6	6		
ANIMAL ID		7	7		
<b>1000 UG/KG</b>		4	5		
				<b>* TOTALS</b>	
Liver		+	+	52	
Basophilic Focus			X	8	
Basophilic Focus, Multiple				1	
Cholangiofibrosis				2	1.5
Clear Cell Focus				2	
Clear Cell Focus, Multiple				3	
Degeneration, Cystic				1	1.0
Eosinophilic Focus				5	
Eosinophilic Focus, Multiple		X		20	
Fatty Change, Focal			3	3	1.7
Fatty Change, Diffuse				39	2.0
Hematopoietic Cell Proliferation				19	1.1
Hyperplasia, Nodular				12	
Inflammation		1	2	43	1.3
Mixed Cell Focus				1	
Mixed Cell Focus, Multiple				30	
Necrosis			3	20	1.5
Pigmentation		1	3	50	2.2
Toxic Hepatopathy			1	33	1.4
Bile Duct, Cyst				6	2.2
Bile Duct, Fibrosis				2	1.0
Bile Duct, Hyperplasia				21	1.5
Centrilobular, Degeneration				6	1.7
Hepatocyte, Hypertrophy		1	2	44	2.0
Hepatocyte, Multinucleated		1	2	40	1.3
Oval Cell, Hyperplasia				40	1.6
				<b>9</b>	
Mesentery					
Artery, Inflammation, Chronic Active				5	3.4
Fat, Necrosis				1	3.0

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Page 117

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
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 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0	4	5	2	3	1	0
<b>SPRAGUE-DAWLEY RATS</b>								
<b>FEMALE</b>								
<b>1000 UG/KG</b>								
ANIMAL ID	0	0	0	0	6	6	7	7
	4	5						
								<b>* TOTALS</b>
Oral Mucosa								1
Gingival, Hyperplasia, Squamous								1 3.0
Pancreas	+	+						52
Inflammation, Chronic Active								3 1.0
Acinus, Atrophy, Focal								3 2.0
Acinus, Hyperplasia								1 2.0
Acinus, Vacuolization Cytoplasmic								4 1.0
Artery, Inflammation, Chronic Active								7 2.4
Salivary Glands	+	+						52
Degeneration								1 2.0
Stomach, Forestomach	+	+						52
Hyperplasia, Squamous								2 1.5
Artery, Inflammation, Chronic Active								1 2.0
Stomach, Glandular	+	+						52
Mineralization								1 1.0
Tooth								4
Peridontal Tissue, Inflammation								4 2.5

**CARDIOVASCULAR SYSTEM**

Blood Vessel	+	+						52
Heart	+	+						52

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1-4 .. Lesion qualified as:

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TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
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 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST			
	0	0	
	4	5	
	2	3	
	1	0	
.....			
<b>SPRAGUE-DAWLEY RATS</b>	0	0	
<b>FEMALE</b>	0	0	
	6	6	
ANIMAL ID	7	7	
<b>1000 UG/KG</b>	4	5	
			<b>* TOTALS</b>
Cardiomyopathy	1		<b>19 1.2</b>
Inflammation			<b>1 2.0</b>
Artery, Inflammation, Chronic Active			<b>1 2.0</b>
Endocardium, Hyperplasia			<b>1 1.0</b>

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	<b>52</b>	
Atrophy				<b>9 2.3</b>
Degeneration, Cystic				<b>6 2.3</b>
Hematopoietic Cell Proliferation				<b>1 1.0</b>
Hyperplasia				<b>13 2.0</b>
Hypertrophy	1			<b>44 1.6</b>
Necrosis				<b>3 2.7</b>
Vacuolization Cytoplasmic				<b>12 1.4</b>
.....				
Adrenal Medulla	+	+	<b>52</b>	
Hyperplasia				<b>10 1.4</b>
Necrosis				<b>1 3.0</b>
.....				
Islets, Pancreatic	+	+	<b>52</b>	
.....				
Parathyroid Gland	+	+	<b>50</b>	
.....				
Pituitary Gland	+	+	<b>52</b>	
Angiectasis				<b>1 3.0</b>
Pars Distalis, Cyst		2		<b>1 2.0</b>
Pars Distalis, Hyperplasia				<b>16 2.5</b>

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+ .. 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





TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
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 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST		0	0
		4	5
		2	3
		1	0
.....			
SPRAGUE-DAWLEY RATS FEMALE		0	0
		0	0
		6	6
		7	7
		4	5
			<b>* TOTALS</b>

Epithelium, Hyperplasia	<b>1 2.0</b>
Vagina	<b>1</b>

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+ +	<b>52</b>
Atrophy	2	<b>1 2.0</b>
Hyperplasia	3	<b>34 2.6</b>
.....		
Lymph Node, Mandibular	+ +	<b>52</b>
Atrophy		<b>1 3.0</b>
Hyperplasia, Lymphoid		<b>1 2.0</b>
Hyperplasia, Plasma Cell		<b>30 1.9</b>
.....		
Lymph Node, Mesenteric	+ +	<b>52</b>
Atrophy		<b>1 3.0</b>
Hemorrhage		<b>1 3.0</b>
.....		
Spleen	+ +	<b>52</b>
Hematopoietic Cell Proliferation		<b>32 1.7</b>
Pigmentation	3	<b>40 2.0</b>
Lymphoid Follicle, Atrophy	2	<b>3 2.7</b>
Red Pulp, Atrophy		<b>1 2.0</b>
.....		
Thymus	+ +	<b>50</b>
Atrophy	2 3	<b>46 3.0</b>
Hemorrhage		<b>1 2.0</b>

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 + .. 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

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
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 Lab: BAT

DAY ON TEST	0	0	4	5	2	3	1	0
<hr/>								
<b>SPRAGUE-DAWLEY RATS</b>	0	0						
<b>FEMALE</b>	0	0						
<b>1000 UG/KG</b>	6	6						
ANIMAL ID	7	7						
	4	5						
								<b>* TOTALS</b>

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+	52
Skin	+	+	52

**MUSCULOSKELETAL SYSTEM**

Bone	+	+	52
Skeletal Muscle			1

**NERVOUS SYSTEM**

Brain	+	+	52
-------	---	---	----

**RESPIRATORY SYSTEM**

Lung	+	+	52	
Congestion				1 3.0
Inflammation				2 3.0
Metaplasia, Squamous				1 1.0
Alveolar Epithelium, Metaplasia, Bronchiolar				24 1.4

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+ .. 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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 Test Type: CHRONIC  
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Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST				
	0	0		
	4	5		
	2	3		
	1	0		
<hr/>				
<b>SPRAGUE-DAWLEY RATS</b>	0	0		
<b>FEMALE</b>	0	0		
	6	6		
ANIMAL ID	7	7		
<b>1000 UG/KG</b>	4	5		
				<b>* TOTALS</b>
<hr/>				
Alveolus, Infiltration Cellular, Histiocyte				<b>34 1.6</b>
<hr/>				
Nose	+	+		<b>52</b>
Inflammation				<b>5 1.6</b>
Respiratory Epithelium, Hyperplasia				<b>14 1.1</b>
<hr/>				
Trachea	+	+		<b>52</b>
<hr/>				
<b>SPECIAL SENSES SYSTEM</b>				
<hr/>				
Eye	+	+		<b>52</b>
Retina, Atrophy				<b>1 2.0</b>
<hr/>				
Harderian Gland	+	+		<b>52</b>
Infiltration Cellular, Mononuclear Cell				<b>4 1.0</b>
Vacuolization Cytoplasmic				<b>1 2.0</b>
<hr/>				
<b>URINARY SYSTEM</b>				
<hr/>				
Kidney	+	+		<b>52</b>
Calculus Micro Observation Only				<b>1</b>
Inflammation				<b>1 2.0</b>
Mineralization				<b>22 1.0</b>
Nephropathy	1	2		<b>44 1.7</b>
Pigmentation				<b>6 1.0</b>
Artery, Inflammation, Chronic Active				<b>1 2.0</b>
Capsule, Inflammation, Chronic Active				<b>1 2.0</b>

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

TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 TEF evaluation (PCB 118)  
 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0	
	4	5	
	2	3	
	1	0	
.....			
<b>SPRAGUE-DAWLEY RATS</b>	0	0	
<b>FEMALE</b>	0	0	
	6	6	
ANIMAL ID	7	7	
<b>1000 UG/KG</b>	4	5	
			<b>* TOTALS</b>
Pelvis, Dilatation			<b>1 2.0</b>
Pelvis, Inflammation			<b>2 1.5</b>
Transitional Epithelium, Hyperplasia			<b>3 1.7</b>
.....			
Ureter			<b>1</b>
.....			
Urinary Bladder	+	+	<b>52</b>
Inflammation			<b>1 3.0</b>

\* .. 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

Page 124

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked



















TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

TEF evaluation (PCB 118)

CAS Number: 31508-00-6

Date Report Requested: 06/26/2008

Time Report Requested: 12:05:16

First Dose M/F: NA / 03/26/04

Lab: BAT

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		6	7	4	7	6	7	4	7	7	7	6	7	6	7	1	7	6	7	7	7	5	7	7	7
		9	3	8	3	7	3	3	3	3	3	7	1	7	3	5	2	2	3	3	1	6	3	3	3
		7	4	4	3	2	3	3	3	4	5	3	8	2	5	8	7	3	4	5	1	7	5	4	3
<b>SPRAGUE-DAWLEY RATS</b>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>FEMALE</b>		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	
<b>4600 UG/KG</b>		0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	2	2	2	2	2	2	2	2	
<b>ANIMAL ID</b>		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	1	2	3	4	5	6	7		
Urinary Bladder		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		

**females  
(cont...)**

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TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

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

DAY ON TEST	0	0	6	7	9	3	9	3
<hr/>								
<b>SPRAGUE-DAWLEY RATS</b>	0	0						
<b>FEMALE</b>	0	0						
ANIMAL ID	7	7						
<b>4600 UG/KG</b>	7	8						
	9	0						
								<b>* TOTALS</b>

**ALIMENTARY SYSTEM**

Esophagus	+	+						<b>52</b>
Intestine Large, Cecum	+	+						<b>48</b>
Artery, Inflammation, Chronic Active								<b>1 3.0</b>
Intestine Large, Colon	+	+						<b>48</b>
Parasite Metazoan								<b>1</b>
Artery, Inflammation, Chronic Active								<b>1 2.0</b>
Intestine Large, Rectum	+	+						<b>50</b>
Parasite Metazoan								<b>3</b>
Artery, Inflammation, Chronic Active								<b>1 3.0</b>
Intestine Small, Duodenum	+	+						<b>48</b>
Intestine Small, Ileum	+	+						<b>47</b>
Intestine Small, Jejunum	+	+						<b>48</b>
Liver	+	+						<b>49</b>
Angiectasis								<b>2 2.0</b>
Basophilic Focus								<b>1</b>
Cholangiofibrosis	4							<b>22 2.5</b>
Degeneration, Cystic								<b>2 1.0</b>
Eosinophilic Focus, Multiple	X	X						<b>41</b>

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TDMS No. 20304 - 01  
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 Lab: BAT

DAY ON TEST			
	0	0	
	6	7	
	9	3	
	9	3	
.....			
<b>SPRAGUE-DAWLEY RATS</b>	0	0	
<b>FEMALE</b>	0	0	
	7	7	
ANIMAL ID	7	8	
<b>4600 UG/KG</b>	9	0	
			<b>* TOTALS</b>
Fatty Change, Diffuse	3	3	48 2.5
Hematopoietic Cell Proliferation			21 1.0
Hyperplasia, Nodular	X	X	43
Inflammation	1	1	44 1.3
Mixed Cell Focus			1
Mixed Cell Focus, Multiple			6
Necrosis		1	22 1.7
Pigmentation	2	2	48 1.7
Toxic Hepatopathy	4		46 3.4
Bile Duct, Cyst			21 2.1
Bile Duct, Hyperplasia	2	2	40 1.9
Centrilobular, Degeneration			1 3.0
Hepatocyte, Hypertrophy	4	3	48 3.5
Hepatocyte, Multinucleated	2	1	43 1.7
Oval Cell, Hyperplasia	3	3	46 3.0
.....			
Mesentery	+		9
Artery, Inflammation, Chronic Active	3		8 3.0
Artery, Thrombosis			1 3.0
Fat, Necrosis			1 3.0
.....			
Oral Mucosa			3
Gingival, Cyst			1 3.0
.....			
Pancreas	+	+	47
Inflammation, Chronic Active			2 2.0
Acinus, Atrophy, Focal			1 1.0
Acinus, Atrophy, Diffuse			1 3.0
Acinus, Vacuolization Cytoplasmic	1	3	42 2.2
Artery, Inflammation, Chronic Active	3		12 2.1

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TDMS No. 20304 - 01  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: RATS/SD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
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Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST				
	0	0		
	6	7		
	9	3		
	9	3		
<hr/>				
<b>SPRAGUE-DAWLEY RATS</b>	0	0		
<b>FEMALE</b>	0	0		
	7	7		
ANIMAL ID	7	8		
<b>4600 UG/KG</b>	9	0		
				<b>* TOTALS</b>
Duct, Dilatation	4			<b>3 4.0</b>
Duct, Inflammation	3			<b>2 3.0</b>
Duct, Necrosis	3			<b>1 3.0</b>
<hr/>				
Salivary Glands	+	+		<b>51</b>
<hr/>				
Stomach, Forestomach	+	+		<b>51</b>
Hyperplasia, Squamous				<b>3 1.7</b>
Inflammation				<b>1 2.0</b>
Artery, Inflammation, Chronic Active				<b>1 3.0</b>
<hr/>				
Stomach, Glandular	+	+		<b>51</b>
Artery, Inflammation, Chronic Active				<b>1 2.0</b>
<hr/>				
Tooth				<b>7</b>
Peridontal Tissue, Inflammation				<b>6 1.8</b>

**CARDIOVASCULAR SYSTEM**

Blood Vessel	+	+		<b>51</b>
<hr/>				
Heart	+	+		<b>50</b>
Cardiomyopathy				<b>16 1.1</b>
Inflammation				<b>1 1.0</b>
Artery, Inflammation, Chronic Active				<b>1 2.0</b>
Coronary Artery, Thrombosis				<b>1 2.0</b>
Endocardium, Hyperplasia				<b>2 1.5</b>
Epicardium, Fibrosis				<b>1 3.0</b>

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x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

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2) Mild 4) Marked

TDMS No. 20304 - 01  
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 Species/Strain: RATS/SD

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 Lab: BAT

DAY ON TEST	0	0	6	7	9	3	9	3	
<hr/>									
<b>SPRAGUE-DAWLEY RATS</b>	0	0	0	0	7	7	7	8	
<b>FEMALE</b>	0	0	7	7	7	8	9	0	
<b>4600 UG/KG</b>								<b>* TOTALS</b>	

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+			<b>49</b>	
Atrophy	2	3			<b>35</b>	<b>2.5</b>
Degeneration, Cystic	2	3			<b>8</b>	<b>2.5</b>
Hyperplasia		3			<b>13</b>	<b>2.5</b>
Hypertrophy	2	2			<b>34</b>	<b>1.7</b>
Vacuolization Cytoplasmic	2				<b>18</b>	<b>1.8</b>
<hr/>						
Adrenal Medulla	+	+			<b>49</b>	
Hyperplasia					<b>1</b>	<b>1.0</b>
<hr/>						
Islets, Pancreatic	+	+			<b>47</b>	
<hr/>						
Parathyroid Gland	+	+			<b>47</b>	
<hr/>						
Pituitary Gland	+	+			<b>52</b>	
Pars Distalis, Hyperplasia					<b>10</b>	<b>2.0</b>
<hr/>						
Thyroid Gland	+	+			<b>49</b>	
Infiltration Cellular, Lymphocyte					<b>1</b>	<b>3.0</b>
C-cell, Hyperplasia		3			<b>11</b>	<b>2.5</b>
Follicular Cell, Hypertrophy					<b>23</b>	<b>2.0</b>

**GENERAL BODY SYSTEM**

NONE

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+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
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 Species/Strain: RATS/SD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
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 CAS Number: 31508-00-6

Date Report Requested: 06/26/2008  
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 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0	6	7	9	3	9	3
<hr/>								
<b>SPRAGUE-DAWLEY RATS</b>	0	0						
<b>FEMALE</b>	0	0						
	7	7						
ANIMAL ID	7	8						
<b>4600 UG/KG</b>	9	0						
								<b>* TOTALS</b>

**GENITAL SYSTEM**

Clitoral Gland	+	+			<b>49</b>		
Inflammation						<b>13</b>	<b>1.2</b>
Duct, Cyst	2	2				<b>30</b>	<b>1.9</b>
Ovary	+	+			<b>48</b>		
Cyst						<b>7</b>	<b>2.3</b>
Inflammation						<b>2</b>	<b>3.5</b>
Uterus	+	+			<b>49</b>		
Adenomyosis						<b>1</b>	<b>4.0</b>
Cyst						<b>1</b>	<b>3.0</b>
Hemorrhage						<b>1</b>	<b>2.0</b>
Inflammation						<b>4</b>	<b>2.8</b>
Metaplasia, Squamous						<b>5</b>	<b>1.4</b>
Endometrium, Hyperplasia, Cystic			1			<b>9</b>	<b>2.0</b>

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+			<b>52</b>		
Hyperplasia	4	2				<b>47</b>	<b>3.0</b>
Necrosis						<b>1</b>	<b>3.0</b>
Lymph Node	+				<b>2</b>		
Bronchial, Ectasia						<b>1</b>	<b>2.0</b>

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I .. Insufficient tissue

M .. Missing tissue

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BLANK .. Not examined microscopically

Page 147

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20304 - 01  
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 Species/Strain: RATS/SD

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 Lab: BAT

DAY ON TEST		0	0		
		6	7		
		9	3		
		9	3		
<b>SPRAGUE-DAWLEY RATS</b>		0	0		
<b>FEMALE</b>		0	0		
ANIMAL ID		7	7		
7		8			
9		0			
				<b>* TOTALS</b>	
Bronchial, Hemorrhage				1	1.0
Lymph Node, Mandibular		+	+	51	
Atrophy					1 4.0
Hyperplasia, Lymphoid					1 3.0
Hyperplasia, Plasma Cell					19 1.7
Lymph Node, Mesenteric		+	+	47	
Ectasia					1 2.0
Spleen		+	+	47	
Hematopoietic Cell Proliferation					34 1.6
Pigmentation			2		28 1.6
Lymphoid Follicle, Atrophy		2			3 2.0
Red Pulp, Atrophy		2			3 2.0
Thymus		+	+	49	
Atrophy		4	4		44 3.3
Hemorrhage					3 2.0
Artery, Inflammation, Chronic Active					2 3.0
<b>INTEGUMENTARY SYSTEM</b>					
Mammary Gland		+	+	50	
Hyperplasia					1 2.0
Skin		+	+	51	

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TDMS No. 20304 - 01  
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 Species/Strain: RATS/SD

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 Lab: BAT

DAY ON TEST	0	0	6	7	9	3	9	3
<hr/>								
<b>SPRAGUE-DAWLEY RATS</b>	0	0						
<b>FEMALE</b>	0	0						
ANIMAL ID	7	7						
<b>4600 UG/KG</b>	7	8						
	9	0						
								<b>* TOTALS</b>

**MUSCULOSKELETAL SYSTEM**

Bone	+	+							<b>52</b>
------	---	---	--	--	--	--	--	--	-----------

**NERVOUS SYSTEM**

Brain	+	+							<b>52</b>
Spinal Cord								<b>1</b>	
Nerve, Degeneration								<b>1 3.0</b>	

**RESPIRATORY SYSTEM**

Lung	+	+							<b>50</b>
Hemorrhage								<b>1 2.0</b>	
Inflammation								<b>2 1.5</b>	
Metaplasia, Squamous	3							<b>13 2.2</b>	
Pigmentation								<b>1 1.0</b>	
Alveolar Epithelium, Metaplasia, Bronchiolar			2					<b>40 2.0</b>	
Alveolus, Infiltration Cellular, Histiocyte	1							<b>40 1.5</b>	
Artery, Mediastinum, Inflammation, Chronic Active								<b>1 2.0</b>	
Nose	+	+							<b>52</b>
Inflammation	2							<b>23 1.7</b>	

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TDMS No. 20304 - 01  
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 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST	0	0		
	6	7		
	9	3		
	9	3		
<hr/>				
<b>SPRAGUE-DAWLEY RATS</b>	0	0		
<b>FEMALE</b>	0	0		
	7	7		
ANIMAL ID	7	8		
<b>4600 UG/KG</b>	9	0		
				<b>* TOTALS</b>
Nasolacrimal Duct, Inflammation, Suppurative				<b>1 3.0</b>
Olfactory Epithelium, Degeneration				<b>1 2.0</b>
Olfactory Epithelium, Metaplasia				<b>1 2.0</b>
Respiratory Epithelium, Hyperplasia				<b>27 1.3</b>
<hr/>				
Trachea	+	+		<b>52</b>
Inflammation				<b>1 1.0</b>
<hr/>				
<b>SPECIAL SENSES SYSTEM</b>				
<hr/>				
Eye	+	+		<b>52</b>
Retina, Atrophy				<b>6 2.0</b>
<hr/>				
Harderian Gland	+	+		<b>52</b>
Infiltration Cellular, Mononuclear Cell		1		<b>13 1.0</b>
<hr/>				
<b>URINARY SYSTEM</b>				
<hr/>				
Kidney	+	+		<b>50</b>
Cyst				<b>1 3.0</b>
Mineralization	1	1		<b>25 1.0</b>
Nephropathy	3	2		<b>46 2.2</b>
Pigmentation	2	3		<b>42 2.2</b>
Pelvis, Inflammation				<b>2 1.5</b>
Transitional Epithelium, Hyperplasia				<b>3 2.3</b>
<hr/>				

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+ .. 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

TDMS No. 20304 - 01  
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 Route: GAVAGE  
 Species/Strain: RATS/SD

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Date Report Requested: 06/26/2008  
 Time Report Requested: 12:05:16  
 First Dose M/F: NA / 03/26/04  
 Lab: BAT

DAY ON TEST		0	0	
		6	7	
		9	3	
		9	3	
.....				
<b>SPRAGUE-DAWLEY RATS</b> <b>FEMALE</b>		0	0	
		0	0	
		7	7	
	ANIMAL ID	7	8	
<b>4600 UG/KG</b>		9	0	
				<b>* TOTALS</b>
Urinary Bladder		+	+	<b>50</b>

\* .. 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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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked





































