

**TDMS No.** 20101 - 02  
**Test Type:** 26-39 WEEKS  
**Route:** DOSED FEED  
**Species/Strain:** MICE/P53(C57BL/6)

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

Senna (powdered)  
**CAS Number:** 8013-11-4

**Date Report Requested:** 03/11/2010  
**Time Report Requested:** 11:54:36  
**First Dose M/F:** 06/26/07 / 06/25/07  
**Lab:** BAT

F1\_Rev.1\_MD

**C Number:** C20101B  
**Lock Date:** 09/03/2008  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 2.2.0

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 Senna (powdered)  
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Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

P53+/- (C57BL/6) MICE MALE	DAY ON TEST																									* TOTALS
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0 ppm	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	
ANIMAL ID	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	
	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	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	
	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	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Gallbladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Intestine Large, Rectum	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	24
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Basophilic Focus								X															X			2
Inflammation, Chronic Active				1	1	1	1		1	1	1		1			1	1	1	1			1	1			15
Necrosis																										1
Tension Lipidosis																X										1
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25

\* .. 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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 1) Minimal 3) Moderate  
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 Lab: BAT

P53+/- (C57BL/6) MICE MALE	DAY ON TEST																				* TOTALS		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
0 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
ANIMAL ID	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	7	6	7	6	7	7	6	6	6	7	6	6	6	7	6	7	7	7	7	6	6	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	0	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	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	

Glands, Cyst 1 1 2 1.0

Tooth Malformation + 1 1 1.0

**CARDIOVASCULAR SYSTEM**

Blood Vessel + 25

Heart + 25  
 Valve, Pigmentation, Melanin X 1

**ENDOCRINE SYSTEM**

Adrenal Cortex + + + + + M + + + + + + + + + + + + + + + + 24  
 Hypertrophy 1 1 3 1.0  
 Subcapsular, Hyperplasia 2 1 1 1 4 1.3

Adrenal Medulla + + + + + M + + + + + + + + + + + + + + + + 24

Islets, Pancreatic + 25

Parathyroid Gland + + M + + M + M + M + + + M + + + + + + M M 18

Pituitary Gland + 25

Thyroid Gland + 25

**GENERAL BODY SYSTEM**

NONE

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 + .. Tissue examined microscopically M .. Missing tissue  
 X .. Lesion present A .. Autolysis precludes evaluation  
 I .. Insufficient tissue BLANK .. Not examined microscopically

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DAY ON TEST	P53+/- (C57BL/6) MICE MALE																									* TOTALS
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0 ppm	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	
ANIMAL ID	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	
	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	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	
	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	

**GENITAL SYSTEM**

Coagulating Gland																											2		
Epithelium, Hyperplasia																												2	1.5
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		
Epithelium, Karyomegaly	2		1						2		2	2	1		1	1			2	1	1		1	1		1	14	1.4	
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		
Duct, Ectasia													3		3	3				3							4	3.0	
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		
Infiltration Cellular, Mononuclear Cell																									1		1	1.0	
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		
Rete Testes, Cyst																											2	1	2.0

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	24		
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		
Lymphoid Follicle, Hyperplasia																											2	1	2.0

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P53+/- (C57BL/6) MICE MALE 0 ppm	DAY ON TEST																									* TOTALS	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
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		
Thymus	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	25	
<b>INTEGUMENTARY SYSTEM</b>																											
Mammary Gland	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	0	
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
<b>MUSCULOSKELETAL SYSTEM</b>																											
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
<b>NERVOUS SYSTEM</b>																											
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
<b>RESPIRATORY SYSTEM</b>																											
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
Inflammation								1		1																2	1.0
Glands, Respiratory Epithelium, Hyperplasia								1																		1	1.0
Respiratory Epithelium, Hyperplasia							1	1																		2	1.0
Septum, Hyalinization	3		3						3		3	3	3		3	2			3	3	3	3	3	2	3	15	2.9
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
<b>SPECIAL SENSES SYSTEM</b>																											
NONE																											

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		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	DAY ON TEST	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
<b>P53+/- (C57BL/6) MICE MALE</b>		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	6	7	6	7	7	6	6	6	6	7	6	6	6	7	6	7	7	7	7	6	6	6	7	
<b>0 ppm</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	
	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	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
		<b>* TOTALS</b>																								

**URINARY SYSTEM**

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		
Infiltration Cellular, Mononuclear Cell																											1	1	1.0
Nephropathy								1						1														7	1.0
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	

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DAY ON TEST	P53+/- (C57BL/6) MICE MALE																				* TOTALS			
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0		
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	3	7		
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	1		7
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	2	2	2	2	3	3	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	8	9	

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Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Gallbladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
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Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Basophilic Focus												X				X				X				3
Eosinophilic Focus						X																		1
Hematopoietic Cell Proliferation									1													1		2 1.0
Inflammation, Chronic Active				1		1	1		1	1	1	1	1	1	1	1	1		1	1		1		17 1.0
Necrosis																1								1 1.0
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25

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P53+/- (C57BL/6) MICE MALE 100 ppm	DAY ON TEST																								* TOTALS
	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6		
ANIMAL ID	0 0 2 6	0 0 2 7	0 0 2 8	0 0 2 9	0 0 3 0	0 0 3 1	0 0 3 2	0 0 3 3	0 0 3 4	0 0 3 5	0 0 3 6	0 0 3 7	0 0 3 8	0 0 3 9	0 0 4 0	0 0 4 1	0 0 4 2	0 0 4 3	0 0 4 4	0 0 4 5	0 0 4 6	0 0 4 7	0 0 4 8	0 0 4 9	0 0 5 0

Stomach, Glandular Glands, Cyst	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	2	1.0
---------------------------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----	---	-----

**CARDIOVASCULAR SYSTEM**

Blood Vessel Inflammation	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	1	3.0
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		

**ENDOCRINE SYSTEM**

Adrenal Cortex Hypertrophy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	1	1.0
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		
Parathyroid Gland	M	+	+	+	M	+	M	M	M	M	+	+	M	+	+	+	+	+	+	M	+	+	M	+	16			
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	24		
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		

**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



TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

P53+/- (C57BL/6) MICE MALE 100 ppm	DAY ON TEST																				* TOTALS										
	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6	0 2 7 6		0 2 7 6									
ANIMAL ID	0 0 0 2 6	0 0 0 2 7	0 0 0 2 8	0 0 0 2 9	0 0 0 3 0	0 0 0 3 1	0 0 0 3 2	0 0 0 3 3	0 0 0 3 4	0 0 0 3 5	0 0 0 3 6	0 0 0 3 7	0 0 0 3 8	0 0 0 3 9	0 0 0 4 0	0 0 0 4 1	0 0 0 4 2	0 0 0 4 3	0 0 0 4 4	0 0 0 4 5	0 0 0 4 6	0 0 0 4 7	0 0 0 4 8	0 0 0 4 9	0 0 0 5 0						
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25					
Penis																										+	1				
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25					
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25					
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25					
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25					
<b>HEMATOPOIETIC SYSTEM</b>																															
Bone Marrow Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25				
																											2	1	2.0		
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25				
Lymph Node, Mesenteric Atrophy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25				
																											3	2	3.5		
Spleen Hematopoietic Cell Proliferation	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25				
																												3	1	3.0	
Lymphoid Follicle, Atrophy																												2	2	1.5	
Lymphoid Follicle, Hyperplasia																												3	1	3.0	
Thymus Atrophy Cyst	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	24			
																													3	1	3.0
																														1	1

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
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TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
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 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

DAY ON TEST	P53+/- (C57BL/6) MICE MALE																								* TOTALS
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
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	
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	
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	
2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	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	

Medulla, Hyperplasia, Lymphoid

2 2

2 2.0

**INTEGUMENTARY SYSTEM**

Mammary Gland

M 0

Skin

+ 25

**MUSCULOSKELETAL SYSTEM**

Bone

+ 25

**NERVOUS SYSTEM**

Brain

+ 25

**RESPIRATORY SYSTEM**

Lung

+ 25

Nose

+ 25

Inflammation

1 1 1.0

Glands, Respiratory Epithelium, Hyperplasia

1 1 1 1 1 6 1.0

Septum, Hyalinization

2 1 2.0

Trachea

+ 25

**SPECIAL SENSES SYSTEM**

NONE

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

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| DAY ON TEST | P53+/- (C57BL/6) MICE MALE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |
|-------------|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|             | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 2           | 2                          | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |          |
| 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 |          |
| 6           | 6                          | 6 | 6 | 7 | 6 | 6 | 6 | 6 | 6 | 7 | 6 | 7 | 7 | 7 | 6 | 6 | 7 | 6 | 6 | 6 | 6 | 6 | 3 | 7 |          |
| ANIMAL ID   | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 0           | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 2           | 2                          | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 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 |          |

**URINARY SYSTEM**

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Kidney          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Mineralization  |   |   |   |   | 1 | 1 |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   | 4 1.0 |
| Nephropathy     |   | 1 |   | 1 | 1 | 1 |   |   | 1 |   |   |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   | 7 1.0 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |

\* .. 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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1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
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TDMS No. 20101 - 02  
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**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
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Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

|                            |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * TOTALS |
|----------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| DAY ON TEST                |  | 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 |   |          |
| P53+/- (C57BL/6) MICE MALE |  | 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 |   |          |
| 300 ppm                    |  | 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 |   |          |
| 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 |          |
|                            |  | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |   |          |
|                            |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 5 |   |          |

**ALIMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Gallbladder   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Intestine Large, Cecum                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Intestine Large, Colon                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Intestine Large, Rectum                             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Intestine Small, Duodenum                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Intestine Small, Ileum                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Intestine Small, Jejunum<br>Epithelium, Hyperplasia | + | + | + | + | + | 2 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Liver   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Basophilic Focus                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   | 2  |
| Inflammation, Chronic Active                        | 1 |   | 1 | 1 | 1 |   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |   |   |   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 19 |
| Mixed Cell Focus                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   | 1  |
| Pancreas  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Salivary Glands                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Stomach, Forestomach                                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Stomach, Glandular                                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |

\* .. 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

| P53+/- (C57BL/6) MICE MALE<br>300 ppm | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | * TOTALS |
|---------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
|                                       | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 |                  |                  |          |
| ANIMAL ID                             | 0<br>0<br>5<br>1 | 0<br>0<br>5<br>2 | 0<br>0<br>5<br>3 | 0<br>0<br>5<br>4 | 0<br>0<br>5<br>5 | 0<br>0<br>5<br>6 | 0<br>0<br>5<br>7 | 0<br>0<br>5<br>8 | 0<br>0<br>5<br>9 | 0<br>0<br>6<br>0 | 0<br>0<br>6<br>1 | 0<br>0<br>6<br>2 | 0<br>0<br>6<br>3 | 0<br>0<br>6<br>4 | 0<br>0<br>6<br>5 | 0<br>0<br>6<br>6 | 0<br>0<br>6<br>7 | 0<br>0<br>6<br>8 | 0<br>0<br>6<br>9 | 0<br>0<br>7<br>0 | 0<br>0<br>7<br>1 | 0<br>0<br>7<br>2 | 0<br>0<br>7<br>3 | 0<br>0<br>7<br>4 | 0<br>0<br>7<br>5 |          |
| Mineralization                        | 1                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 1 1.0    |
| Glands, Cyst                          | 1                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 2 1.0    |

**CARDIOVASCULAR SYSTEM**

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Heart        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |

**ENDOCRINE SYSTEM**

|                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Adrenal Cortex Hypertrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
|                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   | 1 | 2 1.0 |
| Adrenal Medulla            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Islets, Pancreatic         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Parathyroid Gland          | + | M | + | + | + | M | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | M | 21    |
| Pituitary Gland            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Thyroid Gland              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

|                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |
|-------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|
| Coagulating 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  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE MALE<br>300 ppm   | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |             | * TOTALS |  |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------|----------|--|
|   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0           |          |  |
| 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           |          |  |
|   | 5           | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7           |          |  |
|   | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5           |          |  |
| Epithelium, Hyperplasia                 |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1           |          |  |
|   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 1.0       |          |  |
| Epididymis                              | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |          |  |
| Preputial Gland                         | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |          |  |
| Prostate                                | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |          |  |
| Infiltration Cellular, Mononuclear Cell |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   | 1 2 1.0     |          |  |
| Seminal Vesicle                         | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |          |  |
| Testes                                  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |          |  |
| Germinal Epithelium, Degeneration       |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 1 1.0     |          |  |
| <b>HEMATOPOIETIC SYSTEM</b>             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |             |          |  |
| Bone Marrow                             | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |          |  |
| Lymph Node, Mandibular                  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |          |  |
| Hyperplasia, Lymphoid                   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 1 2.0     |          |  |
| Lymph Node, Mesenteric                  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |          |  |
| Spleen                                  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |          |  |
| Hematopoietic Cell Proliferation        |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 1 2.0     |          |  |
| Thymus                                  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |          |  |
| Cyst                                    |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X 1         |          |  |
| Medulla, Hyperplasia, Lymphoid          |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 1 2 3 1.3 |          |  |
| <b>INTEGUMENTARY SYSTEM</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  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| DAY ON TEST | P53+/- (C57BL/6) MICE MALE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |
|-------------|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|             | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 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        |
| 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 |          |
| 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 | 25       |
| 0           | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 0           | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25       |
| 5           | 5                          | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
| 1           | 2                          | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 25       |
|             |                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |

|               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 0  |
| Skin          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |

**MUSCULOSKELETAL SYSTEM**

|      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

**NERVOUS SYSTEM**

|       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

**RESPIRATORY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Lung  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Nose  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Inflammation                                |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   | 2 1.0 |
| Glands, Olfactory Epithelium, Hyperplasia   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 1.0 |
| Glands, Respiratory Epithelium, Hyperplasia |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   | 2 1.0 |
| Respiratory Epithelium, Hyperplasia         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   | 1 1.0 |
| Trachea                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |

**SPECIAL SENSES SYSTEM**

|      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| NONE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

**URINARY SYSTEM**

|        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

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

TDMS No. 20101 - 02

Test Type: 26-39 WEEKS

Route: DOSED FEED

Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Senna (powdered)

CAS Number: 8013-11-4

Date Report Requested: 03/11/2010

Time Report Requested: 11:54:36

First Dose M/F: 06/26/07 / 06/25/07

Lab: BAT

| DAY ON TEST     | P53+/--(C57BL/6) MICE MALE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |
|-----------------|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|                 | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 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 |          |
| 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 |          |
| 6               | 6                          | 7 | 6 | 6 | 7 | 6 | 6 | 7 | 6 | 7 | 6 | 7 | 6 | 6 | 6 | 6 | 7 | 6 | 7 | 6 | 6 | 6 | 7 | 6 | 6 |          |
| 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 |          |
| 5               | 5                          | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
| 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 |          |
| Mineralization  |                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1        |
| Nephropathy     |                            |   |   | 1 | 1 | 1 |   | 1 |   |   | 1 | 1 |   |   |   |   | 1 |   |   |   |   |   |   |   |   | 7        |
| Urinary Bladder | +                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25       |

\* .. 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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2) Mild 4) Marked



TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE MALE<br>1000 ppm | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | * TOTALS |                  |        |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|------------------|--------|
|  | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>7 | 0<br>2<br>7<br>7 | 0<br>2<br>7<br>7 | 0<br>2<br>7<br>7 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>7 | 0<br>2<br>7<br>7 | 0<br>2<br>7<br>7 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>7 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>7 | 0<br>2<br>7<br>7 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>7 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>7 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>7 | 0<br>2<br>7<br>6 |          | 0<br>2<br>7<br>7 |        |
| ANIMAL ID                              | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0        | 0                |        |
|  | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0        | 0                | 0      |
|  | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0        | 0                | 0      |
|  | 7<br>6           | 7<br>7           | 7<br>7           | 7<br>7           | 8<br>8           | 8<br>1           | 8<br>2           | 8<br>3           | 8<br>4           | 8<br>5           | 8<br>6           | 8<br>7           | 8<br>8           | 8<br>9           | 9<br>0           | 9<br>1           | 9<br>2           | 9<br>3           | 9<br>4           | 9<br>5           | 9<br>6           | 9<br>7   | 9<br>8           | 9<br>9 |

**ALIMENTARY SYSTEM**

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Esophagus                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Gallbladder                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Intestine Large, Cecum       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Intestine Large, Colon       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Intestine Large, Rectum      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Intestine Small, Duodenum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Intestine Small, Ileum       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Intestine Small, Jejunum     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Liver                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Clear Cell Focus             |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1      |
| Degeneration, Cystic         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   | 1 2.0  |
| Fibrosis                     |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 1.0  |
| Inflammation, Chronic Active | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 22 1.0 |
| Mixed Cell Focus             |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1      |
| Necrosis                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   | 1 1.0  |
| Pancreas                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Salivary Glands              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Stomach, Forestomach         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |

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 I .. Insufficient tissue  
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 2) Mild 4) Marked

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE MALE<br>1000 ppm | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS              |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|  | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      |                       | 0<br>2<br>7<br>6      |                       |                       |                       |
| ANIMAL ID                              | 0<br>0<br>0<br>7<br>6 | 0<br>0<br>0<br>7<br>7 | 0<br>0<br>0<br>7<br>8 | 0<br>0<br>0<br>7<br>8 | 0<br>0<br>0<br>8<br>1 | 0<br>0<br>0<br>8<br>2 | 0<br>0<br>0<br>8<br>3 | 0<br>0<br>0<br>8<br>4 | 0<br>0<br>0<br>8<br>5 | 0<br>0<br>0<br>8<br>6 | 0<br>0<br>0<br>8<br>7 | 0<br>0<br>0<br>8<br>8 | 0<br>0<br>0<br>8<br>8 | 0<br>0<br>0<br>8<br>9 | 0<br>0<br>0<br>9<br>0 | 0<br>0<br>0<br>9<br>1 | 0<br>0<br>0<br>9<br>2 | 0<br>0<br>0<br>9<br>3 | 0<br>0<br>0<br>9<br>4 | 0<br>0<br>0<br>9<br>5 | 0<br>0<br>0<br>9<br>6 | 0<br>0<br>0<br>9<br>7 | 0<br>0<br>0<br>9<br>8 | 0<br>0<br>0<br>9<br>9 | 0<br>0<br>0<br>9<br>0 |

Inflammation Epithelium, Hyperplasia 1 1 1.0  
 1 1.0

Stomach, Glandular Mineralization + 25 1 1.0

**CARDIOVASCULAR SYSTEM**

Blood Vessel + 25

Heart + 25

**ENDOCRINE SYSTEM**

Adrenal Cortex Atrophy Hypertrophy + 25 1 2.0  
 2 1 1.0

Adrenal Medulla + 25

Islets, Pancreatic + 25

Parathyroid Gland M + + M + + + + + + + + + + M + + + + + M + M 20

Pituitary Gland + 25

Thyroid Gland + 25

**GENERAL BODY SYSTEM**

NONE

\* .. 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

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE MALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |
|----------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|                            | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 1000 ppm                   | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |          |
| ANIMAL ID                  | 7           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
|                            | 6           | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 6 | 7 | 6 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
|                            | 7           | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |          |
|                            | 6           | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |          |

**GENITAL SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Epididymis                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Preputial Gland                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Prostate                                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Infiltration Cellular, Mononuclear Cell |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 1.0 |
| Seminal Vesicle                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Testes                                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |

**HEMATOPOIETIC SYSTEM**

|                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Bone Marrow                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Lymph Node, Mandibular         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Atrophy                        |   | 4 |   |   |   |   | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   | 3 2.7 |
| Hyperplasia, Lymphoid          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   | 3 |   |   |   |   |   |   | 2 2.5 |
| Lymph Node, Mesenteric         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Hyperplasia, Lymphoid          |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 2.0 |
| Spleen                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Thymus                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Atrophy                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 | 1 |   |   |   |   |   |   |   |   | 2 1.5 |
| Epithelial Cell, Hyperplasia   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   | 1 1.0 |
| Medulla, Hyperplasia, Lymphoid |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   | 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  
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TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| DAY ON TEST | P53+/- (C57BL/6) MICE MALE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |
|-------------|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|             | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 2           | 2                          | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |          |
| 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 |          |
| 6           | 7                          | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 6 | 7 | 7 | 6 | 7 |          |
| ANIMAL ID   | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 0           | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 0           | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
|             | 7                          | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |          |
|             | 6                          | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |          |
|             | 6                          | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |          |

**INTEGUMENTARY SYSTEM**

|               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 0  |
| Skin          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |

**MUSCULOSKELETAL SYSTEM**

|      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

**NERVOUS SYSTEM**

|       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

**RESPIRATORY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Lung  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Nose  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Glands, Respiratory Epithelium, Hyperplasia |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   | 2 1.0 |
| Respiratory Epithelium, Hyperplasia         | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   | 2 1.0 |
| Trachea                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

|        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

\* .. 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. 20101 - 02  
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 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| DAY ON TEST     | P53+/--(C57BL/6) MICE MALE |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |
|-----------------|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
|                 | 02                         | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    | 02    |          |
| 1000 ppm        | 006                        | 007   | 007   | 007   | 007   | 006   | 007   | 007   | 007   | 007   | 007   | 007   | 006   | 006   | 007   | 007   | 006   | 007   | 007   | 006   | 007   | 007   | 006   | 007   |          |
| ANIMAL ID       | 00076                      | 00077 | 00078 | 00079 | 00080 | 00081 | 00082 | 00083 | 00084 | 00085 | 00086 | 00087 | 00088 | 00089 | 00090 | 00091 | 00092 | 00093 | 00094 | 00095 | 00096 | 00097 | 00098 | 00099 |          |
| Nephropathy     | 1                          |       |       | 1     |       | 1     | 1     | 1     |       |       | 1     |       |       |       |       |       |       |       | 1     |       |       |       |       |       | 7 1.0    |
| Urinary Bladder | +                          | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | 25       |

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 Lab: BAT

| P53+/- (C57BL/6) MICE MALE | DAY ON TEST |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | * TOTALS |
|----------------------------|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------|
|                            | 02          | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 |          |
| 3000 ppm                   | 00          | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |          |
| ANIMAL ID                  | 01          | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |          |
|                            | 11          | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 |          |

**ALIMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Esophagus                                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Gallbladder                                     | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 24    |
| Intestine Large, Cecum                          | + | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 23    |
| Intestine Large, Colon Epithelium, Hyperplasia  | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 24    |
|   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 | 3 1.3 |
| Intestine Large, Rectum                         | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 24    |
| Intestine Small, Duodenum Ectopic Tissue        | + | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 23    |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 1     |
| Intestine Small, Ileum                          | + | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 23    |
| Intestine Small, Jejunum                        | + | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | 23    |
| Liver   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Eosinophilic Focus Inflammation, Chronic Active |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 1     |
| Mixed Cell Focus                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1     |
| Necrosis  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1     |
| Kupffer Cell, Hyperplasia, Multifocal           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1     |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2     |
| Pancreas  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Salivary Glands                                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |

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 2) Mild 4) Marked

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| DAY ON TEST                                  | P53+/(C57BL/6) MICE MALE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |     |       |
|--|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|-----|-------|
|  | 0                        | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |     |       |
| 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 | 25       |     |       |
| 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 |          |     |       |
| 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 | 25       |     |       |
| 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 |          |     |       |
| 3000 ppm                                     | 0                        | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25       |     |       |
| 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 |          |     |       |
|  | 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 | 25       |     |       |
|  | 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 | 1        | 1.0 |       |
| <b>STOMACH</b>                               |                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     |       |
| Stomach, Forestomach                         | +                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25  |       |
| Stomach, Glandular Glands, Cyst              | +                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25  |       |
|  |                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     | 1 1.0 |
| <b>CARDIOVASCULAR SYSTEM</b>                 |                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     |       |
| Blood Vessel                                 | +                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25  |       |
| Heart Mineralization                         | +                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25  |       |
|  |                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     | 1 1.0 |
| <b>ENDOCRINE SYSTEM</b>                      |                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     |       |
| Adrenal Cortex Embolus Bacterial Hypertrophy | +                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25  |       |
|  |                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     | 1 1.0 |
|  |                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     | 1     |
| Adrenal Medulla                              | +                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25  |       |
| Islets, Pancreatic                           | +                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25  |       |
| Parathyroid Gland                            | +                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25  |       |
| Pituitary Gland                              | +                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25  |       |
| Thyroid Gland                                | +                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25  |       |
| <b>GENERAL BODY SYSTEM</b>                   |                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     |       |
| NONE   |                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     |       |

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

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE MALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |  |
|----------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|--|
|                            | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |  |
| 3000 ppm                   | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |          |  |
| ANIMAL ID                  | 7           | 7 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 6 | 6 | 6 | 7 | 7 | 7 | 6 | 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 |          |  |
|                            | 1           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |          |  |
|                            | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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        |  |

**GENITAL SYSTEM**

|                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |     |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|-----|
| Epididymis              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |   |     |
| Epithelium, Karyomegaly |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 | 1.0 |
| Preputial Gland         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |   |     |
| Hyperplasia             |   |   |   |   |   |   |   |   |   |   |   |   | 4 |   |   |   |   |   |   |   |   |   |   |   |    | 1 | 4.0 |
| Prostate                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |   |     |
| Inflammation            |   |   |   |   |   |   |   |   |   |   |   |   | 4 |   |   |   |   |   |   |   |   |   |   |   |    | 1 | 4.0 |
| Seminal Vesicle         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |   |     |
| Testes                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |   |     |

**HEMATOPOIETIC SYSTEM**

|                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |     |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|-----|
| Bone Marrow                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |   |     |
| Lymph Node, Mandibular         | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | 24 |   |     |
| Atrophy                        |   |   |   |   |   |   |   |   |   |   |   |   |   | 3 |   |   |   |   |   |   |   |   | 2 |   |    | 2 | 2.5 |
| Lymph Node, Mesenteric         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |   |     |
| Spleen                         | + | + | A | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | 23 |   |     |
| Thymus                         | + | + | A | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | 23 |   |     |
| Cortex, Hyperplasia, Lymphoid  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |    | 1 | 2.0 |
| Medulla, Hyperplasia, Lymphoid |   |   |   |   |   |   |   | 1 | 1 |   |   |   |   | 1 |   |   |   |   |   |   |   |   | 1 |   |    | 4 | 1.0 |

**INTEGUMENTARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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| DAY ON TEST                                 | P53+/- (C57BL/6) MICE MALE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |     |
|---|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|-----|
|   | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |     |
| 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        |     |
| 7   | 7                          | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |     |
| 7   | 6                          | 6 | 6 | 7 | 6 | 6 | 7 | 6 | 7 | 6 | 7 | 6 | 6 | 7 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 25       |     |
| 0   | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |     |
| 0   | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |     |
| 1   | 1                          | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |          |     |
| 0   | 0                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 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 |   |          |     |
| Mammary Gland                               | M                          | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 0        |     |
| Skin  | +                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25       |     |
| <b>MUSCULOSKELETAL SYSTEM</b>               |                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     |
| Bone  | +                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25       |     |
| <b>NERVOUS SYSTEM</b>                       |                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     |
| Brain                                       | +                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25       |     |
| <b>RESPIRATORY SYSTEM</b>                   |                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     |
| Lung  | +                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25       |     |
| Thrombosis                                  |                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1        | 1.0 |
| Nose  | +                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25       |     |
| Inflammation                                |                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1        | 1.0 |
| Glands, Respiratory Epithelium, Hyperplasia |                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3        | 1.0 |
| Respiratory Epithelium, Cyst                |                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1        | 1.0 |
| Septum, Hyalinization                       |                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2        | 2.0 |
| Trachea                                     | +                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25       |     |
| <b>SPECIAL SENSES SYSTEM</b>                |                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     |
| Harderian Gland                             |                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1        |     |
| <b>URINARY SYSTEM</b>                       |                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |     |

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
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 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/--(C57BL/6) MICE MALE<br>3000 ppm | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS              |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|  | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>6<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      |                       |                       |
| ANIMAL ID                              | 0<br>0<br>1<br>0<br>1 | 0<br>0<br>1<br>0<br>2 | 0<br>0<br>1<br>0<br>3 | 0<br>0<br>1<br>0<br>4 | 0<br>0<br>1<br>0<br>5 | 0<br>0<br>1<br>0<br>6 | 0<br>0<br>1<br>0<br>7 | 0<br>0<br>1<br>0<br>8 | 0<br>0<br>1<br>0<br>9 | 0<br>0<br>1<br>0<br>0 | 0<br>0<br>1<br>0<br>1 | 0<br>0<br>1<br>0<br>2 | 0<br>0<br>1<br>0<br>3 | 0<br>0<br>1<br>0<br>4 | 0<br>0<br>1<br>0<br>5 | 0<br>0<br>1<br>0<br>6 | 0<br>0<br>1<br>0<br>7 | 0<br>0<br>1<br>0<br>8 | 0<br>0<br>1<br>0<br>9 | 0<br>0<br>1<br>0<br>0 | 0<br>0<br>1<br>0<br>1 | 0<br>0<br>1<br>0<br>2 | 0<br>0<br>1<br>0<br>3 | 0<br>0<br>1<br>0<br>4 | 0<br>0<br>1<br>0<br>5 |
| Kidney                                 | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |
| Inflammation                           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 3                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1 3.0                 |
| Mineralization                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1 1.0                 |
| Necrosis                               |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 3                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1 3.0                 |
| Nephropathy                            |                       |                       |                       |                       |                       | 1                     |                       | 1                     | 1                     |                       |                       |                       | 1                     | 1                     | 1                     |                       |                       |                       | 1                     | 1                     |                       | 1                     |                       |                       | 9 1.0                 |
| Cortex, Cyst                           |                       |                       |                       |                       | 1                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1 1.0                 |
| Urinary Bladder                        | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |
| Inflammation                           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 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

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE MALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |
|----------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|                            | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 10,000 ppm                 | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |          |
| ANIMAL ID                  | 7           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
|                            | 6           | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |          |

**ALIMENTARY SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        |       |        |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|-------|--------|
| Esophagus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |       |        |
| Gallbladder  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |       |        |
| Intestine Large, Cecum<br>Epithelium, Hyperplasia  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |       |        |
|  | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 |   |   |   | 1 | 1 | 1 | 2 | 1 |   | 2 | 1 | 1      | 1     | 22 1.4 |
| Intestine Large, Colon<br>Epithelium, Hyperplasia  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |       |        |
|  | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2      | 2     | 25 2.8 |
| Intestine Large, Rectum<br>Epithelium, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |       |        |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        | 1 2.0 |        |
| Intestine Small, Duodenum                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |       |        |
| Intestine Small, Ileum                             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |       |        |
| Intestine Small, Jejunum                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | +      | 24    |        |
| Liver<br>Basophilic Focus                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |       |        |
| Inflammation, Chronic Active<br>Necrosis           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   | X |   | X |   | X | 4      |       |        |
|  |   |   | 1 |   | 1 | 1 | 1 |   |   |   | 1 | 1 | 1 |   |   |   |   |   | 1 | 1 | 1 |   |   |   | 10 1.0 |       |        |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 | 1 2.0  |       |        |
| Pancreas   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |       |        |
| Salivary Glands                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |       |        |

\* .. 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. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE MALE<br>10,000 ppm | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
|  | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>2      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      |                       |          |
| ANIMAL ID                                | 0<br>0<br>1<br>2<br>6 | 0<br>0<br>1<br>2<br>7 | 0<br>0<br>1<br>2<br>8 | 0<br>0<br>1<br>2<br>9 | 0<br>0<br>1<br>3<br>0 | 0<br>0<br>1<br>3<br>1 | 0<br>0<br>1<br>3<br>2 | 0<br>0<br>1<br>3<br>3 | 0<br>0<br>1<br>3<br>4 | 0<br>0<br>1<br>3<br>5 | 0<br>0<br>1<br>3<br>6 | 0<br>0<br>1<br>3<br>7 | 0<br>0<br>1<br>3<br>8 | 0<br>0<br>1<br>3<br>9 | 0<br>0<br>1<br>4<br>0 | 0<br>0<br>1<br>4<br>1 | 0<br>0<br>1<br>4<br>2 | 0<br>0<br>1<br>4<br>3 | 0<br>0<br>1<br>4<br>4 | 0<br>0<br>1<br>4<br>5 | 0<br>0<br>1<br>4<br>6 | 0<br>0<br>1<br>4<br>7 | 0<br>0<br>1<br>4<br>8 | 0<br>0<br>1<br>4<br>9 |          |
| Stomach, Forestomach                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |          |
| Stomach, Glandular                       | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |          |
| <b>CARDIOVASCULAR SYSTEM</b>             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Blood Vessel                             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |          |
| Heart                                    | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |          |
| <b>ENDOCRINE SYSTEM</b>                  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Adrenal Cortex                           | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |          |
| Hypertrophy                              |                       |                       | 1                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     | 2                     |                       |                       |                       |                       | 2                     |                       |                       |                       | 4 1.5                 |          |
| Subcapsular, Hyperplasia                 |                       |                       | 1                     |                       | 1                     | 1                     | 1                     |                       |                       |                       |                       | 1                     | 1                     | 2                     |                       |                       |                       |                       | 1                     |                       |                       |                       |                       | 8 1.1                 |          |
| Adrenal Medulla                          | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |          |
| Islets, Pancreatic                       | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |          |
| Parathyroid Gland                        | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | M                     | +                     | M                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | M 22                  |                       |          |
| Pituitary Gland                          | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | I                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 24                    |          |
| Thyroid Gland                            | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |          |
| <b>GENERAL BODY SYSTEM</b>               |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| NONE                                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| <b>GENITAL SYSTEM</b>                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |

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 + .. Tissue examined microscopically  
 X .. Lesion present  
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TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

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

Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE MALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |
|----------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|                            | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 10,000 ppm                 | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |          |
| ANIMAL ID                  | 7           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
|                            | 6           | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |          |

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |     |     |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Coagulating Gland<br>Epithelium, Hyperplasia |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3  | 3   | 1.7 |
| Epididymis<br>Inflammation                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 | 1   | 2.0 |
| Epithelium, Karyomegaly                      | 1 |   | 1 |   |   | 2 | 1 | 1 |   |   |   |   | 1 | 1 |   | 1 | 2 |   |   | 1 | 1 | 1 | 1 | 1 | 14 | 1.1 |     |
| Preputial Gland<br>Ectasia                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | I | + | + | + | + | 23 | 1   | 2.0 |
| Duct, Ectasia                                |   |   | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4 | 2  | 4.0 |     |
| Prostate<br>Inflammation                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 | 1   | 1.0 |
| Seminal Vesicle                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |     |
| Testes                                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |     |

**HEMATOPOIETIC SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |     |     |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Bone Marrow<br>Hyperplasia                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 | 1   | 4.0 |
| Lymph Node, Mandibular                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |     |
| Lymph Node, Mesenteric                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |     |
| Spleen<br>Infiltration Cellular, Plasma Cell | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 | 1   | 2.0 |
| Lymphoid Follicle, Atrophy                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3 | 1  | 3.0 |     |

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TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE MALE<br>10,000 ppm                       | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS              |        |  |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------|--|
|  | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>7      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      |                       |        |  |
| ANIMAL ID  | 0<br>0<br>1<br>2<br>6 | 0<br>0<br>1<br>2<br>7 | 0<br>0<br>1<br>2<br>8 | 0<br>0<br>1<br>2<br>9 | 0<br>0<br>1<br>3<br>0 | 0<br>0<br>1<br>3<br>1 | 0<br>0<br>1<br>3<br>2 | 0<br>0<br>1<br>3<br>3 | 0<br>0<br>1<br>3<br>4 | 0<br>0<br>1<br>3<br>5 | 0<br>0<br>1<br>3<br>6 | 0<br>0<br>1<br>3<br>7 | 0<br>0<br>1<br>3<br>8 | 0<br>0<br>1<br>3<br>9 | 0<br>0<br>1<br>4<br>0 | 0<br>0<br>1<br>4<br>1 | 0<br>0<br>1<br>4<br>2 | 0<br>0<br>1<br>4<br>3 | 0<br>0<br>1<br>4<br>4 | 0<br>0<br>1<br>4<br>5 | 0<br>0<br>1<br>4<br>6 | 0<br>0<br>1<br>4<br>7 | 0<br>0<br>1<br>4<br>8 | 0<br>0<br>1<br>4<br>9 | 0<br>0<br>1<br>5<br>0 |        |  |
| Lymphoid Follicle, Hyperplasia                                 |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     | 1 1.0  |  |
| Thymus Atrophy   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    | 1 4.0  |  |
| <b>INTEGUMENTARY SYSTEM</b>                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |        |  |
| Mammary Gland  | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | 0                     |        |  |
| Skin   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |        |  |
| <b>MUSCULOSKELETAL SYSTEM</b>                                  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |        |  |
| Bone Hyperostosis  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    | 1 2.0  |  |
| <b>NERVOUS SYSTEM</b>  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |        |  |
| Brain  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |        |  |
| <b>RESPIRATORY SYSTEM</b>                                      |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |        |  |
| Lung Alveolar Epithelium, Hyperplasia                          | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    | 1 4.0  |  |
| Nose Respiratory Epithelium, Hyperplasia Septum, Hyalinization | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    | 1 1.0  |  |
| Trachea  | 3                     |                       | 2                     |                       | 2                     | 2                     | 3                     |                       |                       |                       |                       | 3                     | 3                     | 3                     | 3                     | 2                     | 3                     |                       |                       |                       | 1                     | 2                     | 3                     | 3                     | 3                     | 16 2.6 |  |

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

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

|                                   |                   | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |                 |
|-----------------------------------|-------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| DAY ON TEST                       |                   | 2         | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |   |                 |
| <b>P53+/- (C57BL/6) MICE MALE</b> |                   | 7         | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |   |                 |
|                                   |                   | 7         | 6 | 7 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 6 | 7 | 6 | 2 | 6 | 6 | 6 | 7 |   |                 |
|                                   | <b>10,000 ppm</b> | 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 | <b>* TOTALS</b> |
|                                   |                   | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |                 |
|                                   |                   | 1         | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |   |                 |
|                                   |                   | 2         | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 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 |                 |

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |            |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|------------|
| Kidney            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>25</b> |            |
| Inflammation      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4 |   |   |   |   |   | <b>1</b>  | <b>4.0</b> |
| Nephropathy       |   | 1 |   |   |   |   | 1 |   |   | 1 |   | 1 |   | 1 | 1 |   |   | 1 |   |   |   | 1 |   |   | <b>8</b>  | <b>1.0</b> |
| Papilla, Necrosis |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4 |   |   |   |   |   | <b>1</b>  | <b>4.0</b> |
| Urinary Bladder   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>25</b> |            |
| Inflammation      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   | <b>1</b>  | <b>2.0</b> |

\*\*\* 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

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |  |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|--|
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |  |
| 0 ppm                        | 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 |          |  |
| ANIMAL ID                    | 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        |  |
|                              | 5           | 5 | 5 | 6 | 6 | 6 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 5 | 6 | 6 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 7 | 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 | 0        |  |
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |  |
|                              | 1           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1        |  |
|                              | 5           | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7        |  |
|                              | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |          |  |

**ALIMENTARY SYSTEM**

|                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |        |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--------|
| Esophagus                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Gallbladder                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Intestine Large, Cecum           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Intestine Large, Colon           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Intestine Large, Rectum          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Intestine Small, Duodenum        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Intestine Small, Ileum           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Intestine Small, Jejunum         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Liver                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Hematopoietic Cell Proliferation |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |    | 1 1.0  |
| Inflammation, Chronic Active     |   |   |   | 1 |   | 1 |   | 1 | 1 | 1 | 1 | 1 |   |   |   |   |   | 1 |   |   |   | 1 | 1 | 1 | 1 |   |    | 13 1.0 |
| Mixed Cell Focus                 |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1      |
| Necrosis, Focal                  |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 1.0  |
| Pancreas                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Salivary Glands                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Hyperplasia, Lymphoid            |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 1.0  |
| Stomach, Forestomach             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |

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 + .. Tissue examined microscopically  
 X .. Lesion present  
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1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
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TDMS No. 20101 - 02

Test Type: 26-39 WEEKS

Route: DOSED FEED

Species/Strain: MICE/P53(C57BL/6)

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

Senna (powdered)

CAS Number: 8013-11-4

Date Report Requested: 03/11/2010

Time Report Requested: 11:54:36

First Dose M/F: 06/26/07 / 06/25/07

Lab: BAT

| DAY ON TEST<br>P53+/(C57BL/6) MICE FEMALE<br>0 ppm | ANIMAL ID        |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |    | * TOTALS     |  |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----|--------------|--|
|  | 0<br>2<br>7<br>5 | 0<br>2<br>7<br>5 | 0<br>2<br>7<br>5 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>5 | 0<br>2<br>7<br>5 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>5 | 0<br>2<br>7<br>5 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>5 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>5 | 0<br>2<br>7<br>5 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 | 0<br>2<br>7<br>6 |    |              |  |
| Stomach, Glandular<br>Glands, Cyst                 | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +  | 25<br>1      |  |
| <b>CARDIOVASCULAR SYSTEM</b>                       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |    |              |  |
| Blood Vessel                                       | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +  | 25           |  |
| Heart  | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +  | 25           |  |
| <b>ENDOCRINE SYSTEM</b>                            |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |    |              |  |
| Adrenal Cortex<br>Subcapsular, Hyperplasia         | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +  | 25<br>16 1.3 |  |
| Adrenal Medulla                                    | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +  | 25           |  |
| Islets, Pancreatic                                 | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +  | 25           |  |
| Parathyroid Gland                                  | M                | +                | M                | +                | M                | +                | +                | M                | M                | +                | +                | +                | +                | +                | +                | +                | +                | +                | M                | +                | +                | +                | +                | +                | 19 |              |  |
| Pituitary Gland                                    | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +  | 25           |  |
| Thyroid Gland                                      | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +  | 25           |  |
| <b>GENERAL BODY SYSTEM</b>                         |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |    |              |  |
| Peritoneum   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |    | 1            |  |
| <b>GENITAL SYSTEM</b>                              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |    |              |  |
| Clitoral Gland                                     | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | I                | +                | +                | +                | +  | 24           |  |

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X .. Lesion present  
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TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
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 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE<br>0 ppm | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS              |                       |                       |                       |                       |  |
|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|
|                                       | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      |                       |                       |                       |                       |                       |  |
| ANIMAL ID                             | 0<br>0<br>1<br>5<br>1 | 0<br>0<br>1<br>5<br>2 | 0<br>0<br>1<br>5<br>3 | 0<br>0<br>1<br>5<br>4 | 0<br>0<br>1<br>5<br>5 | 0<br>0<br>1<br>5<br>6 | 0<br>0<br>1<br>5<br>7 | 0<br>0<br>1<br>5<br>8 | 0<br>0<br>1<br>5<br>9 | 0<br>0<br>1<br>6<br>0 | 0<br>0<br>1<br>6<br>1 | 0<br>0<br>1<br>6<br>2 | 0<br>0<br>1<br>6<br>3 | 0<br>0<br>1<br>6<br>4 | 0<br>0<br>1<br>6<br>5 | 0<br>0<br>1<br>6<br>6 | 0<br>0<br>1<br>6<br>7 | 0<br>0<br>1<br>6<br>8 | 0<br>0<br>1<br>6<br>9 | 0<br>0<br>1<br>7<br>0 | 0<br>0<br>1<br>7<br>1 | 0<br>0<br>1<br>7<br>2 | 0<br>0<br>1<br>7<br>3 | 0<br>0<br>1<br>7<br>4 | 0<br>0<br>1<br>7<br>5 |  |
| Ovary                                 | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |  |
| Atrophy                               |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2                     |                       |                       |                       |                       |                       |                       |                       |                       | 2                     |                       |                       |                       |                       |                       | 3                     |  |
| Cyst                                  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |  |
| Uterus                                | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |  |
| Endometrium, Hyperplasia, Cystic      | 1                     |                       | 1                     | 1                     |                       |                       | 1                     |                       | 1                     |                       |                       | 1                     | 1                     | 1                     | 1                     |                       | 1                     | 1                     | 1                     |                       | 1                     |                       | 1                     | 1                     | 15                    |  |
| <b>HEMATOPOIETIC SYSTEM</b>           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |  |
| Bone Marrow                           | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |  |
| Hyperplasia                           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |  |
| Lymph Node                            |                       |                       |                       | +                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2                     |  |
| Lymph Node, Mandibular                | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |  |
| Hyperplasia, Lymphoid                 |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |  |
| Lymph Node, Mesenteric                | +                     | +                     | I                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | I                     | 23                    |  |
| Atrophy                               |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |  |
| Spleen                                | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |  |
| Hematopoietic Cell Proliferation      |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |  |
| Lymphoid Follicle, Atrophy            |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |  |
| Thymus                                | +                     | +                     | +                     | +                     | +                     | +                     | +                     | I                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 24                    |  |
| Atrophy                               |                       |                       |                       |                       |                       |                       | 3                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 3                     |  |
| Hyperplasia, Lymphoid                 |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |  |
| Medulla, Hyperplasia, Lymphoid        |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 4                     |  |

**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

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/(C57BL/6) MICE FEMALE<br>0 ppm                                  | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |    |       |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|----|-------|
|  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          | 0  |       |
|  | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |          | 2  |       |
| ANIMAL ID  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |    |       |
| Mammary Gland<br>Duct, Ectasia                                       | 7           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7        | 25 |       |
| 5  | 5           | 5 | 6 | 6 | 6 | 6 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 5 | 6 | 6 | 5 | 6 | 5 | 6 | 6 | 6        | 2  | 1 2.0 |
| Skin   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        | 25 |       |
| 1  | 1           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1        |    |       |
| 5  | 5           | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7        |    |       |
| 1  | 2           | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3        |    |       |
| <b>MUSCULOSKELETAL SYSTEM</b>  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |    |       |
| Bone<br>Callus   | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25 |       |
|  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |          | X  | 1     |
| <b>NERVOUS SYSTEM</b>  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |    |       |
| Brain  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25 |       |
| Peripheral Nerve<br>Degeneration                                     |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 1  |       |
|  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 3  | 1 3.0 |
| Spinal Cord<br>Nerve, Degeneration                                   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 1  |       |
|  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 3  | 1 3.0 |
| <b>RESPIRATORY SYSTEM</b>  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |    |       |
| Lung<br>Alveolar Epithelium, Hyperplasia                             | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25 |       |
|  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 1  | 1 1.0 |
| Nose<br>Inflammation   | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +        | 25 |       |
|  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 1  | 1 1.0 |
| Glands, Respiratory Epithelium, Hyperplasia<br>Septum, Hyalinization |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |    | 1 1.0 |
|  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 1  | 1 1.0 |
|  | 1           | 2 | 2 | 1 |   | 2 | 2 |   | 2 | 1 | 1 |   | 2 | 1 |   | 2 | 1 | 1 |   | 2 | 2 |          | 17 | 1.6   |

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

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TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |  |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|--|
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |  |
| 0 ppm                        | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |          |  |
| ANIMAL ID                    | 7           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |  |
|                              | 5           | 5 | 5 | 6 | 6 | 6 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 5 | 7 | 6 | 5 | 6 | 6 | 5 | 5 | 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           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |  |
|                              | 1           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |          |  |
|                              | 5           | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 |   |          |  |
|                              | 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        |  |

Trachea + 25

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Kidney          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Mineralization  |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 1.0 |
| Nephropathy     |   |   |   |   |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   | 3 1.0 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |

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| P53+/- (C57BL/6) MICE FEMALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 100 ppm                      | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |          |
| ANIMAL ID                    | 7           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
|                              | 6           | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 6 | 5 | 5 | 6 | 5 | 6 | 1 | 6 | 5 |          |
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
|                              | 1           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |          |
|                              | 7           | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |          |
|                              | 6           | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |          |

**ALIMENTARY SYSTEM**

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |     |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Esophagus                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Gallbladder                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Intestine Large, Cecum       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Intestine Large, Colon       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Intestine Large, Rectum      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Intestine Small, Duodenum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Intestine Small, Ileum       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Intestine Small, Jejunum     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Liver                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Inflammation, Chronic Active |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   | 1 | 2  | 1.0 |
| Pancreas                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Salivary Glands              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Stomach, Forestomach         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Stomach, Glandular           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Glands, Cyst                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4  | 1.0 |
| 1                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |     |
| 1                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |     |
| 1                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |     |
| 1                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |     |
| Tooth                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |     |

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TDMS No. 20101 - 02  
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
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Date Report Requested: 03/11/2010  
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 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |  |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|--|
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |  |
| 100 ppm                      | 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 |          |  |
| ANIMAL ID                    | 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        |  |
|                              | 6           | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 6 | 5 | 6 | 5 | 1 | 6 | 7 | 7 | 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        |  |
|                              | 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        |  |
|                              | 7           | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0        |  |
|                              | 6           | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |          |  |

**CARDIOVASCULAR SYSTEM**

|               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Heart         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Embolus Tumor |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   | 1  |

**ENDOCRINE SYSTEM**

|                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Adrenal Cortex           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Subcapsular, Hyperplasia |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   | 1 | 2 1.0 |
| Adrenal Medulla          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Islets, Pancreatic       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Parathyroid Gland        | M | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | M | + | + | + | M | + | + | + | + | 21    |
| Pituitary Gland          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Thyroid Gland            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Cyst                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 2.0 |

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

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 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE<br>100 ppm | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS              |                       |                  |     |     |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|-----|-----|
|   | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>1      | 0<br>2<br>7<br>5      |                       | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>1 |     |     |
| ANIMAL ID                               | 0<br>0<br>1<br>7<br>6 | 0<br>0<br>1<br>7<br>6 | 0<br>0<br>1<br>7<br>8 | 0<br>0<br>1<br>7<br>9 | 0<br>0<br>1<br>8<br>0 | 0<br>0<br>1<br>8<br>1 | 0<br>0<br>1<br>8<br>2 | 0<br>0<br>1<br>8<br>3 | 0<br>0<br>1<br>8<br>4 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>8<br>7 | 0<br>0<br>1<br>8<br>8 | 0<br>0<br>1<br>8<br>9 | 0<br>0<br>1<br>9<br>0 | 0<br>0<br>1<br>9<br>1 | 0<br>0<br>1<br>9<br>2 | 0<br>0<br>1<br>9<br>3 | 0<br>0<br>1<br>9<br>4 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>9 | 0<br>0<br>1<br>9<br>0 | 0<br>0<br>1<br>9<br>0 |                  |     |     |
| Ovary                                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25               |     |     |
| Angiectasis                             |                       |                       |                       |                       |                       |                       |                       |                       | 3                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                | 3.0 |     |
| Atrophy                                 |                       | 2                     |                       |                       |                       |                       |                       |                       |                       |                       |                       | 3                     |                       |                       |                       |                       | 1                     |                       |                       |                       |                       |                       |                       |                       |                       |                       | 3                | 2.0 |     |
| Cyst                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       |                       |                       |                       | 2                | 1.0 |     |
| Uterus                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25               |     |     |
| Endometrium, Hyperplasia, Cystic        | 1                     |                       |                       |                       |                       | 1                     |                       |                       |                       |                       |                       | 2                     |                       |                       | 1                     |                       | 1                     |                       | 1                     |                       |                       |                       |                       |                       |                       | 1                     | 7                | 1.1 |     |
| <b>HEMATOPOIETIC SYSTEM</b>             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |     |     |
| Bone Marrow                             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25               |     |     |
| Hyperplasia                             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 3                | 1   | 3.0 |
| Inflammation                            |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       |                       |                       |                       |                  | 1   | 1.0 |
| Lymph Node                              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  | 1   |     |
| Lymph Node, Mandibular                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25               |     |     |
| Infiltration Cellular, Mast Cell        |                       | 2                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  | 1   | 2.0 |
| Lymph Node, Mesenteric                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25               |     |     |
| Atrophy                                 |                       |                       |                       |                       | 1                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  | 1   | 1.0 |
| Spleen                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25               |     |     |
| Hematopoietic Cell Proliferation        |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 3                | 1   | 3.0 |
| Lymphoid Follicle, Atrophy              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2                | 1   | 2.0 |
| Lymphoid Follicle, Hyperplasia          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  | 1   | 2.0 |
| Thymus                                  | +                     | I                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | I                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 22               |     |     |
| Atrophy                                 |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 4                | 1   | 4.0 |
| Medulla, Hyperplasia, Lymphoid          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       |                       |                       |                       | 1                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                | 3   | 1.0 |

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 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. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |           |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|-----------|
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |           |
| 100 ppm                      | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |          |           |
| ANIMAL ID                    | 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        |           |
|                              | 6           | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 6 | 5 | 6 | 1 | 6 | 5 | 5        |           |
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |           |
|                              | 0           | 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        |           |
|                              | 7           | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9        |           |
|                              | 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        |           |
|                              |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | <b>25</b> |

**INTEGUMENTARY SYSTEM**

|               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>25</b> |
| Skin          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>25</b> |

**MUSCULOSKELETAL SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Bone                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>25</b> |
| Fibro-Osseous Lesion |   |   |   |   |   | X |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   | <b>2</b>  |

**NERVOUS SYSTEM**

|       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>25</b> |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|

**RESPIRATORY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |              |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Lung  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>25</b>    |
| Artery, Infiltration Cellular, Mixed Cell   |   |   | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1 3.0</b> |
| Nose  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>25</b>    |
| Inflammation                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1 1.0</b> |
| Glands, Respiratory Epithelium, Hyperplasia |   |   |   |   |   | 1 |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>6 1.0</b> |
| Septum, Hyalinization                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   | <b>2 1.5</b> |
| Trachea                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>25</b>    |

**SPECIAL SENSES SYSTEM**

NONE

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

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



TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

|                              |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |          |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----------|
| P53+/- (C57BL/6) MICE FEMALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | * TOTALS |
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |          |
|                              | 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  |          |
| 100 ppm                      | 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 | 25 |          |
|                              | 0           | 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  |          |
|                              | 7           | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 1  |          |
|                              | 6           | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 2  |          |

**URINARY SYSTEM**

|                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Kidney                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Nephropathy                       |   |   | 1 |   | 1 | 1 |   | 1 |   |   | 1 |   |   |   |   |   |   |   |   | 1 |   |   |   |   | 6 1.0 |
| Urinary Bladder                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Infiltration Cellular, Lymphocyte |   |   |   |   |   |   |   |   |   | 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:  
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TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 300 ppm                      | 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 |          |
| ANIMAL ID                    | 7           | 7 | 3 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
|                              | 6           | 5 | 2 | 5 | 6 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 6 | 5 | 5 | 6 | 5 | 5 | 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 |          |
|                              | 0           | 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 |          |
|                              | 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 |          |

**ALIMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                                |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------------------|
| Esophagus   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25                             |
| Gallbladder   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25                             |
| Intestine Large, Cecum  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25                             |
| Intestine Large, Colon  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25                             |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25                             |
| Intestine Small, Duodenum                                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25                             |
| Intestine Small, Ileum  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25                             |
| Intestine Small, Jejunum<br>Diverticulum                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25<br>1                        |
| Liver<br>Inflammation, Chronic Active                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25<br>1 1.0                    |
| Pancreas  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25                             |
| Salivary Glands   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25                             |
| Stomach, Forestomach<br>Inflammation<br>Epithelium, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25<br>1<br>2<br>1 1.0<br>1 2.0 |
| Stomach, Glandular  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25                             |

\* .. 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. 20101 - 02

Test Type: 26-39 WEEKS

Route: DOSED FEED

Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Senna (powdered)

CAS Number: 8013-11-4

Date Report Requested: 03/11/2010

Time Report Requested: 11:54:36

First Dose M/F: 06/26/07 / 06/25/07

Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE<br>300 ppm | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |          |
|   | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |   |          |
|   | 7           | 7 | 3 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |   |          |
|   | 6           | 5 | 2 | 5 | 6 | 5 | 5 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 6 | 5 | 5 | 6 | 5 | 6 | 6 |   |          |
| 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 |   |          |
|   | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |   |          |
|   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 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 |   |          |
| Glands, Cyst                            |             |   |   | 1 |   |   |   | 1 |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   | 3 | 1.0      |

CARDIOVASCULAR SYSTEM

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | + |
| Heart        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | + |
|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 25 |   |
|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 25 |   |

ENDOCRINE SYSTEM

|                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |     |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Adrenal Cortex             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  |     |
| Hypertrophy                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 1  | 1.0 |
| Subcapsular, Hyperplasia   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  | 1.0 |
| Adrenal Medulla            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  |     |
| Islets, Pancreatic         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  |     |
| Parathyroid Gland          | + | M | + | + | + | + | M | + | M | M | + | + | + | + | + | M | + | + | + | + | + | + | M  |     |
| Pituitary Gland            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  |     |
| Pars Distalis, Hyperplasia |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 1  | 1.0 |
| Thyroid Gland              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  |     |
|                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 25 |     |

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

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE<br>300 ppm | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       | * TOTALS |  |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|----------|--|
|   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     |          |  |
| 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     |          |  |
|   | 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     |          |  |
|   | 7           | 7 | 3 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 4     |          |  |
|   | 6           | 5 | 2 | 5 | 6 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 6 | 5 | 5 | 6 | 5 | 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     |          |  |
|   | 0           | 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     |          |  |
|   | 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     |          |  |
| Clitoral Gland                          | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |          |  |
| Ovary                                   | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |          |  |
| Atrophy                                 |             |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   | 1 |   | 2 1.5 |          |  |
| Mineralization                          |             |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 1.0 |          |  |
| Pigmentation, Hemosiderin               |             |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 1.0 |          |  |
| Uterus                                  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |          |  |
| Endometrium, Hyperplasia, Cystic        |             |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   | 1 |   |   | 3 1.0 |          |  |
| <b>HEMATOPOIETIC SYSTEM</b>             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |          |  |
| Bone Marrow                             | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +     | 25       |  |
| Lymph Node, Mandibular                  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +     | 25       |  |
| Atrophy                                 |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       | 1 1.0    |  |
| Lymph Node, Mesenteric                  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +     | 25       |  |
| Atrophy                                 |             |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   | 2 |       | 2 2.0    |  |
| Spleen                                  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +     | 25       |  |
| Thymus                                  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +     | 22       |  |
| Atrophy                                 |             |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       | 1 2.0    |  |
| Medulla, Hyperplasia, Lymphoid          |             |   | 1 |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   | 1 |   |       | 3 1.3    |  |
| <b>INTEGUMENTARY SYSTEM</b>             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |          |  |
| Mammary Gland                           | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +     | 25       |  |

\* .. 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. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| DAY ON TEST | P53+/- (C57BL/6) MICE FEMALE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |
|-------------|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|             | 0                            | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 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 | 25       |
| 7           | 7                            | 3 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
| 6           | 5                            | 2 | 5 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 6 | 5 | 5 | 6 | 5 | 5 | 6 | 6 | 25       |
| 0           | 0                            | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 0           | 0                            | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25       |
| 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 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 25       |
| 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 + 25

**MUSCULOSKELETAL SYSTEM**

Bone + 25

**NERVOUS SYSTEM**

Brain + 25

Peripheral Nerve + 1

Spinal Cord Degeneration + 3 2 2 2.5

**RESPIRATORY SYSTEM**

Lung + 25

Nose Inflammation + 25  
 Glands, Olfactory Epithelium, Dilatation 1 1 1.0  
 Glands, Respiratory Epithelium, Hyperplasia 1 1 4 1.0  
 Septum, Hyalinization 2 2 1 3 1.7

Trachea + 25

**SPECIAL SENSES SYSTEM**

NONE

\* .. 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

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| DAY ON TEST | P53+/- (C57BL/6) MICE FEMALE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |
|-------------|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|             | 0                            | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 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 |          |
| 7           | 7                            | 3 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
| 6           | 5                            | 2 | 5 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 | 6 | 5 | 5 | 6 | 5 | 6 | 6 | 6 |          |
| 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 |          |
| 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 | 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 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |          |

**URINARY SYSTEM**

|                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |     |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|-----|
| Kidney                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |   |     |
| Mineralization                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  | 1 | 1.0 |
| Nephropathy                       |   |   |   | 1 |   |   |   | 1 | 1 |   |   |   |   |   |   | 1 |   |   | 1 |   |   |   |   |   |   |    | 5 | 1.0 |
| Urinary Bladder                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |   |     |
| Infiltration Cellular, Lymphocyte |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   | 2 | 2 |   |    | 3 | 2.0 |
| Inflammation                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |    | 1 | 1.0 |

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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

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE | DAY ON TEST |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | * TOTALS |
|------------------------------|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------|
|                              | 02          | 07 | 06 | 05 | 06 | 07 | 05 | 09 | 05 | 05 | 06 | 05 | 06 | 06 | 06 | 05 | 06 | 06 | 05 | 01 | 05 | 04 | 05 |    |          |
| 1000 ppm                     | 00          | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 25 |          |
| ANIMAL ID                    | 02          | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 25 |          |
|                              | 22          | 22 | 22 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 25 |          |
|                              | 67          | 67 | 68 | 69 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 25 |          |

**ALIMENTARY SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |             |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------|
| Esophagus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |
| Gallbladder  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |
| Intestine Large, Cecum   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |
| Intestine Large, Colon   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |
| Intestine Large, Rectum  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |
| Intestine Small, Duodenum  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | 24          |
| Intestine Small, Ileum   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |
| Intestine Small, Jejunum<br>Diverticulum   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |
| Liver  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |
| Infiltration Cellular, Mixed Cell<br>Inflammation, Chronic Active<br>Tension Lipidosis |   |   | 2 |   |   | 1 |   |   |   |   |   | 1 | 1 | 1 |   |   |   |   |   | 2 |   | 1 |   | 2<br>5<br>1 |
| Pancreas   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |
| Salivary Glands<br>Hyperplasia, Lymphoid   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |
| Stomach, Forestomach   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25          |

\* .. 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. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE<br>1000 ppm | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS              |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|  | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>9      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>1      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>4      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>0      | 0<br>2<br>7<br>7      |                       |
| ANIMAL ID                                | 0<br>0<br>2<br>2<br>6 | 0<br>0<br>2<br>2<br>7 | 0<br>0<br>2<br>2<br>8 | 0<br>0<br>2<br>2<br>9 | 0<br>0<br>2<br>3<br>0 | 0<br>0<br>2<br>3<br>1 | 0<br>0<br>2<br>3<br>2 | 0<br>0<br>2<br>3<br>3 | 0<br>0<br>2<br>3<br>4 | 0<br>0<br>2<br>3<br>5 | 0<br>0<br>2<br>3<br>6 | 0<br>0<br>2<br>3<br>7 | 0<br>0<br>2<br>3<br>8 | 0<br>0<br>2<br>3<br>9 | 0<br>0<br>2<br>4<br>0 | 0<br>0<br>2<br>4<br>1 | 0<br>0<br>2<br>4<br>2 | 0<br>0<br>2<br>4<br>3 | 0<br>0<br>2<br>4<br>4 | 0<br>0<br>2<br>4<br>5 | 0<br>0<br>2<br>4<br>6 | 0<br>0<br>2<br>4<br>7 | 0<br>0<br>2<br>4<br>8 | 0<br>0<br>2<br>4<br>9 | 0<br>0<br>2<br>5<br>0 |

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |   |     |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|---|-----|
| Stomach, Glandular Epithelium, Metaplasia, Squamous Glands, Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |   |   |     |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 | 1 | 1.0 |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 | 2 | 1.0 |

**CARDIOVASCULAR SYSTEM**

|                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |   |     |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|---|-----|
| Blood Vessel            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |    |   |     |
| Heart Valve, Thrombosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 3  | 25 | 1 | 3.0 |

**ENDOCRINE SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |   |     |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|---|-----|
| Adrenal Cortex Subcapsular, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 25 |   |     |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1  | 2 | 1.0 |
| Adrenal Medulla                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 25 |   |     |
| Islets, Pancreatic                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 25 |   |     |
| Parathyroid Gland                       | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | M | M | + | + | + | M | 20 |    |   |     |
| Pituitary Gland                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 25 |   |     |
| Thyroid Gland                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 25 |   |     |

**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



TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE<br>1000 ppm | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS              |       |  |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------|--|
|  | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>9      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>1      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>4      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>0      |                       |                       |       |  |
| ANIMAL ID                                | 0<br>0<br>2<br>2<br>6 | 0<br>0<br>2<br>2<br>7 | 0<br>0<br>2<br>2<br>8 | 0<br>0<br>2<br>2<br>9 | 0<br>0<br>2<br>3<br>0 | 0<br>0<br>2<br>3<br>1 | 0<br>0<br>2<br>3<br>2 | 0<br>0<br>2<br>3<br>3 | 0<br>0<br>2<br>3<br>4 | 0<br>0<br>2<br>3<br>5 | 0<br>0<br>2<br>3<br>6 | 0<br>0<br>2<br>3<br>7 | 0<br>0<br>2<br>3<br>8 | 0<br>0<br>2<br>3<br>9 | 0<br>0<br>2<br>4<br>0 | 0<br>0<br>2<br>4<br>1 | 0<br>0<br>2<br>4<br>2 | 0<br>0<br>2<br>4<br>3 | 0<br>0<br>2<br>4<br>4 | 0<br>0<br>2<br>4<br>5 | 0<br>0<br>2<br>4<br>6 | 0<br>0<br>2<br>4<br>7 | 0<br>0<br>2<br>4<br>8 | 0<br>0<br>2<br>4<br>9 | 0<br>0<br>2<br>5<br>0 |       |  |
| Clitoral Gland                           | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |       |  |
| Ovary                                    | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |       |  |
| Atrophy                                  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       | 1                     |                       |                       |                       |                       |                       |                       | 3                     |                       |                       | 3 1.7                 |       |  |
| Cyst                                     |                       |                       | 1                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       | 1                     |                       |                       |                       |                       |                       |                       |                       | 3 1.0                 |       |  |
| Uterus                                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |       |  |
| Endometrium, Hyperplasia, Cystic         | 1                     |                       |                       |                       |                       | 1                     |                       | 1                     | 1                     |                       | 1                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 5 1.0                 |       |  |
| <b>HEMATOPOIETIC SYSTEM</b>              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |       |  |
| Bone Marrow                              | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |       |  |
| Hyperplasia                              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       |                       | 1 1.0                 |       |  |
| Lymph Node, Mandibular                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |       |  |
| Atrophy                                  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2                     |                       |                       |                       |                       | 2                     |                       |                       |                       |                       |                       | 2 2.0                 |       |  |
| Lymph Node, Mesenteric                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |       |  |
| Atrophy                                  | 4                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2                     |                       |                       |                       |                       |                       |                       | 2 3.0                 |       |  |
| Inflammation, Suppurative                |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 3                     |                       |                       | 1 3.0                 |       |  |
| Spleen                                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25                    |       |  |
| Hematopoietic Cell Proliferation         |                       |                       |                       |                       | 1                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1 1.0                 |       |  |
| Lymphoid Follicle, Hyperplasia           |                       |                       |                       |                       | 2                     |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2                     |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2 2.0                 |       |  |
| Thymus                                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | I                     | +                     | I                     | +                     | +                     | +                     | +                     | +                     | 22                    |       |  |
| Atrophy                                  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       | A                     | +                     | 1 1.0 |  |
| Medulla, Hyperplasia, Lymphoid           | 1                     | 2                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     | 2                     |                       | 1                     | 2                     |                       |                       |                       |                       |                       |                       |                       | 6 1.5                 |       |  |

**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  
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TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
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**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
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 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE<br>1000 ppm    | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |  |  |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|--|--|
|   | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>9      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>6      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>1      | 0<br>2<br>7<br>5      | 0<br>2<br>7<br>4      | 0<br>2<br>7<br>5      |                       |          |  |  |
| ANIMAL ID                                   | 0<br>0<br>2<br>2<br>6 | 0<br>0<br>2<br>2<br>7 | 0<br>0<br>2<br>2<br>8 | 0<br>0<br>2<br>2<br>9 | 0<br>0<br>2<br>3<br>0 | 0<br>0<br>2<br>3<br>1 | 0<br>0<br>2<br>3<br>2 | 0<br>0<br>2<br>3<br>3 | 0<br>0<br>2<br>3<br>4 | 0<br>0<br>2<br>3<br>5 | 0<br>0<br>2<br>3<br>6 | 0<br>0<br>2<br>3<br>7 | 0<br>0<br>2<br>3<br>8 | 0<br>0<br>2<br>3<br>9 | 0<br>0<br>2<br>4<br>0 | 0<br>0<br>2<br>4<br>1 | 0<br>0<br>2<br>4<br>2 | 0<br>0<br>2<br>4<br>3 | 0<br>0<br>2<br>4<br>4 | 0<br>0<br>2<br>4<br>5 | 0<br>0<br>2<br>4<br>6 | 0<br>0<br>2<br>4<br>7 | 0<br>0<br>2<br>4<br>8 | 0<br>0<br>2<br>4<br>9 |          |  |  |
| Mammary Gland                               | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25       |  |  |
| Skin  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25       |  |  |
| <b>MUSCULOSKELETAL SYSTEM</b>               |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |  |  |
| Bone  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25       |  |  |
| Fibro-Osseous Lesion                        |                       |                       |                       | X                     |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2        |  |  |
| <b>NERVOUS SYSTEM</b>                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |  |  |
| Brain                                       | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25       |  |  |
| Peripheral Nerve                            |                       |                       |                       |                       |                       |                       |                       | +                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |  |  |
| Spinal Cord                                 |                       |                       |                       |                       |                       |                       |                       |                       |                       | +                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | +                     |                       | 2        |  |  |
| Degeneration                                |                       |                       |                       |                       |                       |                       |                       |                       |                       | 3                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 4                     |                       | 2 3.5    |  |  |
| <b>RESPIRATORY SYSTEM</b>                   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |  |  |
| Lung  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25       |  |  |
| Nose  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25       |  |  |
| Inflammation                                |                       |                       | 1                     |                       |                       | 1                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2 1.0    |  |  |
| Inflammation, Suppurative                   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2                     |                       | 1 2.0    |  |  |
| Glands, Respiratory Epithelium, Hyperplasia |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       |                       |                       | 1                     |                       |                       |                       | 1                     |                       |                       | 1                     |                       |                       | 4 1.0    |  |  |
| Septum, Hyalinization                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       |                       |                       | 2 1.0    |  |  |
| Trachea                                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 25       |  |  |
| <b>SPECIAL SENSES SYSTEM</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  
 1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked



TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| DAY ON TEST | P53+/- (C57BL/6) MICE FEMALE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |
|-------------|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
|             | 0                            | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
| 3000 ppm    | 2                            | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 |          |
| ANIMAL ID   | 7                            | 6 | 7 | 4 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
|             | 6                            | 9 | 5 | 1 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 6 | 6 | 6 | 5 | 6 | 5 | 5 | 1 | 6 | 5 | 6 | 5 | 5 | 5 |          |
|             | 0                            | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
|             | 2                            | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |          |
|             | 5                            | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |          |
|             | 1                            | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |          |

**ALIMENTARY SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |       |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|
| Esophagus                                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |       |
| Gallbladder                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |       |
| Intestine Large, Cecum                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |       |
| Intestine Large, Colon Epithelium, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 | 7 1.0 |
| Intestine Large, Rectum                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |       |
| Intestine Small, Duodenum                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |       |
| Intestine Small, Ileum                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |       |
| Intestine Small, Jejunum                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |       |
| Liver  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |       |
| Hematopoietic Cell Proliferation               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |       |
| Inflammation, Chronic Active                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |       |
| Necrosis                                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |       |
| Pancreas                                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |       |
| Atrophy  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |       |
| Salivary Glands                                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |       |
| Stomach, Forestomach                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |       |

\* .. 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. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE<br>3000 ppm | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |  |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|--|
|  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 |   |          |  |
|  | 2           | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |   |          |  |
|  | 7           | 6 | 7 | 4 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |   |          |  |
|  | 6           | 9 | 5 | 1 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 6 | 6 | 6 | 5 | 6 | 5 | 5 | 1 | 6 | 5 | 6 | 5 |   |          |  |
|  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |          |  |
|  | 0           | 0 | 0 | 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 |   |          |  |
|  | 5           | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 |   |          |  |
|  | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5        |  |

**GENITAL SYSTEM**

|                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |     |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Clitoral Gland                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | 24 |     |
| Ovary                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Atrophy                          |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   | 2  | 2.0 |
| Cyst                             |   |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  | 1.0 |
| Uterus                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Endometrium, Hyperplasia, Cystic |   | 1 |   |   |   |   |   |   | 1 |   |   |   |   | 1 |   |   |   | 1 |   |   |   |   |   |   | 1 | 6  | 1.0 |

**HEMATOPOIETIC SYSTEM**

|                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |     |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Bone Marrow                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Necrosis                         |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  | 2.0 |
| Lymph Node, Mandibular           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Atrophy                          |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  | 2.0 |
| Lymph Node, Mesenteric           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Atrophy                          |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   | 2  | 2.0 |
| Spleen                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |     |
| Hematopoietic Cell Proliferation |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   | 1  | 2.0 |
| Thymus                           | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 22 |     |
| Atrophy                          |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  | 1.0 |
| Medulla, Hyperplasia, Lymphoid   |   |   |   |   | 1 |   |   |   |   |   | 1 |   | 2 |   |   |   |   |   |   |   | 1 |   |   |   | 1 | 5  | 1.2 |

**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

TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| DAY ON TEST  | P53+/- (C57BL/6) MICE FEMALE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       | * TOTALS |  |
|--|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|----------|--|
|  | 0                            | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     |          |  |
| ANIMAL ID  | 3000 ppm                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       | * TOTALS |  |
|  | 0                            | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0     |          |  |
| Mammary Gland Duct, Ectasia  | +                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |          |  |
|  | 2                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 2.0 |          |  |
| Skin   | +                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |          |  |
| <b>MUSCULOSKELETAL SYSTEM</b>  |                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |          |  |
| Bone Fibro-Osseous Lesion  | +                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |          |  |
|  | X                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1     |          |  |
| <b>NERVOUS SYSTEM</b>  |                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |          |  |
| Brain  | +                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |          |  |
| Peripheral Nerve   |                              |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1     |          |  |
| Spinal Cord  |                              |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1     |          |  |
| <b>RESPIRATORY SYSTEM</b>  |                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |          |  |
| Lung Serosa, Inflammation  | +                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |          |  |
|  | 2                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 2.0 |          |  |
| Nose Glands, Respiratory Epithelium, Hyperplasia Septum, Hyalinization | +                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |          |  |
|  |                              |   |   |   | 1 |   |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   | 1 |   |   | 1 | 4 1.0 |          |  |
|  | 1                            |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   | 3 1.3 |          |  |
| Trachea  | +                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |          |  |

**SPECIAL SENSES 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





TDMS No. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |   |   |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|---|
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          | 0 | 0 |
| 10,000 ppm                   | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2        | 2 |   |
| ANIMAL ID                    | 6           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7        | 7 |   |
|                              | 4           | 6 | 5 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 6 | 6 | 5 | 6 | 6 | 5        | 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 | 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        | 3 |   |
|                              | 7           | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9        | 0 |   |
|                              | 6           | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6        | 7 |   |

ALIMENTARY SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |        |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--------|
| Esophagus                                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Gallbladder Inflammation                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 | 1 2.0  |
| Intestine Large, Cecum Epithelium, Hyperplasia  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 | 19 1.3 |
| Intestine Large, Colon Epithelium, Hyperplasia  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 | 25 2.7 |
| Intestine Large, Rectum Epithelium, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 | 1 1.0  |
| Intestine Small, Duodenum                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Intestine Small, Ileum                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Intestine Small, Jejunum                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Liver   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Basophilic Focus                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   | 1  |        |
| Clear Cell Focus                                |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |        |
| Hematopoietic Cell Proliferation                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 1  | 1.0    |
| Inflammation, Chronic Active                    | 1 |   | 1 |   |   |   | 1 |   |   |   | 1 |   |   |   | 1 |   |   |   |   | 1 | 1 |   | 1 | 9  | 1.0    |
| Pancreas  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |
| Salivary Glands                                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |        |

\* .. 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. 20101 - 02  
 Test Type: 26-39 WEEKS  
 Route: DOSED FEED  
 Species/Strain: MICE/P53(C57BL/6)

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE<br>10,000 ppm | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |   |   |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|---|
|  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          | 0 | 0 |
|  | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2        | 2 |   |
|  | 6           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7        | 7 |   |
|  | 4           | 6 | 5 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 6 | 6 | 5 | 6 | 6 | 5        | 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 | 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        | 3 |   |
|  | 7           | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9        | 0 |   |
|  | 6           | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6        | 0 |   |

|                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |   |    |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|---|----|
| Hyperplasia, Lymphoid | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 1.0 |   |    |
| Stomach, Forestomach  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +     | + | 25 |
| Stomach, Glandular    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +     | + | 25 |

**CARDIOVASCULAR SYSTEM**

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Blood Vessel   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Heart          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Cardiomyopathy |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   | 1 1.0 |

**ENDOCRINE SYSTEM**

|                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Adrenal Cortex           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Subcapsular, Hyperplasia | 1 | 2 |   | 2 |   |   |   |   | 1 | 2 |   | 1 | 1 | 1 | 1 | 2 |   |   |   |   | 1 | 1 | 16 1.3 |
| Adrenal Medulla          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Islets, Pancreatic       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Parathyroid Gland        | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | 23     |
| Pituitary Gland          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |
| Thyroid Gland            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |

**GENERAL BODY SYSTEM**

|      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| NONE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

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TDMS No. 20101 - 02  
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Senna (powdered)  
 CAS Number: 8013-11-4

Date Report Requested: 03/11/2010  
 Time Report Requested: 11:54:36  
 First Dose M/F: 06/26/07 / 06/25/07  
 Lab: BAT

| P53+/- (C57BL/6) MICE FEMALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |   |    |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|----|
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          | 0 | 0  |
| 10,000 ppm                   | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2        | 2 | 25 |
| ANIMAL ID                    | 6           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7        | 7 | 25 |
|                              | 4           | 6 | 5 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 6 | 6 | 5 | 6 | 6 | 5        | 6 | 25 |
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        | 0 | 25 |
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        | 0 | 25 |
|                              | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2        | 3 | 25 |
|                              | 7           | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9        | 0 | 25 |
|                              | 6           | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6        | 9 | 25 |

**GENITAL SYSTEM**

|                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        |    |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|----|
| Clitoral Gland                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +      | 25 |
| Ovary                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +      | 25 |
| Atrophy                          |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   | 1 |   |   |   |   | 1 | 4 1.0  |    |
| Cyst                             |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   | 1      |    |
| Uterus                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25     |    |
| Endometrium, Hyperplasia, Cystic | 1 | 2 |   | 1 |   |   |   | 1 |   | 1 | 1 | 1 | 1 | 1 |   | 1 | 1 |   | 1 |   | 1 | 1 | 14 1.1 |    |

**HEMATOPOIETIC SYSTEM**

|                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Bone Marrow                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Hyperplasia                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 | 1 2.0 |
| Lymph Node, Mandibular         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Atrophy                        |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 2.0 |
| Lymph Node, Mesenteric         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Hyperplasia, Lymphoid          |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 1.0 |
| Spleen                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25    |
| Thymus                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 24    |
| Atrophy                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 1 | 2 1.0 |
| Medulla, Hyperplasia, Lymphoid |   |   |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 1 | 1 | 4 1.0 |

**INTEGUMENTARY SYSTEM**

|               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

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