

**TDMS No.** 20009 - 03  
**Test Type:** CHRONIC  
**Route:** DOSED WATER  
**Species/Strain:** RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 05/27/2011  
**Time Report Requested:** 10:09:56  
**First Dose M/F:** 11/18/04 / 11/19/04  
**Lab:** BAT

F2\_R2

**C Number:** C20009  
**Lock Date:** 06/05/2008  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 2.4.1.0\_004  
**PWG Approval Date:** 06/29/2010

Note: Animals arranged according to days on test.

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FISCHER 344 RATS MALE	DAY ON TEST																								males (cont...)
	0 1 6	0 2 3	0 3 1	0 4 6	0 4 9	0 5 0	0 5 9	0 6 0	0 6 0	0 6 4	0 6 6	0 6 7	0 6 7	0 6 7	0 6 8	0 6 8	0 7 1	0 7 2	0 7 2	0 7 2	0 7 2	0 7 2	0 7 2	0 7 2	
0 mg/l	0 0 0 3 9	0 0 0 2 0	0 0 0 2 5	0 0 0 1 7	0 0 0 0 3	0 0 0 2 8	0 0 0 1 9	0 0 0 5 0	0 0 0 3 5	0 0 0 4 2	0 0 0 0 4	0 0 0 0 6	0 0 0 0 2	0 0 0 3 0	0 0 0 4 8	0 0 0 4 1	0 0 0 4 4	0 0 0 0 2	0 0 0 0 5	0 0 0 0 9	0 0 0 1 0	0 0 0 1 2	0 0 0 1 5	0 0 0 2 1	0 0 0 2 2
	ANIMAL ID																								

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Cecum	+	+	+	A	+	+	A	+	A	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Colon Adenoma	+	+	+	+	+	+	+	+	A	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	X
Intestine Large, Rectum	+	+	+	+	+	+	+	+	A	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum	+	+	+	+	+	+	A	+	+	A	A	+	A	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Jejunum	+	+	+	A	+	+	A	+	A	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver Hepatocellular Adenoma Hepatocellular Adenoma, Multiple	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	X
Mesentery		+									+		+												
Pancreas Adenoma, Mixed Cell	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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	0 1 6	0 2 3	0 3 9	0 4 6	0 4 9	0 5 0	0 5 9	0 6 0	0 6 0	0 6 4	0 6 8	0 6 4	0 6 6	0 6 7	0 6 7	0 6 8	0 6 8	0 7 1	0 7 2	0 7 2	0 7 2	0 7 2	0 7 2	0 7 6	
0 mg/l	0 0 0 3 9	0 0 0 2 0	0 0 0 2 5	0 0 0 1 7	0 0 0 0 3	0 0 0 2 8	0 0 0 1 9	0 0 0 5 0	0 0 0 3 5	0 0 0 4 2	0 0 0 0 4	0 0 0 0 6	0 0 0 0 2	0 0 0 3 0	0 0 0 4 8	0 0 0 4 1	0 0 0 0 4	0 0 0 0 2	0 0 0 0 5	0 0 0 0 9	0 0 0 1 0	0 0 0 1 2	0 0 0 1 5	0 0 0 2 1	0 0 0 2 1

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma																									
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pheochromocytoma Benign																									
Pheochromocytoma Complex																									
Bilateral, Pheochromocytoma Benign																									
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma																									
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pars Distalis, Adenoma																									
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
C-cell, Adenoma																									
C-cell, Carcinoma																									
Follicular Cell, Carcinoma																									

GENERAL BODY SYSTEM

Peritoneum																									
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FISCHER 344 RATS MALE	DAY ON TEST																								males (cont...)
	0 1 6	0 2 3	0 3 1	0 4 7	0 4 9	0 5 0	0 5 9	0 6 0	0 6 0	0 6 4	0 6 8	0 6 4	0 6 6	0 6 7	0 6 7	0 6 7	0 6 7	0 7 2	0 7 2	0 7 2	0 7 2	0 7 2	0 7 2	0 7 2	
0 mg/l	0 0 3 9	0 0 0 0	0 0 2 5	0 0 2 7	0 0 1 3	0 0 2 8	0 0 1 9	0 0 5 0	0 0 3 5	0 0 4 2	0 0 0 4	0 0 0 6	0 0 0 2	0 0 3 0	0 0 4 8	0 0 3 1	0 0 4 4	0 0 0 2	0 0 0 5	0 0 0 9	0 0 0 0	0 0 1 1	0 0 1 1	0 0 2 5	0 0 2 2
	ANIMAL ID	0 0 3 9	0 0 2 5	0 0 2 7	0 0 1 3	0 0 2 8	0 0 1 9	0 0 5 0	0 0 3 5	0 0 4 2	0 0 0 4	0 0 0 6	0 0 0 2	0 0 3 0	0 0 4 8	0 0 3 1	0 0 4 4	0 0 0 2	0 0 0 5	0 0 0 9	0 0 1 1	0 0 1 1	0 0 2 5	0 0 2 2	0 0 2 2

GENITAL SYSTEM

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Preputial Gland Carcinoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Prostate	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Testes Bilateral, Interstitial Cell, Adenoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Interstitial Cell, Adenoma						X		X		X		X	X			X	X		X	X		X	X		X

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymph Node Deep Cervical, Carcinoma, Metastatic, Harderian Gland			+	+	+						+						+						+		
Lymph Node, Mandibular	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
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Thymus Carcinoma, Metastatic, Harderian Gland	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

INTEGUMENTARY SYSTEM

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FISCHER 344 RATS MALE	DAY ON TEST																								males (cont...)	
	0 1 6	0 2 3	0 3 1	0 4 6	0 4 9	0 5 0	0 5 9	0 6 0	0 6 0	0 6 4	0 6 6	0 6 4	0 6 6	0 6 7	0 6 7	0 6 8	0 6 8	0 7 1	0 7 2	0 7 2	0 7 2	0 7 2	0 7 2	0 7 2		0 7 2
0 mg/l	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3	2	2	1	0	2	1	5	3	4	0	0	3	4	4	3	4	0	0	0	1	1	1	2	2	
	9	0	5	7	3	8	9	0	5	2	4	6	2	0	8	1	4	2	5	9	0	2	5	1	2	

Mammary Gland Fibroadenoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Skin Basal Cell Adenoma	+	+	+	+	+	+	+	X	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Carcinoma, Metastatic, Harderian Gland																	X							
Keratoacanthoma															X				X					
Subcutaneous Tissue, Fibroma			X																					
Subcutaneous Tissue, Fibrosarcoma																								

MUSCULOSKELETAL SYSTEM

Bone Carcinoma, Metastatic, Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
																	X							

NERVOUS SYSTEM

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
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RESPIRATORY SYSTEM

Lung Alveolar/Bronchiolar Adenoma	+	+	+	+	+	+	+	X	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Carcinoma, Metastatic, Harderian Gland																	X					X		
Carcinoma, Metastatic, Preputial Gland								X																
Rhabdomyosarcoma, Metastatic, Uncertain Primary Site																								
Nose Carcinoma, Metastatic, Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
																	X							
Trachea	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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DAY ON TEST	FISCHER 344 RATS MALE																				ANIMAL ID	males (cont...)			
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	
0	2	3	4	4	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	0	
1	7	9	6	9	0	9	0	5	5	6	7	7	7	8	8	1	2	2	2	2	2	2	2	0	
6	3	1	7	9	4	3	0	4	8	4	6	6	7	3	5	3	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	
3	2	2	1	0	2	1	5	3	4	0	0	3	4	4	3	4	0	0	0	1	1	1	2	0	
9	0	5	7	3	8	9	0	5	2	4	6	2	0	8	1	4	2	5	9	0	2	5	1	0	

SPECIAL SENSES SYSTEM

Ear																								
Neural Crest Tumor																								
Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Carcinoma, Metastatic, Harderian Gland																	X							
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Carcinoma																	X							
Zymbal's Gland																								
Carcinoma																								

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

SYSTEMIC LESIONS

Multiple Organ	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Leukemia Mononuclear				X	X	X					X			X					X	X	X			
Mesothelioma Malignant	X						X	X	X															

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FISCHER 344 RATS MALE	DAY ON TEST																								* TOTALS	
	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726	0726		0726
0 mg/l	0023	0024	0027	0033	0041	0045	0047	0071	0077	0081	0083	0085	0091	0093	0095	0097	0099	0103	0105	0107	0113	0115	0117	0123	0125	50

**ALIMENTARY SYSTEM**

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	45
Intestine Large, Colon Adenoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	47 1
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	47
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	48
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	46
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	45
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Hepatocellular Adenoma																										2
Hepatocellular Adenoma, Multiple																										1
Mesentery																										4
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49
Adenoma, Mixed Cell																										1
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50

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DAY ON TEST	FISCHER 344 RATS MALE																				* TOTALS					
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0				
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	50				
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	50				
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	50				
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					
2	2	2	3	4	4	4	0	0	0	1	1	1	1	2	3	3	4	4	1	2	3	3	4			
3	3	4	7	3	1	5	7	1	7	8	1	3	4	6	9	6	7	3	6	8	6	0	4	8	9	

**CARDIOVASCULAR SYSTEM**

Blood Vessel	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Adenoma															X											1
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Pheochromocytoma Benign										X	X															4
Pheochromocytoma Complex																										1
Bilateral, Pheochromocytoma Benign												X														1
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Adenoma															X	X					X					4
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Pars Distalis, Adenoma	X		X	X	X		X	X		X	X	X			X	X				X				X	X	28
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
C-cell, Adenoma	X				X					X			X				X				X	X				12
C-cell, Carcinoma																										1
Follicular Cell, Carcinoma																								X		1

**GENERAL BODY SYSTEM**

Peritoneum																											2
------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>FISCHER 344 RATS 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	
		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>0 mg/l</b>		6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
		6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		2	2	2	3	4	4	4	0	0	0	1	1	1	1	2	3	3	4	4	1	2	3	3	3	
		3	4	7	3	1	5	7	1	7	8	1	3	4	6	9	6	7	3	6	8	6	0	4	8	
																								<b>* TOTALS</b>		

**GENITAL SYSTEM**

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Preputial Gland Carcinoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50 2
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Bilateral, Interstitial Cell, Adenoma			X		X	X					X		X			X			X	X	X	X			22
Interstitial Cell, Adenoma		X		X				X	X	X	X	X	X												13

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Lymph Node Deep Cervical, Carcinoma, Metastatic, Harderian Gland											+						+					+			9 1
Lymph Node, Mandibular	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
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Thymus Carcinoma, Metastatic, Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49 1

**INTEGUMENTARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

FISCHER 344 RATS MALE	DAY ON TEST																								* TOTALS
	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6		
0 mg/l	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	
	2	2	2	3	4	4	4	0	0	0	1	1	1	1	2	3	3	4	4	1	2	3	3	4	
	3	4	7	3	1	5	7	1	7	8	1	3	4	6	9	6	7	3	6	8	6	0	4	8	
Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Fibroadenoma																						X		1	
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Basal Cell Adenoma																								1	
Carcinoma, Metastatic, Harderian Gland																								1	
Keratoacanthoma											X					X						X		5	
Subcutaneous Tissue, Fibroma				X							X													3	
Subcutaneous Tissue, Fibrosarcoma										X														1	
<b>MUSCULOSKELETAL SYSTEM</b>																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Carcinoma, Metastatic, Harderian Gland																								1	
<b>NERVOUS SYSTEM</b>																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
<b>RESPIRATORY SYSTEM</b>																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Alveolar/Bronchiolar Adenoma	X																							3	
Carcinoma, Metastatic, Harderian Gland																								1	
Carcinoma, Metastatic, Preputial Gland																								1	
Rhabdomyosarcoma, Metastatic, Uncertain Primary Site											X													1	
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Carcinoma, Metastatic, Harderian Gland																								1	
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	

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 + .. Tissue examined microscopically  
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TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

DAY ON TEST	FISCHER 344 RATS 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		
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		
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	8	8	8	8	8	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	2	2	3	4	4	4	0	0	0	1	1	1	1	2	3	3	4	4	1	2	3	3	3	4	4	
3	3	4	7	3	1	5	7	1	7	8	1	3	4	6	9	6	7	3	6	8	6	0	4	8	9	
																								<b>* TOTALS</b>		

SPECIAL SENSES SYSTEM

Ear																												
Neural Crest Tumor																									+	+	2	
																									X		1	
Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Carcinoma, Metastatic, Harderian Gland																											1	
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Carcinoma																											1	
Zymbal's Gland																											+	1
Carcinoma																											X	1

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50

SYSTEMIC LESIONS

Multiple Organ	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Leukemia Mononuclear	X			X			X			X			X			X			X			X			14		
Mesothelioma Malignant																											4

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TDMS No. 20009 - 03  
Test Type: CHRONIC  
Route: DOSED WATER  
Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
Time Report Requested: 10:09:56  
First Dose M/F: 11/18/04 / 11/19/04  
Lab: BAT

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FISCHER 344 RATS MALE		4	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7
156.25 mg/l		9	4	6	8	3	4	6	6	6	7	8	8	9	9	1	1	1	2	2	2	2	2
ANIMAL ID		8	4	7	9	8	5	4	4	6	3	4	6	3	4	7	3	7	9	0	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
		7	6	8	5	5	6	6	9	7	8	8	9	8	8	5	9	6	9	5	5	5	6
		0	0	3	8	1	2	6	7	8	6	8	0	7	4	7	5	1	4	9	4	6	3

males  
(cont...)

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Cecum	+	+	+	+	+	+	+	A	+	+	A	A	+	+	+	+	+	+	+	+	+	+
Intestine Large, Colon	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Large, Rectum	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Duodenum	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum	+	+	+	+	+	+	+	A	+	+	A	A	+	+	+	+	+	+	+	+	+	+
Intestine Small, Jejunum	+	+	+	+	+	+	+	A	+	+	A	A	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hepatocellular Adenoma																						X
Osteosarcoma, Metastatic, Uncertain Primary Site												X										
Mesentery									+					+	+				+			
Osteosarcoma, Metastatic, Uncertain Primary Site														X								
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma, Mixed Cell																						X
Osteosarcoma, Metastatic, Uncertain Primary Site												X										
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
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 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

FISCHER 344 RATS MALE	DAY ON TEST																								ANIMAL ID	males (cont...)
	0 4 9 8	0 5 4 4	0 5 6 7	0 5 8 9	0 6 3 8	0 6 4 5	0 6 6 4	0 6 6 4	0 6 6 6	0 6 6 3	0 6 7 4	0 6 8 6	0 6 8 3	0 6 9 4	0 7 9 7	0 7 1 3	0 7 1 7	0 7 1 9	0 2 2 0	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6	0 7 2 6		
156.25 mg/l	0 0 0 7 0	0 0 0 6 0	0 0 0 8 3	0 0 0 5 8	0 0 0 5 1	0 0 0 6 2	0 0 0 6 6	0 0 0 9 7	0 0 0 7 8	0 0 0 8 6	0 0 0 8 8	0 0 0 9 8	0 0 0 8 0	0 0 0 8 4	0 0 0 5 7	0 0 0 9 5	0 0 0 6 1	0 0 0 9 4	0 0 0 5 4	0 0 0 5 6	0 0 0 5 3	0 0 0 6 4	0 0 0 6 5	0 0 0 6 6	0 0 0 7 1	

Squamous Cell Papilloma

X

Stomach, Glandular

+ +

CARDIOVASCULAR SYSTEM

Blood Vessel

+ +

Heart

+ +

ENDOCRINE SYSTEM

Adrenal Cortex

+ +

Osteosarcoma, Metastatic, Uncertain Primary Site

X

Adrenal Medulla

+ + + + + + + + + + + + + + + A + + + + + + + +

Osteosarcoma, Metastatic, Uncertain Primary Site

X

Pheochromocytoma Benign

Islets, Pancreatic

+ +

Adenoma

X

Parathyroid Gland

+ + M +

Pituitary Gland

+ + + + + + + + + + + + + + + A + + + + + + + +

Pars Distalis, Adenoma

X X

Thyroid Gland

+ +

C-cell, Adenoma

X X X

C-cell, Carcinoma

X

Follicular Cell, Carcinoma

X

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST                  |                    | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|------------------------------|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>FISCHER 344 RATS MALE</b> |                    | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |   |
|                              |                    | 9 | 4 | 6 | 8 | 3 | 4 | 6 | 6 | 6 | 7 | 8 | 8 | 9 | 9 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |   |
|                              | <b>156.25 mg/l</b> | 8 | 4 | 7 | 9 | 8 | 5 | 4 | 4 | 6 | 3 | 4 | 6 | 3 | 4 | 7 | 3 | 7 | 9 | 0 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                              |                    | 7 | 6 | 8 | 5 | 5 | 6 | 6 | 9 | 7 | 8 | 8 | 9 | 8 | 8 | 5 | 9 | 6 | 9 | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 1 |
|                              |                    | 0 | 0 | 3 | 8 | 1 | 2 | 6 | 7 | 8 | 6 | 8 | 0 | 7 | 4 | 7 | 5 | 1 | 4 | 9 | 4 | 6 | 3 | 4 | 5 | 1 |   |

males  
(cont...)

**GENERAL BODY SYSTEM**

Peritoneum +  
 Osteosarcoma, Metastatic, Uncertain Primary Site X

**GENITAL SYSTEM**

Epididymis +  
 Osteosarcoma, Metastatic, Uncertain Primary Site X  
 Preputial Gland +  
 Adenoma X  
 Carcinoma  
 Prostate +  
 Osteosarcoma, Metastatic, Uncertain Primary Site X  
 Seminal Vesicle +  
 Testes +  
 Bilateral, Interstitial Cell, Adenoma X X X X  
 Interstitial Cell, Adenoma X X X X X X X X X X X X

**HEMATOPOIETIC SYSTEM**

Bone Marrow +  
 Lymph Node + + + + +  
 Lymph Node, Mandibular M

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
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 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | ANIMAL ID | males<br>(cont...) |
|-----------------------|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------|--------------------|
|                       | 04          | 05 | 05 | 05 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 |           |                    |
| 156.25 mg/l           | 09          | 04 | 06 | 08 | 03 | 04 | 06 | 06 | 06 | 07 | 08 | 08 | 09 | 09 | 01 | 01 | 01 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02        |                    |
|                       | 08          | 04 | 07 | 09 | 08 | 05 | 04 | 04 | 06 | 03 | 04 | 06 | 03 | 04 | 07 | 03 | 07 | 09 | 00 | 06 | 06 | 06 | 06 | 06 | 06        |                    |
|                       | 00          | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00        |                    |
|                       | 00          | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00        |                    |
|                       | 07          | 06 | 08 | 05 | 05 | 06 | 06 | 09 | 07 | 08 | 08 | 09 | 08 | 08 | 05 | 09 | 06 | 09 | 05 | 05 | 05 | 06 | 06 | 06 | 07        |                    |
|                       | 00          | 00 | 03 | 08 | 01 | 02 | 06 | 07 | 08 | 06 | 08 | 00 | 07 | 04 | 07 | 05 | 01 | 04 | 09 | 04 | 06 | 03 | 04 | 05 | 01        |                    |

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lymph Node, Mesenteric                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Osteosarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |
| Thymus   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + |

**INTEGUMENTARY SYSTEM**

|                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Carcinoma                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Fibroadenoma                    |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |
| Skin                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Basal Cell Adenoma              |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |
| Keratoacanthoma                 |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | X |   |   |
| Squamous Cell Carcinoma         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Subcutaneous Tissue, Fibroma    |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   | X |   |   |   |   |
| Subcutaneous Tissue, Hemangioma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**MUSCULOSKELETAL SYSTEM**

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

**NERVOUS SYSTEM**

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

**RESPIRATORY SYSTEM**

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Alveolar/Bronchiolar Adenoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | X |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | ANIMAL ID             | males<br>(cont...) |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------|
|                       | 0<br>4<br>9<br>8      | 0<br>5<br>4<br>4      | 0<br>5<br>6<br>7      | 0<br>5<br>8<br>9      | 0<br>6<br>3<br>8      | 0<br>6<br>4<br>5      | 0<br>6<br>6<br>4      | 0<br>6<br>6<br>4      | 0<br>6<br>6<br>6      | 0<br>6<br>7<br>3      | 0<br>6<br>8<br>4      | 0<br>6<br>8<br>6      | 0<br>6<br>9<br>3      | 0<br>6<br>9<br>7      | 0<br>7<br>1<br>3      | 0<br>7<br>1<br>7      | 0<br>7<br>1<br>9      | 0<br>2<br>2<br>0      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      |                       |                    |
| 156.25 mg/l           | 0<br>0<br>0<br>7<br>0 | 0<br>0<br>0<br>6<br>0 | 0<br>0<br>0<br>8<br>0 | 0<br>0<br>0<br>5<br>1 | 0<br>0<br>0<br>5<br>2 | 0<br>0<br>0<br>6<br>6 | 0<br>0<br>0<br>6<br>6 | 0<br>0<br>0<br>9<br>7 | 0<br>0<br>0<br>7<br>8 | 0<br>0<br>0<br>8<br>6 | 0<br>0<br>0<br>8<br>8 | 0<br>0<br>0<br>9<br>8 | 0<br>0<br>0<br>8<br>8 | 0<br>0<br>0<br>5<br>7 | 0<br>0<br>0<br>9<br>5 | 0<br>0<br>0<br>6<br>1 | 0<br>0<br>0<br>9<br>4 | 0<br>0<br>0<br>5<br>4 | 0<br>0<br>0<br>5<br>5 | 0<br>0<br>0<br>6<br>3 | 0<br>0<br>0<br>6<br>4 | 0<br>0<br>0<br>6<br>6 | 0<br>0<br>0<br>6<br>5 | 0<br>0<br>0<br>7<br>1 | 0<br>0<br>0<br>7<br>1 |                    |

Carcinoma, Metastatic, Thyroid Gland  
 Osteosarcoma, Metastatic, Uncertain Primary Site

X

Nose  
 Respiratory Epithelium, Adenoma

+  
 X

Trachea

+ +

SPECIAL SENSES SYSTEM

Eye

+ +

Harderian Gland

+ +

URINARY SYSTEM

Kidney  
 Hemangiosarcoma  
 Capsule, Osteosarcoma, Metastatic, Uncertain Primary Site  
 Renal Tubule, Adenoma

+  
 X  
 X  
 X

Urinary Bladder

+ +

SYSTEMIC LESIONS

Multiple Organ  
 Leukemia Mononuclear  
 Mesothelioma Malignant

+  
 X X X X X X X  
 X

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |
|-----------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
|                       | 0726        | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 |          |
| 156.25 mg/l           | 0072        | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 22       |
|                       | 0072        | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 0072 | 22       |

ALIMENTARY SYSTEM

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Large, Colon                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Rectum                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Duodenum                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Ileum                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Small, Jejunum                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Liver  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hepatocellular Adenoma                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Osteosarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Mesentery  | + |   |   |   |   | + |   |   |   |   |   |   |   | + | + |   |   |   |   |   |   |   |   |   | 8  |
| Osteosarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Pancreas   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma, Mixed Cell                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Osteosarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Salivary Glands                                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach                             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |
|-----------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
|                       | 0726        | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  | 0726  |          |
| 156.25 mg/l           | 00726       | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 |          |
|                       | 00726       | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 | 00726 |          |

|                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Squamous Cell Papilloma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Stomach, Glandular      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

**CARDIOVASCULAR SYSTEM**

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Heart        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

**ENDOCRINE SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex                                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Osteosarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Adrenal Medulla                                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Osteosarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Pheochromocytoma Benign                          |   |   | X |   |   |   | X |   |   |   |   |   | X |   |   |   |   |   | X |   | X |   |   | 5 |    |
| Islets, Pancreatic                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Parathyroid Gland                                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | M | + | + | + | 47 |
| Pituitary Gland                                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Pars Distalis, Adenoma                           | X | X | X | X | X | X | X | X | X | X |   | X | X | X | X |   | X | X | X | X | X |   | X | X | 35 |
| Thyroid Gland                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| C-cell, Adenoma                                  |   | X |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   | X |   |   | X |   | 10 |
| C-cell, Carcinoma                                |   | X |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3  |
| Follicular Cell, Carcinoma                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |  |
|-----------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|--|
|                       | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 |          |  |
| 156.25 mg/l           | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | * TOTALS |  |
| ANIMAL ID             | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                |                  |          |  |
| 0                     | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                |                  |          |  |
| 7                     | 7                | 7                | 7                | 7                | 8                | 8                | 8                | 9                | 9                | 9                | 9                | 5                | 6                | 6                | 7                | 8                | 9                | 0                | 5                | 5                | 6                | 7                | 8                |          |  |
| 2                     | 3                | 4                | 5                | 7                | 1                | 5                | 9                | 1                | 3                | 8                | 9                | 5                | 8                | 9                | 9                | 0                | 6                | 0                | 2                | 3                | 7                | 6                | 2                |          |  |

**GENERAL BODY SYSTEM**

|  |          |
|--|----------|
| Peritoneum                                       | <b>1</b> |
| Osteosarcoma, Metastatic, Uncertain Primary Site | <b>1</b> |

**GENITAL SYSTEM**

|  |           |
|--|-----------|
| Epididymis                                       | <b>50</b> |
| Osteosarcoma, Metastatic, Uncertain Primary Site | <b>1</b>  |
| Preputial Gland                                  | <b>50</b> |
| Adenoma  | <b>1</b>  |
| Carcinoma  | <b>1</b>  |
| Prostate   | <b>50</b> |
| Osteosarcoma, Metastatic, Uncertain Primary Site | <b>1</b>  |
| Seminal Vesicle                                  | <b>50</b> |
| Testes   | <b>50</b> |
| Bilateral, Interstitial Cell, Adenoma            | <b>20</b> |
| Interstitial Cell, Adenoma                       | <b>18</b> |

**HEMATOPOIETIC SYSTEM**

|                        |           |
|------------------------|-----------|
| Bone Marrow            | <b>50</b> |
| Lymph Node             | <b>11</b> |
| Lymph Node, Mandibular | <b>0</b>  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE                            | DAY ON TEST |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | * TOTALS |  |  |
|--|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--|--|
|  | 0726        | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   | 0726   |          |  |  |
| 156.25 mg/l                                      | ANIMAL ID   |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | * TOTALS |  |  |
|  | 000722      | 000723 | 000724 | 000725 | 000727 | 000728 | 000729 | 000731 | 000735 | 000739 | 000741 | 000743 | 000745 | 000747 | 000749 | 000751 | 000753 | 000755 | 000757 | 000759 | 000761 | 000763 | 000765 | 000767 |          |  |  |
| Lymph Node, Mesenteric                           | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50       |  |  |
| Spleen   | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50       |  |  |
| Osteosarcoma, Metastatic, Uncertain Primary Site |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | 1        |  |  |
| Thymus   | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 49       |  |  |
| <b>INTEGUMENTARY SYSTEM</b>                      |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |  |  |
| Mammary Gland                                    | +           | +      | +      | M      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 49       |  |  |
| Carcinoma  |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | X      |        | 1        |  |  |
| Fibroadenoma                                     |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | 1        |  |  |
| Skin   | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50       |  |  |
| Basal Cell Adenoma                               |             |        |        |        | X      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | 2        |  |  |
| Keratoacanthoma                                  |             |        |        |        |        |        |        |        |        | X      |        |        |        |        |        |        |        |        |        |        |        |        | X      |        | 5        |  |  |
| Squamous Cell Carcinoma                          |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | X      |        | 1        |  |  |
| Subcutaneous Tissue, Fibroma                     |             |        |        |        |        |        |        |        |        | X      |        |        |        |        |        |        |        |        |        |        |        |        | X      |        | 4        |  |  |
| Subcutaneous Tissue, Hemangioma                  | X           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | 1        |  |  |
| <b>MUSCULOSKELETAL SYSTEM</b>                    |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |  |  |
| Bone   | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50       |  |  |
| <b>NERVOUS SYSTEM</b>                            |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |  |  |
| Brain  | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50       |  |  |
| <b>RESPIRATORY SYSTEM</b>                        |             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |  |  |
| Lung   | +           | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50       |  |  |
| Alveolar/Bronchiolar Adenoma                     |             |        |        |        |        |        |        |        | X      |        |        |        |        |        |        |        |        | X      |        |        |        |        | X      |        | 5        |  |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
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TDMS No. 20009 - 03  
 Test Type: CHRONIC  
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**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE                                     | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|-----------------------|
|   | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      |          |                       |
| 156.25 mg/l   | ANIMAL ID             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |                       |
|   | 0<br>0<br>0<br>7<br>2 | 0<br>0<br>0<br>7<br>3 | 0<br>0<br>0<br>7<br>4 | 0<br>0<br>0<br>7<br>5 | 0<br>0<br>0<br>7<br>1 | 0<br>0<br>0<br>8<br>5 | 0<br>0<br>0<br>8<br>9 | 0<br>0<br>0<br>8<br>9 | 0<br>0<br>0<br>9<br>1 | 0<br>0<br>0<br>9<br>3 | 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>5 | 0<br>0<br>0<br>6<br>8 | 0<br>0<br>0<br>6<br>9 | 0<br>0<br>0<br>7<br>9 | 0<br>0<br>0<br>8<br>0 | 0<br>0<br>0<br>5<br>6 | 0<br>0<br>0<br>5<br>2 | 0<br>0<br>0<br>6<br>3 | 0<br>0<br>0<br>7<br>7 | 0<br>0<br>0<br>8<br>6 |          | 0<br>0<br>0<br>9<br>2 |
| Carcinoma, Metastatic, Thyroid Gland                      | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |                       |
| Osteosarcoma, Metastatic, Uncertain Primary Site          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |                       |
| Nose<br>Respiratory Epithelium, Adenoma                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50<br>1               |
| Trachea   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50                    |
| <b>SPECIAL SENSES SYSTEM</b>                              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |                       |
| Eye   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50                    |
| Harderian Gland   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50                    |
| <b>URINARY SYSTEM</b>                                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |                       |
| Kidney<br>Hemangiosarcoma                                 | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50<br>1               |
| Capsule, Osteosarcoma, Metastatic, Uncertain Primary Site |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |                       |
| Renal Tubule, Adenoma                                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |                       |
| Urinary Bladder   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50                    |
| <b>SYSTEMIC LESIONS</b>                                   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |                       |
| Multiple Organ<br>Leukemia Mononuclear                    | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50<br>19              |
| Mesothelioma Malignant                                    | X                     |                       |                       |                       |                       | X                     |                       |                       |                       | X                     |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       | X                     |          | 2                     |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

|                              |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|
|                              | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                        |
| <b>FISCHER 344 RATS MALE</b> | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                        |
|                              | 3           | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |                        |
|                              | 9           | 6 | 8 | 1 | 1 | 4 | 4 | 4 | 4 | 5 | 7 | 8 | 9 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |                        |
|                              | 3           | 9 | 6 | 5 | 8 | 3 | 6 | 6 | 6 | 7 | 3 | 1 | 2 | 1 | 1 | 3 | 1 | 2 | 6 | 6 | 6 | 6 |                        |
| <b>312.5 mg/l</b>            | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                        |
|                              | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                        |
|                              | 1           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |                        |
|                              | 0           | 0 | 3 | 2 | 2 | 3 | 2 | 4 | 4 | 0 | 1 | 0 | 4 | 1 | 4 | 4 | 5 | 4 | 0 | 0 | 2 | 2 |                        |
|                              | 4           | 3 | 2 | 2 | 8 | 6 | 0 | 0 | 2 | 9 | 8 | 6 | 3 | 3 | 7 | 5 | 0 | 6 | 2 | 7 | 8 | 5 |                        |
|                              | ANIMAL ID   | 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 |                        |
|                              |             | 0 | 0 | 3 | 2 | 2 | 3 | 2 | 4 | 4 | 0 | 1 | 0 | 4 | 1 | 4 | 4 | 5 | 4 | 0 | 0 | 2 |                        |
|                              |             | 4 | 3 | 2 | 2 | 8 | 6 | 0 | 0 | 2 | 9 | 8 | 6 | 3 | 3 | 7 | 5 | 0 | 6 | 2 | 7 | 8 | <b>males (cont...)</b> |

**ALIMENTARY SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum   | + | A | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon   | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum  | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum  | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum   | + | A | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum   | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + |
| Liver<br>Carcinoma, Metastatic, Uncertain Primary Site<br>Hepatocellular Carcinoma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mesentery  |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pancreas   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Salivary Glands  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach<br>Squamous Cell Papilloma                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Glandular   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Tongue<br>Squamous Cell Carcinoma  | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                       | ANIMAL ID             | males<br>(cont...) |
|-----------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------------|-----------------------|--------------------|
|                       | 0<br>3<br>9<br>3 | 0<br>5<br>6<br>9 | 0<br>5<br>8<br>6 | 0<br>6<br>1<br>5 | 0<br>6<br>1<br>8 | 0<br>6<br>4<br>3 | 0<br>6<br>4<br>6 | 0<br>6<br>4<br>6 | 0<br>6<br>4<br>6 | 0<br>6<br>5<br>7 | 0<br>6<br>7<br>3 | 0<br>6<br>8<br>1 | 0<br>6<br>9<br>2 | 0<br>7<br>0<br>1 | 0<br>7<br>0<br>1 | 0<br>7<br>1<br>3 | 0<br>7<br>2<br>1 | 0<br>7<br>2<br>2 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6      |                       |                    |
| 312.5 mg/l            | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0<br>0<br>1<br>0<br>4 | 0<br>0<br>1<br>0<br>4 |                    |

Squamous Cell Papilloma

CARDIOVASCULAR SYSTEM

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

ENDOCRINE SYSTEM

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex<br>Adenoma                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adrenal Medulla<br>Pheochromocytoma Benign | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pheochromocytoma Malignant                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Bilateral, Pheochromocytoma Malignant      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Islets, Pancreatic<br>Adenoma              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pituitary Gland<br>Pars Distalis, Adenoma  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pars Intermedia, Adenoma                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Thyroid Gland<br>C-cell, Adenoma           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| C-cell, Carcinoma                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Follicular Cell, Adenoma                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

GENERAL BODY SYSTEM

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

| DAY ON TEST | FISCHER 344 RATS MALE |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | ANIMAL ID | males (cont...) |      |      |
|-------------|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|-----------------|------|------|
|             | 0393                  | 0569 | 0586 | 0611 | 0614 | 0644 | 0644 | 0666 | 0666 | 0666 | 0666 | 0667 | 0667 | 0671 | 0671 | 0672 | 0672 | 0672 | 0672 | 0672 | 0677 | 0677 | 0677 | 0677 | 0685 |           |                 | 0685 |      |
| 312.5 mg/l  | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0001            | 0001 |      |
|             | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0               | 0001 | 0001 |
|             | 1                     | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1         | 1               | 0001 | 0001 |
|             | 0                     | 0    | 3    | 2    | 2    | 3    | 2    | 4    | 4    | 0    | 1    | 0    | 4    | 1    | 4    | 4    | 5    | 4    | 0    | 0    | 0    | 2    | 2    | 3    | 3    | 4         | 4               | 0004 | 0004 |
|             | 4                     | 3    | 2    | 2    | 8    | 6    | 0    | 0    | 2    | 9    | 8    | 6    | 3    | 3    | 7    | 5    | 0    | 6    | 2    | 7    | 8    | 5    | 6    | 1    | 9    | 9         | 0004            | 0004 |      |

Peritoneum

**GENITAL SYSTEM**

Epididymis

+ +

Preputial Gland  
Adenoma  
Carcinoma

+  
 X

Prostate

+ +

Seminal Vesicle

+ +

Testes  
Bilateral, Interstitial Cell, Adenoma  
Interstitial Cell, Adenoma  
Tunic, Leiomyosarcoma

+  
 X X X X X X X X X X X X X X X X  
 X X X X X X X X

**HEMATOPOIETIC SYSTEM**

Bone Marrow

+ +

Lymph Node

+ +

Lymph Node, Mandibular

M M

Lymph Node, Mesenteric  
Carcinoma, Metastatic, Uncertain Primary Site

+  
 X

Spleen

+ +

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST | FISCHER 344 RATS MALE |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | ANIMAL ID | males<br>(cont...) |      |
|-------------|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--------------------|------|
|             | 0393                  | 0569 | 0589 | 0615 | 0618 | 0664 | 0666 | 0666 | 0666 | 0666 | 0666 | 0666 | 0666 | 0666 | 0666 | 0666 | 0666 | 0666 | 0666 | 0666 | 0666 | 0666 | 0666 | 0666 |           |                    | 0666 |
| 312.5 mg/l  | 0                     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0         | 0011004            |      |

Thymus M + M + + +

**INTEGUMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland Adenoma Fibroadenoma  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Skin Basal Cell Adenoma Keratoacanthoma Squamous Cell Papilloma Subcutaneous Tissue, Fibroma Subcutaneous Tissue, Lipoma Subcutaneous Tissue, Sarcoma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

**MUSCULOSKELETAL SYSTEM**

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

**NERVOUS SYSTEM**

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

**RESPIRATORY SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung Alveolar/Bronchiolar Adenoma Alveolar/Bronchiolar Carcinoma Alveolar/Bronchiolar Carcinoma, Multiple Carcinoma, Metastatic, Thyroid Gland Carcinoma, Metastatic, Zymbal'S Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | ANIMAL ID             | males<br>(cont...) |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------|
|                       | 0<br>3<br>9<br>3      | 0<br>5<br>6<br>9      | 0<br>5<br>8<br>6      | 0<br>6<br>1<br>5      | 0<br>6<br>1<br>8      | 0<br>6<br>4<br>3      | 0<br>6<br>4<br>6      | 0<br>6<br>4<br>6      | 0<br>6<br>4<br>6      | 0<br>6<br>5<br>7      | 0<br>6<br>7<br>3      | 0<br>6<br>8<br>1      | 0<br>6<br>9<br>2      | 0<br>7<br>0<br>1      | 0<br>7<br>0<br>1      | 0<br>7<br>1<br>3      | 0<br>7<br>2<br>1      | 0<br>7<br>2<br>2      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      |                       |                    |
| 312.5 mg/l            | 0<br>0<br>1<br>0<br>4 | 0<br>0<br>0<br>0<br>3 | 0<br>0<br>1<br>0<br>2 | 0<br>0<br>1<br>2<br>2 | 0<br>0<br>1<br>2<br>8 | 0<br>0<br>1<br>2<br>6 | 0<br>0<br>1<br>4<br>0 | 0<br>0<br>1<br>4<br>0 | 0<br>0<br>1<br>4<br>2 | 0<br>0<br>1<br>0<br>9 | 0<br>0<br>1<br>1<br>8 | 0<br>0<br>1<br>0<br>6 | 0<br>0<br>1<br>4<br>3 | 0<br>0<br>1<br>4<br>3 | 0<br>0<br>1<br>4<br>7 | 0<br>0<br>1<br>4<br>5 | 0<br>0<br>1<br>4<br>0 | 0<br>0<br>1<br>4<br>6 | 0<br>0<br>1<br>4<br>2 | 0<br>0<br>1<br>4<br>7 | 0<br>0<br>1<br>4<br>8 | 0<br>0<br>1<br>2<br>5 | 0<br>0<br>1<br>2<br>6 | 0<br>0<br>1<br>2<br>6 | 0<br>0<br>1<br>3<br>9 |                    |

Pheochromocytoma Malignant, Metastatic,  
 Adrenal Medulla

X

Nose

+ +

Trachea

+ +

SPECIAL SENSES SYSTEM

Eye

+ +

Harderian Gland

+ +

Zymbal's Gland  
 Carcinoma

+  
 X

URINARY SYSTEM

Kidney

+ +

Renal Tubule, Adenoma, Multiple

Urinary Bladder

+ +

Leiomyoma

X

SYSTEMIC LESIONS

Multiple Organ

+ +

Leukemia Mononuclear

X X

Lymphoma Malignant

Mesothelioma Malignant

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | * TOTALS |
|-----------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
|                       | 0726        | 0727  | 0728  | 0729  | 0730  | 0731  | 0732  | 0733  | 0734  | 0735  | 0736  | 0737  | 0738  | 0739  | 0740  | 0741  | 0742  | 0743  | 0744  | 0745  | 0746  | 0747  |          |
| 312.5 mg/l            | 00149       | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 00111 | 50       |

**ALIMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Large, Colon                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Rectum                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Duodenum                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Ileum                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Small, Jejunum                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Liver   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   | 1  |
| Hepatocellular Carcinoma                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 1  |
| Mesentery                                     | + |   |   |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   | + |   | 4  |
| Pancreas                                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Salivary Glands                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Squamous Cell Papilloma                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 1  |
| Stomach, Glandular                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Tongue  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Squamous Cell Carcinoma                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
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 BLANK .. Not examined microscopically

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>312.5 mg/l   | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | * TOTALS  |                  |   |          |  |
|---------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|------------------|---|----------|--|
|                                       | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 |           | 0<br>7<br>2<br>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                |   |          |  |
|                                       | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1         | 1                |   |          |  |
|                                       | 4                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 2                | 2                | 2                | 2                | 3                | 3                | 3                | 3                | 4                | 0                | 0                | 1                | 1                | 2         | 3                | 4 | 4        |  |
|                                       | 9                | 0                | 1                | 4                | 5                | 6                | 9                | 1                | 3                | 7                | 9                | 0                | 3                | 5                | 7                | 8                | 1                | 5                | 2                | 7                | 4                | 4         | 8                | 4 | <b>1</b> |  |
| Squamous Cell Papilloma               | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>1</b>  |                  |   |          |  |
| <b>CARDIOVASCULAR SYSTEM</b>          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |   |          |  |
| Blood Vessel                          | +                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>50</b> |                  |   |          |  |
| Heart                                 | +                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>50</b> |                  |   |          |  |
| <b>ENDOCRINE SYSTEM</b>               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |           |                  |   |          |  |
| Adrenal Cortex                        | +                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>50</b> |                  |   |          |  |
| Adenoma                               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>1</b>  |                  |   |          |  |
| Adrenal Medulla                       | +                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>49</b> |                  |   |          |  |
| Pheochromocytoma Benign               | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>6</b>  |                  |   |          |  |
| Pheochromocytoma Malignant            | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>2</b>  |                  |   |          |  |
| Bilateral, Pheochromocytoma Malignant | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>1</b>  |                  |   |          |  |
| Islets, Pancreatic                    | +                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>50</b> |                  |   |          |  |
| Adenoma                               | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>3</b>  |                  |   |          |  |
| Parathyroid Gland                     | +                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>48</b> |                  |   |          |  |
| Pituitary Gland                       | +                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>50</b> |                  |   |          |  |
| Pars Distalis, Adenoma                | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>28</b> |                  |   |          |  |
| Pars Intermedia, Adenoma              | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>1</b>  |                  |   |          |  |
| Thyroid Gland                         | +                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>50</b> |                  |   |          |  |
| C-cell, Adenoma                       | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>4</b>  |                  |   |          |  |
| C-cell, Carcinoma                     | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>1</b>  |                  |   |          |  |
| Follicular Cell, Adenoma              | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b>1</b>  |                  |   |          |  |

**GENERAL BODY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   | * TOTALS |
|-----------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---|----------|
|                       | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 | 0<br>7<br>2<br>7 |   |          |
| 312.5 mg/l            | 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 |          |
|                       | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1 |          |
|                       | 4                | 1                | 1                | 1                | 1                | 1                | 1                | 2                | 2                | 2                | 2                | 3                | 3                | 3                | 3                | 4                | 0                | 0                | 1                | 1                | 2                | 3                | 3                | 4 |          |
|                       | 9                | 0                | 1                | 4                | 5                | 6                | 9                | 1                | 3                | 7                | 9                | 0                | 3                | 5                | 7                | 8                | 1                | 5                | 2                | 7                | 4                | 4                | 8                | 1 |          |

Peritoneum + 1

**GENITAL SYSTEM**

|                                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |
|---------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Epididymis                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 50 |
| Preputial Gland                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 50 |
| Adenoma                               |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   | X | 2  |    |
| Carcinoma                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |    | 2  |
| Prostate                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 50 |
| Seminal Vesicle                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 50 |
| Testes                                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 50 |
| Bilateral, Interstitial Cell, Adenoma |   | X | X | X |   | X | X |   | X | X | X | X |   |   | X |   | X | X |   |   | X | X | X | 26 |    |
| Interstitial Cell, Adenoma            | X |   |   |   | X |   |   | X |   |   |   |   |   |   | X |   | X |   | X | X |   |   | X | 16 |    |
| Tunic, Leiomyosarcoma                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   | 1  |    |

**HEMATOPOIETIC SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow                                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | + | + |   |   |   |   |   |   |   | 11 |
| Lymph Node, Mandibular                        | 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  |
| Lymph Node, Mesenteric                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Spleen  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>312.5 mg/l      | DAY ON TEST |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |     | * TOTALS |
|--|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----|----------|
|  | 07<br>26    | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 | 07<br>27 |     |          |
| ANIMAL ID                                | 001         | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001      | 001 |          |
| Thymus                                   | +           | +        | +        | +        | +        | +        | +        | +        | M        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | M        | +        | +        | M        | +   | 45       |
| <b>INTEGUMENTARY SYSTEM</b>              |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |     |          |
| Mammary Gland                            | +           | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +   | 50       |
| Adenoma                                  |             |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |     | 1        |
| Fibroadenoma                             |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          | X        |          |          |          |          |          | X        |          |     | 2        |
| Skin                                     | +           | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +   | 50       |
| Basal Cell Adenoma                       |             |          |          |          |          |          |          |          |          |          |          |          |          |          | X        |          |          |          |          | X        |          |          |          |     | 2        |
| Keratoacanthoma                          |             |          |          | X        |          |          |          |          |          |          |          | X        |          |          |          | X        |          |          |          |          |          |          |          |     | 7        |
| Squamous Cell Papilloma                  |             |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |     | 1        |
| Subcutaneous Tissue, Fibroma             |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |     | 2        |
| Subcutaneous Tissue, Lipoma              |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          | X        |          |          |          |          |     | 2        |
| Subcutaneous Tissue, Sarcoma             |             |          |          |          |          |          |          |          |          |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |     | 1        |
| <b>MUSCULOSKELETAL SYSTEM</b>            |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |     |          |
| Bone                                     | +           | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +   | 50       |
| Sarcoma                                  |             |          |          |          |          |          |          |          |          |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |     | 1        |
| <b>NERVOUS SYSTEM</b>                    |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |     |          |
| Brain                                    | +           | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +   | 50       |
| <b>RESPIRATORY SYSTEM</b>                |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |     |          |
| Lung                                     | +           | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +        | +   | 50       |
| Alveolar/Bronchiolar Adenoma             |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |     | 1        |
| Alveolar/Bronchiolar Carcinoma           |             |          |          |          |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |     | 3        |
| Alveolar/Bronchiolar Carcinoma, Multiple |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |     | 1        |
| Carcinoma, Metastatic, Thyroid Gland     |             |          |          |          |          |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |     | 1        |
| Carcinoma, Metastatic, Zymbal'S Gland    |             |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |     | 1        |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>312.5 mg/l                     | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
|   | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      | 0<br>7<br>2<br>7      |                       |          |
| ANIMAL ID   | 0<br>0<br>1<br>4<br>9 | 0<br>0<br>1<br>1<br>0 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>1 |          |
| Pheochromocytoma Malignant, Metastatic, Adrenal Medulla |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |          |
| Nose  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |          |
| Trachea   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |          |
| <b>SPECIAL SENSES SYSTEM</b>                            |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Eye   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |          |
| Harderian Gland   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |          |
| Zymbal's Gland Carcinoma                                |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1<br>1                |          |
| <b>URINARY SYSTEM</b>                                   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Kidney Renal Tubule, Adenoma, Multiple                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50<br>1               |          |
| Urinary Bladder Leiomyoma                               | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50<br>1               |          |
| <b>SYSTEMIC LESIONS</b>                                 |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Multiple Organ Leukemia Mononuclear                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50<br>16              |          |
| Lymphoma Malignant                                      |                       |                       | X                     | X                     |                       | X                     | X                     |                       |                       |                       |                       |                       | X                     | X                     |                       |                       |                       |                       |                       |                       |                       | X                     |                       | 1                     |          |
| Mesothelioma Malignant                                  | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |          |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 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 | males<br>(cont...) |   |   |
|-----------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------|---|---|
| DAY ON TEST           |  | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |                    |   |   |
| FISCHER 344 RATS MALE |  | 9 | 4 | 4 | 5 | 5 | 6 | 8 | 0 | 1 | 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 9 | 9 | 9 | 0 | 0 | 1 |                    | 1 | 2 |
| 625 mg/l              |  | 9 | 3 | 5 | 1 | 2 | 8 | 6 | 7 | 8 | 4 | 8 | 1 | 9 | 7 | 4 | 3 | 1 | 1 | 4 | 6 | 1 | 2 | 3 | 3 |                    | 0 |   |
| ANIMAL ID             |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                  | 0 |   |
|                       |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1                  | 1 |   |
|                       |  | 8 | 9 | 5 | 9 | 6 | 6 | 7 | 8 | 7 | 9 | 9 | 8 | 0 | 7 | 6 | 6 | 8 | 8 | 7 | 9 | 6 | 5 | 7 | 8 | 8                  | 8 |   |
|                       |  | 1 | 8 | 8 | 5 | 3 | 4 | 2 | 5 | 9 | 3 | 7 | 0 | 0 | 5 | 7 | 8 | 3 | 2 | 0 | 9 | 0 | 1 | 3 | 9 | 7                  |   |   |

**ALIMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Esophagus   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Large, Cecum                            | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |  |
| Intestine Large, Colon                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + |  |
| Intestine Large, Rectum                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |  |
| Intestine Small, Duodenum                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Small, Ileum                            | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Small, Jejunum                          | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Leiomyoma   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Liver   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |  |
| Hepatocellular Adenoma                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |  |
| Mesentery   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |   | + |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Pancreas  | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |  |
| Acinus, Adenoma                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>625 mg/l | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | ANIMAL ID | males<br>(cont...) |
|-----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------|--------------------|
|                                   | 0<br>4<br>9<br>9 | 0<br>5<br>4<br>3 | 0<br>5<br>4<br>5 | 0<br>5<br>5<br>1 | 0<br>5<br>5<br>2 | 0<br>5<br>6<br>8 | 0<br>5<br>6<br>6 | 0<br>6<br>8<br>7 | 0<br>6<br>0<br>1 | 0<br>6<br>1<br>2 | 0<br>6<br>2<br>2 | 0<br>6<br>3<br>3 | 0<br>6<br>4<br>5 | 0<br>6<br>6<br>7 | 0<br>6<br>7<br>8 | 0<br>6<br>8<br>9 | 0<br>6<br>9<br>1 | 0<br>6<br>9<br>4 | 0<br>6<br>9<br>6 | 0<br>7<br>0<br>1 | 0<br>7<br>0<br>2 | 0<br>7<br>1<br>3 | 0<br>7<br>1<br>3 | 0<br>7<br>2<br>0 |           |                    |
|                                   | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0011881          |           |                    |

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Salivary Glands<br>Carcinoma                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Stomach, Forestomach<br>Squamous Cell Papilloma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Glandular                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Tongue<br>Squamous Cell Carcinoma               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**CARDIOVASCULAR SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blood Vessel   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Heart<br>Alveolar/Bronchiolar Carcinoma, Metastatic,<br>Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**ENDOCRINE SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex<br>Adenoma                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Adrenal Medulla<br>Pheochromocytoma Benign | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Islets, Pancreatic<br>Adenoma              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST | FISCHER 344 RATS MALE |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | ANIMAL ID                 | males<br>(cont...) |
|-------------|-----------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------------------|--------------------|
|             | 04                    | 05 | 05 | 05 | 05 | 05 | 05 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 07 | 07 | 07 | 07 | 07 |                           |                    |
| 625 mg/l    | 99                    | 43 | 45 | 45 | 51 | 52 | 68 | 67 | 88 | 18 | 24 | 23 | 31 | 49 | 57 | 64 | 73 | 81 | 99 | 99 | 00 | 00 | 01 | 01 | 0011885342593700001119989 | males<br>(cont...) |

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parathyroid Gland                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M |
| Pituitary Gland<br>Pars Distalis, Adenoma | + | + | + | + | + | + | + | + | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Thyroid Gland<br>C-cell, Adenoma          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X |

GENERAL BODY SYSTEM

|            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |
|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|
| Peritoneum |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | + | + |
|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|

GENITAL SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Epididymis  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Preputial Gland   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Prostate<br>Fibrous Histiocytoma, Metastatic, Skeletal Muscle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X |
| Seminal Vesicle   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Testes<br>Bilateral, Interstitial Cell, Adenoma               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Interstitial Cell, Adenoma                                    |   | X |   | X | X |   | X | X |   | X | X |   | X |   | X | X |   | X | X |   | X |   | X |

HEMATOPOIETIC SYSTEM

|             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lymph Node  | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | + |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                              |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                            |
|------------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------------|
| <b>FISCHER 344 RATS MALE</b> | DAY ON TEST     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | <b>males<br/>(cont...)</b> |
|                              |                 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 |                            |
|                              | <b>625 mg/l</b> | 9 | 4 | 4 | 5 | 5 | 6 | 8 | 0 | 1 | 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 9 | 9 | 0 | 0 | 1 | 1 |                            |
|                              | ANIMAL ID       | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                            |
|                              |                 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |                            |
|                              |                 | 8 | 9 | 5 | 9 | 6 | 6 | 7 | 8 | 7 | 9 | 9 | 8 | 0 | 7 | 6 | 6 | 8 | 8 | 7 | 9 | 6 | 5 | 7 | 8 |                            |
|                              |                 | 1 | 8 | 8 | 5 | 3 | 4 | 2 | 5 | 9 | 3 | 7 | 0 | 0 | 5 | 7 | 8 | 3 | 2 | 0 | 9 | 0 | 1 | 3 | 9 |                            |

Iliac, Chordoma, Metastatic, Uncertain Primary Site

Lymph Node, Mandibular

Lymph Node, Mesenteric

Fibrous Histiocytoma, Metastatic, Skeletal Muscle

Spleen

Thymus

Alveolar/Bronchiolar Carcinoma, Metastatic, Lung

Fibrous Histiocytoma, Metastatic, Skeletal Muscle

**INTEGUMENTARY SYSTEM**

Mammary Gland

Skin

Keratoacanthoma

Subcutaneous Tissue, Fibroma

**MUSCULOSKELETAL SYSTEM**

Bone

Skeletal Muscle

Fibrous Histiocytoma

**NERVOUS SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>625 mg/l | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                       | ANIMAL ID | males<br>(cont...) |
|-----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------------|-----------|--------------------|
|                                   | 0<br>4<br>9<br>9 | 0<br>5<br>4<br>3 | 0<br>5<br>4<br>5 | 0<br>5<br>5<br>1 | 0<br>5<br>5<br>2 | 0<br>5<br>6<br>8 | 0<br>5<br>6<br>6 | 0<br>6<br>8<br>7 | 0<br>6<br>0<br>8 | 0<br>6<br>1<br>4 | 0<br>6<br>2<br>8 | 0<br>6<br>2<br>1 | 0<br>6<br>3<br>9 | 0<br>6<br>4<br>7 | 0<br>6<br>5<br>4 | 0<br>6<br>6<br>3 | 0<br>6<br>8<br>1 | 0<br>6<br>9<br>1 | 0<br>6<br>9<br>4 | 0<br>7<br>0<br>6 | 0<br>7<br>0<br>1 | 0<br>7<br>1<br>3 | 0<br>7<br>1<br>3 | 0<br>7<br>2<br>0      |           |                    |
|                                   | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0<br>0<br>1<br>8<br>1 |           |                    |

Brain +

**RESPIRATORY SYSTEM**

Lung +  
 Alveolar/Bronchiolar Adenoma X  
 Alveolar/Bronchiolar Carcinoma X  
 Fibrous Histiocytoma, Metastatic, Skeletal Muscle X  
 Nose +  
 Trachea +

**SPECIAL SENSES SYSTEM**

Eye +  
 Harderian Gland +  
 Zymbal's Gland Adenoma + X

**URINARY SYSTEM**

Kidney +  
 Fibrous Histiocytoma, Metastatic, Skeletal Muscle X  
 Renal Tubule, Adenoma  
 Urinary Bladder +  
 Fibrous Histiocytoma, Metastatic, Skeletal Muscle X

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                                       |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                    |
|---------------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|
| FISCHER 344 RATS MALE<br><br>625 mg/l | DAY ON TEST | 04   | 05   | 05   | 05   | 05   | 05   | 05   | 06   | 06   | 06   | 06   | 06   | 06   | 06   | 06   | 06   | 06   | 06   | 06   | 07   | 07   | 07   | 07   | 07   | males<br>(cont...) |
|                                       | ANIMAL ID   | 0018 | 0018 | 0005 | 0003 | 0004 | 0002 | 0005 | 0009 | 0003 | 0007 | 0000 | 0000 | 0005 | 0007 | 0008 | 0003 | 0002 | 0000 | 0009 | 0000 | 0001 | 0003 | 0009 | 0007 |                    |
|                                       |             | 9    | 3    | 5    | 1    | 2    | 8    | 6    | 7    | 8    | 4    | 8    | 1    | 9    | 7    | 4    | 3    | 1    | 1    | 4    | 6    | 1    | 2    | 3    | 0    |                    |

SYSTEMIC LESIONS

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Multiple Organ       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Leukemia Mononuclear | X | X |   | X | X | X |   |   |   |   |   |   | X | X |   |   |   |   |   | X |   |   |   | X |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |
|-----------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
|                       | 0723        | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 | 0726 |          |
| 625 mg/l              | 0088        | 0085 | 0056 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066 | 0066     |
|                       | 0018        | 0015 | 0015 | 0016 | 0016 | 0017 | 0018 | 0019 | 0015 | 0015 | 0015 | 0015 | 0015 | 0016 | 0016 | 0017 | 0017 | 0017 | 0017 | 0018 | 0019 | 0019 | 0019 | 0016 | 0019     |

**ALIMENTARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Large, Colon                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Large, Rectum                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Intestine Small, Duodenum                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Intestine Small, Jejunum                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Leiomyoma   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Liver   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Hepatocellular Adenoma                            |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Mesentery   | + |   |   |   |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   |   |   | 6  |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Pancreas  | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Acinus, Adenoma                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   | 1  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br><br>625 mg/l                | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |  |  |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|--|--|
|  | 0<br>7<br>2<br>3      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      |                       |          |  |  |
| ANIMAL ID  | 0<br>0<br>1<br>8<br>8 | 0<br>0<br>1<br>5<br>5 | 0<br>0<br>1<br>5<br>6 | 0<br>0<br>1<br>6<br>6 | 0<br>0<br>1<br>7<br>6 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>9<br>6 | 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>7 | 0<br>0<br>1<br>5<br>9 | 0<br>0<br>1<br>6<br>5 | 0<br>0<br>1<br>6<br>9 | 0<br>0<br>1<br>7<br>1 | 0<br>0<br>1<br>7<br>4 | 0<br>0<br>1<br>7<br>7 | 0<br>0<br>1<br>7<br>8 | 0<br>0<br>1<br>7<br>4 | 0<br>0<br>1<br>8<br>0 | 0<br>0<br>1<br>9<br>4 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>1 |          |  |  |
| Salivary Glands<br>Carcinoma                         | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50<br>1  |  |  |
| Stomach, Forestomach<br>Squamous Cell Papilloma      | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50<br>1  |  |  |
| Stomach, Glandular                                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |  |  |
| Tongue<br>Squamous Cell Carcinoma                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1<br>1   |  |  |
| <b>CARDIOVASCULAR SYSTEM</b>                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |  |  |
| Blood Vessel   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |  |  |
| Heart  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |  |  |
| Alveolar/Bronchiolar Carcinoma, Metastatic,<br>Lung  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |  |  |
| Carcinoma, Metastatic, Salivary Glands               |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |  |  |
| Fibrous Histiocytoma, Metastatic, Skeletal<br>Muscle |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |  |  |
| <b>ENDOCRINE SYSTEM</b>                              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |  |  |
| Adrenal Cortex                                       | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |  |  |
| Adenoma  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |  |  |
| Adrenal Medulla                                      | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |  |  |
| Pheochromocytoma Benign                              |                       |                       |                       |                       | X                     |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       | 5        |  |  |
| Islets, Pancreatic                                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |  |  |
| Adenoma  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2        |  |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>625 mg/l                 | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS              |  |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|
|   | 0<br>7<br>2<br>3      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      |                       |  |
| ANIMAL ID   | 0<br>0<br>1<br>8<br>8 | 0<br>0<br>1<br>5<br>5 | 0<br>0<br>1<br>5<br>6 | 0<br>0<br>1<br>6<br>6 | 0<br>0<br>1<br>6<br>6 | 0<br>0<br>1<br>7<br>6 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>9<br>6 | 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>7 | 0<br>0<br>1<br>5<br>9 | 0<br>0<br>1<br>6<br>5 | 0<br>0<br>1<br>6<br>9 | 0<br>0<br>1<br>7<br>1 | 0<br>0<br>1<br>7<br>4 | 0<br>0<br>1<br>7<br>7 | 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>4 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>1 |  |
| Parathyroid Gland                                 | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | M                     | +                     | 48                    |  |
| Pituitary Gland                                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | I                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 49                    |  |
| Pars Distalis, Adenoma                            |                       | X                     |                       | X                     | X                     | X                     |                       | X                     | X                     |                       | X                     | X                     |                       | X                     | X                     |                       | X                     | X                     | X                     | X                     |                       | X                     | X                     | X                     | 36                    |  |
| Thyroid Gland                                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |  |
| C-cell, Adenoma                                   |                       |                       |                       |                       |                       | X                     | X                     | X                     |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       | X                     |                       |                       | X                     | 8                     |  |
| <b>GENERAL BODY SYSTEM</b>                        |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |  |
| Peritoneum  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2                     |  |
| <b>GENITAL SYSTEM</b>                             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |  |
| Epididymis  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |  |
| Preputial Gland                                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |  |
| Prostate  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |  |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1                     |                       |  |
| Seminal Vesicle                                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |  |
| Testes  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |  |
| Bilateral, Interstitial Cell, Adenoma             | X                     | X                     | X                     |                       | X                     | X                     |                       | X                     | X                     |                       | X                     | X                     |                       | X                     | X                     |                       | X                     | X                     |                       | X                     | X                     |                       | X                     | X                     | 24                    |  |
| Interstitial Cell, Adenoma                        |                       |                       |                       | X                     | X                     |                       |                       | X                     | X                     |                       | X                     |                       |                       | X                     |                       |                       | X                     |                       |                       | X                     |                       |                       |                       | X                     | 18                    |  |
| <b>HEMATOPOIETIC SYSTEM</b>                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |  |
| Bone Marrow                                       | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |  |
| Lymph Node  | +                     |                       | +                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 8                     |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
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TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
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**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS              |                       |  |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|
|                       | 0<br>7<br>2<br>3      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      | 0<br>7<br>2<br>6      |                       |                       |  |
| 625 mg/l              | 0<br>0<br>1<br>8<br>8 | 0<br>0<br>1<br>5<br>5 | 0<br>0<br>1<br>5<br>6 | 0<br>0<br>1<br>6<br>6 | 0<br>0<br>1<br>6<br>6 | 0<br>0<br>1<br>7<br>6 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>9<br>6 | 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>7 | 0<br>0<br>1<br>5<br>9 | 0<br>0<br>1<br>6<br>5 | 0<br>0<br>1<br>6<br>9 | 0<br>0<br>1<br>7<br>1 | 0<br>0<br>1<br>7<br>4 | 0<br>0<br>1<br>7<br>7 | 0<br>0<br>1<br>7<br>8 | 0<br>0<br>1<br>8<br>4 | 0<br>0<br>1<br>9<br>0 | 0<br>0<br>1<br>9<br>4 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>6<br>1 | 0<br>0<br>1<br>9<br>2 |  |

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |          |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|----------|
| Iliac, Chordoma, Metastatic, Uncertain Primary Site | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           | <b>1</b> |
| Lymph Node, Mandibular                              | 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         | <b>0</b> |
| Lymph Node, Mesenteric                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>50</b> |          |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1</b>  |          |
| Spleen  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>50</b> |          |
| Thymus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>50</b> |          |
| Alveolar/Bronchiolar Carcinoma, Metastatic, Lung    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1</b>  |          |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1</b>  |          |

**INTEGUMENTARY SYSTEM**

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |           |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|-----------|
| Mammary Gland                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | <b>50</b> |
| Skin                         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>50</b> |           |
| Keratoacanthoma              |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   | X |   |   | X |   |   | <b>5</b>  |           |
| Subcutaneous Tissue, Fibroma |   | X |   | X |   |   |   |   |   |   |   |   |   |   | X |   |   |   | X |   |   |   |   | <b>5</b>  |           |

**MUSCULOSKELETAL SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Bone                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>50</b> |
| Skeletal Muscle      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1</b>  |
| Fibrous Histiocytoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1</b>  |

**NERVOUS SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS MALE<br>625 mg/l | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | * TOTALS |
|-----------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
|                                   | 0<br>7<br>2<br>3 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>6 | 0<br>7<br>2<br>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                |                  |          |
|                                   | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                | 1                |                  |          |
|                                   | 8                | 5                | 5                | 6                | 6                | 7                | 8                | 9                | 5                | 5                | 5                | 5                | 5                | 6                | 6                | 7                | 7                | 7                | 8                | 9                | 9                | 9                | 6                |                  |          |
|                                   | 8                | 5                | 6                | 2                | 6                | 6                | 6                | 1                | 2                | 3                | 4                | 7                | 9                | 5                | 9                | 1                | 4                | 7                | 8                | 4                | 0                | 4                | 6                |                  |          |

Brain + 50

**RESPIRATORY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Lung  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Alveolar/Bronchiolar Adenoma                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   | 2  |
| Alveolar/Bronchiolar Carcinoma                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 2  |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Nose  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Trachea   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

**SPECIAL SENSES SYSTEM**

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Eye             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Zymbal's Gland  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Adenoma         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

**URINARY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Kidney  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Renal Tubule, Adenoma                             |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   | 1  |
| Urinary Bladder                                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Fibrous Histiocytoma, Metastatic, Skeletal Muscle |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | ANIMAL ID | females<br>(cont...) |
|-------------------------|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------|----------------------|
|                         | 04          | 04 | 05 | 05 | 05 | 05 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 |           |                      |
| 0 mg/l                  | 54          | 88 | 09 | 14 | 31 | 79 | 08 | 21 | 25 | 44 | 82 | 83 | 91 | 00 | 01 | 01 | 12 | 12 | 55 | 97 | 77 | 27 | 27 | 07 |           |                      |
|                         | 00          | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |           |                      |
|                         | 22          | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |           |                      |
|                         | 11          | 00 | 22 | 00 | 22 | 33 | 33 | 33 | 44 | 00 | 44 | 44 | 44 | 11 | 22 | 33 | 00 | 22 | 00 | 00 | 11 | 11 | 11 | 33 |           |                      |
|                         | 49          | 95 | 52 | 99 | 00 | 66 | 11 | 22 | 33 | 11 | 88 | 00 | 22 | 77 | 77 | 11 | 00 | 55 | 88 | 00 | 33 | 66 | 33 | 99 |           |                      |

ALIMENTARY SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum  | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | A | A | + | + | + | + | + |
| Intestine Large, Colon  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | A | + | + | + | + | + |
| Intestine Large, Rectum<br>Leiomyosarcoma, Metastatic, Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | A | + | + | + | + | + |
| Intestine Small, Duodenum                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | A | + | + | + | + | + |
| Intestine Small, Jejunum                                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + |
| Liver<br>Hepatocellular Adenoma                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mesentery   |   | + |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pancreas  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Salivary Glands   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Glandular  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

CARDIOVASCULAR SYSTEM

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

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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











TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | * TOTALS |
|-------------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
|                         | 078         | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 |          |
| 0 mg/l                  | 000         | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 50       |
| ANIMAL ID               | 000         | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 50       |
|                         | 28          | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 28  | 50       |
|                         | 06          | 07  | 07  | 09  | 11  | 12  | 13  | 12  | 15  | 14  | 15  | 00  | 14  | 11  | 15  | 18  | 14  | 16  | 18  | 14  | 18  | 13  | 16  | 17  | 50       |

**ALIMENTARY SYSTEM**

|                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum             | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Intestine Large, Colon             | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Large, Rectum            | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Leiomyosarcoma, Metastatic, Uterus |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Intestine Small, Duodenum          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum             | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Small, Jejunum           | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Liver                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hepatocellular Adenoma             |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Mesentery                          |   |   |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4  |
| Pancreas                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Salivary Glands                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Glandular                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

**CARDIOVASCULAR SYSTEM**

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | * TOTALS |
|-------------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
|                         | 078         | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 |          |
| 0 mg/l                  | 000         | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 |     |          |
| ANIMAL ID               | 000         | 000 | 001 | 001 | 002 | 002 | 002 | 003 | 003 | 004 | 004 | 005 | 000 | 004 | 001 | 005 | 008 | 004 | 006 | 008 | 004 | 008 | 003 |     |          |

Heart + 50

**ENDOCRINE SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| Adrenal Cortex Adenoma                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50<br>2  |
| Adrenal Medulla Pheochromocytoma Benign  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50<br>2  |
| Islets, Pancreatic                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50       |
| Parathyroid Gland                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | M | + | 47       |
| Pituitary Gland Pars Distalis, Adenoma   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50<br>30 |
| Thyroid Gland Bilateral, C-cell, Adenoma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50<br>1  |
| C-cell, Adenoma                          |   |   |   | X |   |   |   |   |   |   |   |   |   |   | X | X | X | X | X | X |   |   |   | 9        |
| C-cell, Carcinoma                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   | 1        |

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|
| Clitoral Gland Adenoma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50<br>7 |
| Sarcoma                |   |   | X |   |   |   |   | X |   | X |   |   |   |   |   |   |   |   | X |   |   |   | X | 1       |
| Ovary                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | * TOTALS |  |
|-------------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|--|
|                         | 078         | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 |          |  |
| 0 mg/l                  | 000         | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000      |  |
|                         | 220         | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220      |  |
|                         | 001         | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001      |  |
|                         | 677         | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677 | 677      |  |

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Schwannoma Malignant   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Uterus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Leiomyosarcoma         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Polyp Stromal          | X | X |   |   |   |   |   |   |   | X | X |   |   | X |   | X |   |   |   |   |   |   | X |   | 8 |    |
| Endometrium, Carcinoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   | 1  |
| Vagina                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Polyp                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | 1  |

**HEMATOPOIETIC SYSTEM**

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node             |   |   | + |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5  |
| Lymph Node, Mandibular | 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  |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Spleen                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Thymus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |

**INTEGUMENTARY SYSTEM**

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Mammary Gland          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 50 |
| Carcinoma              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 2  |
| Fibroadenoma           | X | X | X | X |   |   | X | X | X | X |   | X |   | X |   | X |   | X |   | X | X |   | X |   | 22 |    |
| Fibroadenoma, Multiple |   |   |   | X | X |   |   |   |   |   |   |   |   | X |   | X |   |   |   |   |   | X |   |   | 12 |    |
| Skin                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 50 |
| Basal Cell Adenoma     |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   | 1  |    |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST                          | FISCHER 344 RATS 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   |          |
| 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 mg/l                               | 7                       | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7   |          |
|                                      | 2                       | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2   |          |
|                                      | 8                       | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9   |          |
|                                      | 0                       | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0   |          |
|                                      | 0                       | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0   |          |
|                                      | 2                       | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2   |          |
|                                      | 0                       | 0 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4   |          |
|                                      | 6                       | 7 | 7 | 9 | 1 | 2 | 3 | 2 | 5 | 4 | 5 | 0 | 4 | 1 | 5 | 8 | 4 | 6 | 8 | 4 | 8 | 3 | 6 | 7   |          |
| Subcutaneous Tissue, Fibroma         |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X   | 2        |
| <b>MUSCULOSKELETAL SYSTEM</b>        |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |
| Bone                                 |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | 50       |
| <b>NERVOUS SYSTEM</b>                |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |
| Brain                                |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | 50       |
| Glioma Benign                        |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X   | 1        |
| <b>RESPIRATORY SYSTEM</b>            |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |
| Lung                                 |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | 50       |
| Carcinoma, Metastatic, Thyroid Gland |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X   | 1        |
| Nose                                 |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | 50       |
| Trachea                              |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | 50       |
| <b>SPECIAL SENSES SYSTEM</b>         |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |
| Eye                                  |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | 50       |
| Harderian Gland                      |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | 50       |
| <b>URINARY SYSTEM</b>                |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |
| Kidney                               |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | 49       |
| Urinary Bladder                      |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | 50       |
| Leiomyosarcoma, Metastatic, Uterus   |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | I   | 1        |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                         |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
|-------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
|                         | DAY ON TEST     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| FISCHER 344 RATS FEMALE | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
|                         | 7               | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |  |  |
| 0 mg/l                  | 2               | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |  |  |
|                         | 8               | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |  |  |
|                         | ANIMAL ID       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
|                         | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
|                         | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 4 | 4 |  |  |
|                         | 6               | 7 | 7 | 9 | 1 | 2 | 3 | 2 | 5 | 4 | 5 | 0 | 4 | 1 | 5 | 8 | 4 | 6 | 8 | 4 | 8 | 3 | 6 |  |  |
|                         | <b>* TOTALS</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |

SYSTEMIC LESIONS

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|
| Multiple Organ       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>50</b> |
| Leukemia Mononuclear |   |   |   |   |   |   |   | X |   |   |   |   |   |   | X | X |   |   |   |   |   |   |   | <b>12</b> |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | ANIMAL ID | females<br>(cont...) |
|-------------------------|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------|----------------------|
|                         | 04          | 04 | 05 | 05 | 05 | 05 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 |           |                      |
| 156.25 mg/l             | 74          | 88 | 26 | 26 | 31 | 88 | 14 | 16 | 16 | 42 | 45 | 45 | 00 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 |           |                      |
|                         | 00          | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |           |                      |
|                         | 22          | 22 | 23 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |           |                      |
|                         | 99          | 99 | 70 | 05 | 88 | 55 | 55 | 66 | 77 | 99 | 99 | 88 | 55 | 66 | 99 | 66 | 88 | 55 | 55 | 66 | 77 | 77 | 77 | 77 |           |                      |
|                         | 88          | 99 | 60 | 03 | 33 | 11 | 66 | 99 | 44 | 33 | 66 | 99 | 22 | 33 | 44 | 44 | 11 | 88 | 99 | 88 | 00 | 33 | 77 | 88 |           |                      |

ALIMENTARY SYSTEM

|                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum    | + | + | + | + | A | A | + | A | A | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon    | + | + | + | + | + | A | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum   | + | + | + | + | + | A | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | + | + | A | + | + | A | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum    | + | + | + | + | A | A | + | + | A | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum  | + | + | + | + | A | A | + | + | A | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mesentery                 |   | + |   |   |   |   | + |   | + |   |   |   |   | + |   | + |   |   |   |   |   |   |   |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

CARDIOVASCULAR SYSTEM

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

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

|                                |  | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                              |
|--------------------------------|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------------|
| <b>FISCHER 344 RATS FEMALE</b> |  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   | 0 | 0                            |
|                                |  | 4           | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |                              |
| <b>156.25 mg/l</b>             |  | 7           | 8 | 2 | 2 | 3 | 8 | 1 | 1 | 1 | 4 | 4 | 4 | 7 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 |                              |
|                                |  | 4           | 8 | 6 | 6 | 1 | 8 | 4 | 6 | 6 | 2 | 5 | 5 | 0 | 6 | 6 | 6 | 2 | 5 | 7 | 7 | 7 | 7 |                              |
|                                |  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                              |
|                                |  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                              |
|                                |  | 2           | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |                              |
|                                |  | 9           | 9 | 7 | 0 | 5 | 8 | 5 | 5 | 6 | 7 | 9 | 9 | 8 | 5 | 6 | 9 | 6 | 8 | 5 | 5 | 6 | 7 |                              |
|                                |  | 8           | 9 | 6 | 0 | 3 | 3 | 1 | 6 | 9 | 4 | 3 | 6 | 9 | 2 | 3 | 4 | 4 | 1 | 8 | 9 | 8 | 8 | <b>females<br/>(cont...)</b> |
|                                |  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                              |

**ENDOCRINE SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex<br>Adenoma                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | X |
| Adrenal Medulla                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Islets, Pancreatic<br>Adenoma             | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | + |
| Parathyroid Gland                         | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pituitary Gland<br>Pars Distalis, Adenoma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + | X |
| Thyroid Gland<br>C-cell, Adenoma          | X |   | X |   |   | X |   | X |   |   |   |   | X | X | X |   | X |   | X |   |   | X |   | X | X | X |
| Thyroid Gland<br>C-cell, Carcinoma        | + | + | + | + | + | A | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | + |

**GENERAL BODY SYSTEM**

|            |   |
|------------|---|
| Peritoneum | + |
|------------|---|

**GENITAL SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland<br>Adenoma               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X |
| Carcinoma                               | X |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |
| Bilateral, Adenoma                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |
| Ovary<br>Granulosa Cell Tumor Malignant | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | ANIMAL ID | females<br>(cont...) |
|-------------------------|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------|----------------------|
|                         | 04          | 04 | 05 | 05 | 05 | 05 | 06 | 06 | 06 | 06 | 06 | 06 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 |           |                      |
| 156.25 mg/l             | 74          | 88 | 26 | 26 | 31 | 38 | 41 | 66 | 66 | 66 | 66 | 67 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 |           |                      |
|                         | 00          | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |           |                      |
|                         | 22          | 22 | 23 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |           |                      |
|                         | 99          | 99 | 70 | 05 | 88 | 55 | 55 | 66 | 77 | 99 | 99 | 88 | 55 | 66 | 99 | 66 | 88 | 55 | 55 | 66 | 77 | 77 |           |                      |
|                         | 88          | 99 | 60 | 03 | 33 | 31 | 66 | 99 | 44 | 33 | 66 | 99 | 22 | 33 | 44 | 44 | 11 | 88 | 99 | 88 | 00 | 33 |           |                      |

|               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Uterus        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Polyp Stromal |   |   |   | X |   | X |   |   |   |   |   |   |   |   |   | X |   |   | X | X |   | X |
| Vagina        |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |
| Polyp         |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |

HEMATOPOIETIC SYSTEM

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node             |   |   | + |   |   |   |   | + |   | + | + |   |   | + |   |   |   |   |   |   |   | + |
| Lymph Node, Mandibular | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Thymus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

INTEGUMENTARY SYSTEM

|                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fibroadenoma                      |   |   |   | X |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |
| Fibroadenoma, Multiple            |   |   |   |   |   | X |   |   | X |   | X | X |   | X | X |   | X | X | X |   |   |   |
| Skin                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Subcutaneous Tissue, Fibroma      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Subcutaneous Tissue, Fibrosarcoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

MUSCULOSKELETAL SYSTEM

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE        | DAY ON TEST |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | ANIMAL ID | females<br>(cont...) |
|--------------------------------|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------|----------------------|
|                                | 04          | 04 | 05 | 05 | 05 | 05 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 |           |                      |
| 156.25 mg/l                    | 74          | 88 | 26 | 26 | 31 | 88 | 14 | 16 | 16 | 42 | 45 | 45 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 | 06 |           |                      |
|                                | 00          | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |           |                      |
|                                | 29          | 29 | 77 | 00 | 55 | 88 | 55 | 55 | 66 | 77 | 99 | 99 | 88 | 55 | 66 | 99 | 66 | 88 | 55 | 55 | 66 | 77 | 77 | 77 |           |                      |
|                                | 88          | 99 | 66 | 00 | 33 | 33 | 11 | 66 | 99 | 44 | 33 | 66 | 99 | 22 | 33 | 44 | 44 | 11 | 88 | 99 | 88 | 00 | 33 | 77 |           |                      |
| Bone                           | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  |    |           |                      |
| Skeletal Muscle                |             | +  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |           |                      |
| <b>NERVOUS SYSTEM</b>          |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |           |                      |
| Brain                          | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  |    |           |                      |
| <b>RESPIRATORY SYSTEM</b>      |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |           |                      |
| Lung                           | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  |    |           |                      |
| Alveolar/Bronchiolar Adenoma   |             |    |    | X  |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |           |                      |
| Alveolar/Bronchiolar Carcinoma |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |           |                      |
| Nose                           | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  |    |           |                      |
| Trachea                        | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  |    |           |                      |
| <b>SPECIAL SENSES SYSTEM</b>   |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |           |                      |
| Eye                            | +           | +  | +  | +  | A  | A  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  |    |           |                      |
| Harderian Gland                | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  |    |           |                      |
| <b>URINARY SYSTEM</b>          |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |           |                      |
| Kidney                         | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  |    |           |                      |
| Renal Tubule, Adenoma          |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |           |                      |
| Urinary Bladder                | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  |    |           |                      |
| <b>SYSTEMIC LESIONS</b>        |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |           |                      |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
|                         | 0727        | 0727 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 | 0728 |          |
| 156.25 mg/l             | 0087        | 0087 | 0086 | 0086 | 0086 | 0086 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 |          |
|                         | 0087        | 0087 | 0086 | 0086 | 0086 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 | 0087 |          |

**ALIMENTARY SYSTEM**

|                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Liver                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Mesentery                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7  |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

**CARDIOVASCULAR SYSTEM**

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Heart        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>156.25 mg/l | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
|  | 077         | 077  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  |          |
| ANIMAL ID                              | 0087        | 0090 | 0006 | 0001 | 0006 | 0007 | 0001 | 0002 | 0005 | 0004 | 0005 | 0008 | 0008 | 0009 | 0009 | 0005 | 0004 | 0005 | 0007 | 0002 | 0005 | 0009 |          |
| Uterus                                 | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |          |
| Polyp Stromal                          |             | X    |      |      | X    |      |      |      |      |      | X    |      |      |      |      |      |      | X    | X    | X    |      | X    |          |
| Vagina                                 |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
| Polyp                                  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
| <b>HEMATOPOIETIC SYSTEM</b>            |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
| Bone Marrow                            | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |          |
| Lymph Node                             |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
| Lymph Node, Mandibular                 | M           | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    | M    |          |
| Lymph Node, Mesenteric                 | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |          |
| Spleen                                 | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |          |
| Thymus                                 | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |          |
| <b>INTEGUMENTARY SYSTEM</b>            |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
| Mammary Gland                          | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |          |
| Fibroadenoma                           | X           |      | X    |      | X    | X    | X    |      |      |      | X    |      | X    |      | X    |      | X    | X    | X    |      | X    |      |          |
| Fibroadenoma, Multiple                 |             | X    |      |      |      |      |      | X    | X    |      |      |      |      | X    |      | X    |      | X    |      |      |      | X    |          |
| Skin                                   | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    |          |
| Subcutaneous Tissue, Fibroma           |             |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      | X    |      |          |
| Subcutaneous Tissue, Fibrosarcoma      |             |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |
| <b>MUSCULOSKELETAL SYSTEM</b>          |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE        | DAY ON TEST |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | * TOTALS |  |
|--------------------------------|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------|--|
|                                | 07          | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 |    |          |  |
| 156.25 mg/l                    | 07          | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 |          |  |
|                                | 00          | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |          |  |
|                                | 27          | 27 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 |          |  |
|                                | 87          | 90 | 60 | 61 | 66 | 67 | 71 | 72 | 75 | 74 | 85 | 88 | 88 | 91 | 92 | 95 | 97 | 94 | 95 | 97 | 92 | 95 | 99 | 92 |          |  |
| Bone                           | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | 50       |  |
| Skeletal Muscle                |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 1        |  |
| <b>NERVOUS SYSTEM</b>          |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |          |  |
| Brain                          | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | 50       |  |
| <b>RESPIRATORY SYSTEM</b>      |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |          |  |
| Lung                           | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | 50       |  |
| Alveolar/Bronchiolar Adenoma   |             |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 3        |  |
| Alveolar/Bronchiolar Carcinoma |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    | 1        |  |
| Nose                           | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | 50       |  |
| Trachea                        | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | 50       |  |
| <b>SPECIAL SENSES SYSTEM</b>   |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |          |  |
| Eye                            | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | 48       |  |
| Harderian Gland                | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | 50       |  |
| <b>URINARY SYSTEM</b>          |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |          |  |
| Kidney                         | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | 50       |  |
| Renal Tubule, Adenoma          |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    | 1        |  |
| Urinary Bladder                | +           | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | +  | 50       |  |
| <b>SYSTEMIC LESIONS</b>        |             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |          |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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







TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST  | FISCHER 344 RATS FEMALE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | ANIMAL ID | females<br>(cont...) |                      |
|--|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|----------------------|----------------------|
|  | 0                       | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |           |                      | 0                    |
| 5  | 5                       | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7         | 0                    | females<br>(cont...) |
| 2  | 2                       | 7 | 8 | 0 | 4 | 6 | 6 | 7 | 7 | 8 | 9 | 9 | 9 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2         | 0                    |                      |
| 6  | 7                       | 9 | 2 | 3 | 2 | 6 | 6 | 0 | 6 | 7 | 3 | 0 | 1 | 1 | 1 | 1 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7         | 0                    |                      |
| 0  | 0                       | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0         | 0                    |                      |
| 0  | 0                       | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0         | 0                    |                      |
| 3  | 3                       | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3         | 0                    |                      |
| 1  | 3                       | 3 | 2 | 2 | 1 | 2 | 4 | 3 | 1 | 4 | 3 | 0 | 0 | 3 | 4 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 3 | 4         | 0                    |                      |
| 7  | 9                       | 1 | 4 | 0 | 2 | 8 | 4 | 4 | 4 | 1 | 5 | 3 | 1 | 6 | 0 | 0 | 5 | 7 | 9 | 5 | 3 | 7 | 0 | 2         | 0                    |                      |
| Stomach, Glandular   | +                       | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         |                      |                      |
| <b>CARDIOVASCULAR SYSTEM</b>   |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |                      |                      |
| Blood Vessel   | +                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | +                    |                      |
| Heart  | +                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | +                    |                      |
| <b>ENDOCRINE SYSTEM</b>  |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |                      |                      |
| Adrenal Cortex<br>Adenoma  | +                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | +                    |                      |
| Adrenal Medulla<br>Pheochromocytoma Benign   | +                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | +                    | X                    |
| Islets, Pancreatic   | +                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | +                    |                      |
| Parathyroid Gland  | +                       | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | +                    |                      |
| Pituitary Gland<br>Pars Distalis, Adenoma  | +                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | +                    | X                    |
| Thyroid Gland<br>Carcinoma<br>Bilateral, C-cell, Adenoma<br>C-cell, Adenoma<br>C-cell, Carcinoma | +                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +         | +                    | X                    |
|  |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |                      | X                    |
| <b>GENERAL BODY SYSTEM</b>   |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |                      |                      |
| NONE   |                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |                      |                      |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | ANIMAL ID | females<br>(cont...) |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|----------------------|
|                         | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |           |                      |
| 312.5 mg/l              | 5           | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 0 |           |                      |
|                         | 2           | 2 | 7 | 8 | 0 | 4 | 6 | 6 | 7 | 7 | 8 | 9 | 9 | 9 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |           |                      |
|                         | 6           | 7 | 9 | 2 | 3 | 2 | 6 | 6 | 0 | 6 | 7 | 3 | 0 | 1 | 1 | 1 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 0 |           |                      |
|                         | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |           |                      |
|                         | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |           |                      |
|                         | 3           | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |           |                      |
|                         | 1           | 3 | 3 | 2 | 2 | 1 | 2 | 4 | 3 | 1 | 4 | 3 | 0 | 0 | 3 | 4 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 0 |           |                      |
|                         | 7           | 9 | 1 | 4 | 0 | 2 | 8 | 4 | 4 | 4 | 1 | 5 | 3 | 1 | 6 | 0 | 0 | 5 | 7 | 9 | 5 | 3 | 7 | 0 |           |                      |

### GENITAL SYSTEM

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Clitoral Gland Adenoma                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | X | X | X |   |  |
| Clitoral Gland Carcinoma                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Clitoral Gland Sarcoma                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Ovary Granulosa Cell Tumor Benign                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Uterus Leiomyosarcoma                                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Uterus Polyp Stromal                                       |   |   |   |   |   |   | X | X | X | X |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   | X |  |
| Uterus Cervix, Sarcoma, Metastatic, Uncertain Primary Site |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |  |
| Uterus Endometrium, Adenoma                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |  |

### HEMATOPOIETIC SYSTEM

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lymph Node, Mandibular | 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 | M | M |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Thymus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

### INTEGUMENTARY SYSTEM

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>312.5 mg/l                         | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | ANIMAL ID             | females<br>(cont...) |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------------|----------------------|
|   | 0<br>5<br>2<br>6 | 0<br>5<br>2<br>7 | 0<br>5<br>7<br>9 | 0<br>5<br>8<br>2 | 0<br>6<br>0<br>3 | 0<br>6<br>4<br>2 | 0<br>6<br>6<br>6 | 0<br>6<br>6<br>6 | 0<br>6<br>7<br>6 | 0<br>6<br>7<br>7 | 0<br>6<br>7<br>8 | 0<br>6<br>7<br>9 | 0<br>6<br>9<br>9 | 0<br>6<br>9<br>0 | 0<br>6<br>9<br>1 | 0<br>6<br>7<br>1 | 0<br>6<br>7<br>2 | 0<br>6<br>7<br>2 | 0<br>6<br>7<br>2 | 0<br>6<br>7<br>2 | 0<br>6<br>7<br>2 | 0<br>6<br>7<br>2 | 0<br>6<br>7<br>2 | 0<br>6<br>7<br>2 |                       |                      |
|   | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0<br>0<br>3<br>1<br>7 |                      |
| Eye   | +                | +                | +                | A                | +                | +                | +                | +                | +                | +                | A                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |                       |                      |
| Harderian Gland   | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |                       |                      |
| Zymbal's Gland<br>Carcinoma                                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | +                |                  | +                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                       |                      |
|   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | X                |                  | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                       |                      |
| <b>URINARY SYSTEM</b>   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                       |                      |
| Kidney<br>Renal Tubule, Adenoma                               | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |                       |                      |
| Urinary Bladder   | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |                       |                      |
| <b>SYSTEMIC LESIONS</b>                                       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                       |                      |
| Multiple Organ<br>Histiocytic Sarcoma<br>Leukemia Mononuclear | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |                       |                      |
|   |                  |                  | X                |                  |                  |                  |                  |                  | X                | X                | X                |                  |                  | X                | X                | X                | X                |                  |                  |                  | X                |                  | X                |                  |                       |                      |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE                    | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | * TOTALS |          |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|----------|
|  | 078         | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  |          | 078      |
| 312.5 mg/l                                 | 0011        | 0013 | 0016 | 0018 | 0019 | 0026 | 0033 | 0035 | 0036 | 0039 | 0040 | 0042 | 0044 | 0046 | 0048 | 0051 | 0052 | 0055 | 0059 | 0062 | 0063     |          |
|  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 49       |
| <b>CARDIOVASCULAR SYSTEM</b>               |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |          |
| Blood Vessel                               | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50       |
| Heart                                      | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50       |
| <b>ENDOCRINE SYSTEM</b>                    |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |          |
| Adrenal Cortex<br>Adenoma                  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | X    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50<br>2  |
| Adrenal Medulla<br>Pheochromocytoma Benign | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | X    | +    | +    | +    | +        | 50<br>3  |
| Islets, Pancreatic                         | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50       |
| Parathyroid Gland                          | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | M    | +    | +        | 48       |
| Pituitary Gland<br>Pars Distalis, Adenoma  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 49<br>29 |
| Thyroid Gland<br>Carcinoma                 | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +        | 50<br>1  |
| Bilateral, C-cell, Adenoma                 |             |      |      |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |          | 2        |
| C-cell, Adenoma                            |             |      | X    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          | 1        |
| C-cell, Carcinoma                          |             |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      |      |      |          | 2        |
| <b>GENERAL BODY SYSTEM</b>                 |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |          |
| NONE                                       |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |          |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>312.5 mg/l | DAY ON TEST |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | * TOTALS |     |     |     |
|---------------------------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|-----|-----|-----|
|                                       | 078         | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 |          | 078 |     |     |
| ANIMAL ID                             | 001         | 003 | 006 | 008 | 009 | 006 | 003 | 005 | 006 | 009 | 002 | 004 | 006 | 008 | 001 | 002 | 005 | 009 | 002 | 003 | 007      | 008 | 007 | 008 |
| Mammary Gland                         | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +        | +   | +   | 50  |
| Adenoma                               |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          | X   |     | 2   |
| Carcinoma                             |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |     |     | 1   |
| Fibroadenoma                          | X           |     | X   |     | X   |     | X   |     |     | X   |     |     | X   |     | X   |     | X   | X   | X   | X   |          |     |     | 17  |
| Fibroadenoma, Multiple                |             |     |     | X   |     |     |     |     | X   | X   |     |     | X   |     | X   |     |     |     |     | X   | X        |     |     | 11  |
| Skin                                  | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +        | +   | +   | 50  |
| Subcutaneous Tissue, Fibroma          |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |     |     | 1   |
| Subcutaneous Tissue, Fibrosarcoma     |             |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |          |     |     | 1   |
| Subcutaneous Tissue, Hemangiosarcoma  |             |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |     |     | 1   |
| <b>MUSCULOSKELETAL SYSTEM</b>         |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |     |     |     |
| Bone                                  | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +        | +   | +   | 50  |
| <b>NERVOUS SYSTEM</b>                 |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |     |     |     |
| Brain                                 | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +        | +   | +   | 50  |
| <b>RESPIRATORY SYSTEM</b>             |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |     |     |     |
| Lung                                  | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +        | +   | +   | 50  |
| Alveolar/Bronchiolar Adenoma          |             |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |          |     |     | 2   |
| Carcinoma, Metastatic, Thyroid Gland  |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |     |     | 1   |
| Hemangiosarcoma, Metastatic, Skin     |             |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |     |     | 1   |
| Nose                                  | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +        | +   | +   | 50  |
| Respiratory Epithelium, Adenoma       |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |     |     | 1   |
| Trachea                               | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +        | +   | +   | 50  |
| <b>SPECIAL SENSES SYSTEM</b>          |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |     |     |     |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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













TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>625 mg/l | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | ANIMAL ID | females<br>(cont...) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----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|                                     | 0474        | 0515 | 0527 | 0540 | 0551 | 0579 | 0589 | 0598 | 0607 | 0616 | 0626 | 0636 | 0646 | 0656 | 0666 | 0676 | 0686 | 0696 | 0706 | 0716 | 0726 | 0736 | 0746 | 0756 |           |                      | 0766 | 0776 | 0786 | 0796 | 0806 | 0816 | 0826 | 0836 | 0846 | 0856 | 0866 | 0876 | 0886 | 0896 | 0906 | 0916 | 0926 | 0936 | 0946 | 0956 | 0966 | 0976 | 0986 | 0996 | 1006 | 1016 | 1026 | 1036 | 1046 | 1056 | 1066 | 1076 | 1086 | 1096 | 1106 | 1116 | 1126 | 1136 | 1146 | 1156 | 1166 | 1176 | 1186 | 1196 | 1206 | 1216 | 1226 | 1236 | 1246 | 1256 | 1266 | 1276 | 1286 | 1296 | 1306 | 1316 | 1326 | 1336 | 1346 | 1356 | 1366 | 1376 | 1386 | 1396 | 1406 | 1416 | 1426 | 1436 | 1446 | 1456 | 1466 | 1476 | 1486 | 1496 | 1506 | 1516 | 1526 | 1536 | 1546 | 1556 | 1566 | 1576 | 1586 | 1596 | 1606 | 1616 | 1626 | 1636 | 1646 | 1656 | 1666 | 1676 | 1686 | 1696 | 1706 | 1716 | 1726 | 1736 | 1746 | 1756 | 1766 | 1776 | 1786 | 1796 | 1806 | 1816 | 1826 | 1836 | 1846 | 1856 | 1866 | 1876 | 1886 | 1896 | 1906 | 1916 | 1926 | 1936 | 1946 | 1956 | 1966 | 1976 | 1986 | 1996 | 2006 | 2016 | 2026 | 2036 | 2046 | 2056 | 2066 | 2076 | 2086 | 2096 | 2106 | 2116 | 2126 | 2136 | 2146 | 2156 | 2166 | 2176 | 2186 | 2196 | 2206 | 2216 | 2226 | 2236 | 2246 | 2256 | 2266 | 2276 | 2286 | 2296 | 2306 | 2316 | 2326 | 2336 | 2346 | 2356 | 2366 | 2376 | 2386 | 2396 | 2406 | 2416 | 2426 | 2436 | 2446 | 2456 | 2466 | 2476 | 2486 | 2496 | 2506 | 2516 | 2526 | 2536 | 2546 | 2556 | 2566 | 2576 | 2586 | 2596 | 2606 | 2616 | 2626 | 2636 | 2646 | 2656 | 2666 | 2676 | 2686 | 2696 | 2706 | 2716 | 2726 | 2736 | 2746 | 2756 | 2766 | 2776 | 2786 | 2796 | 2806 | 2816 | 2826 | 2836 | 2846 | 2856 | 2866 | 2876 | 2886 | 2896 | 2906 | 2916 | 2926 | 2936 | 2946 | 2956 | 2966 | 2976 | 2986 | 2996 | 3006 | 3016 | 3026 | 3036 | 3046 | 3056 | 3066 | 3076 | 3086 | 3096 | 3106 | 3116 | 3126 | 3136 | 3146 | 3156 | 3166 | 3176 | 3186 | 3196 | 3206 | 3216 | 3226 | 3236 | 3246 | 3256 | 3266 | 3276 | 3286 | 3296 | 3306 | 3316 | 3326 | 3336 | 3346 | 3356 | 3366 | 3376 | 3386 | 3396 | 3406 | 3416 | 3426 | 3436 | 3446 | 3456 | 3466 | 3476 | 3486 | 3496 | 3506 | 3516 | 3526 | 3536 | 3546 | 3556 | 3566 | 3576 | 3586 | 3596 | 3606 | 3616 | 3626 | 3636 | 3646 | 3656 | 3666 | 3676 | 3686 | 3696 | 3706 | 3716 | 3726 | 3736 | 3746 | 3756 | 3766 | 3776 | 3786 | 3796 | 3806 | 3816 | 3826 | 3836 | 3846 | 3856 | 3866 | 3876 | 3886 | 3896 | 3906 | 3916 | 3926 | 3936 | 3946 | 3956 | 3966 | 3976 | 3986 | 3996 | 4006 | 4016 | 4026 | 4036 | 4046 | 4056 | 4066 | 4076 | 4086 | 4096 | 4106 | 4116 | 4126 | 4136 | 4146 | 4156 | 4166 | 4176 | 4186 | 4196 | 4206 | 4216 | 4226 | 4236 | 4246 | 4256 | 4266 | 4276 | 4286 | 4296 | 4306 | 4316 | 4326 | 4336 | 4346 | 4356 | 4366 | 4376 | 4386 | 4396 | 4406 | 4416 | 4426 | 4436 | 4446 | 4456 | 4466 | 4476 | 4486 | 4496 | 4506 | 4516 | 4526 | 4536 | 4546 | 4556 | 4566 | 4576 | 4586 | 4596 | 4606 | 4616 | 4626 | 4636 | 4646 | 4656 | 4666 | 4676 | 4686 | 4696 | 4706 | 4716 | 4726 | 4736 | 4746 | 4756 | 4766 | 4776 | 4786 | 4796 | 4806 | 4816 | 4826 | 4836 | 4846 | 4856 | 4866 | 4876 | 4886 | 4896 | 4906 | 4916 | 4926 | 4936 | 4946 | 4956 | 4966 | 4976 | 4986 | 4996 | 5006 | 5016 | 5026 | 5036 | 5046 | 5056 | 5066 | 5076 | 5086 | 5096 | 5106 | 5116 | 5126 | 5136 | 5146 | 5156 | 5166 | 5176 | 5186 | 5196 | 5206 | 5216 | 5226 | 5236 | 5246 | 5256 | 5266 | 5276 | 5286 | 5296 | 5306 | 5316 | 5326 | 5336 | 5346 | 5356 | 5366 | 5376 | 5386 | 5396 | 5406 | 5416 | 5426 | 5436 | 5446 | 5456 | 5466 | 5476 | 5486 | 5496 | 5506 | 5516 | 5526 | 5536 | 5546 | 5556 | 5566 | 5576 | 5586 | 5596 | 5606 | 5616 | 5626 | 5636 | 5646 | 5656 | 5666 | 5676 | 5686 | 5696 | 5706 | 5716 | 5726 | 5736 | 5746 | 5756 | 5766 | 5776 | 5786 | 5796 | 5806 | 5816 | 5826 | 5836 | 5846 | 5856 | 5866 | 5876 | 5886 | 5896 | 5906 | 5916 | 5926 | 5936 | 5946 | 5956 | 5966 | 5976 | 5986 | 5996 | 6006 | 6016 | 6026 | 6036 | 6046 | 6056 | 6066 | 6076 | 6086 | 6096 | 6106 | 6116 | 6126 | 6136 | 6146 | 6156 | 6166 | 6176 | 6186 | 6196 | 6206 | 6216 | 6226 | 6236 | 6246 | 6256 | 6266 | 6276 | 6286 | 6296 | 6306 | 6316 | 6326 | 6336 | 6346 | 6356 | 6366 | 6376 | 6386 | 6396 | 6406 | 6416 | 6426 | 6436 | 6446 | 6456 | 6466 | 6476 | 6486 | 6496 | 6506 | 6516 | 6526 | 6536 | 6546 | 6556 | 6566 | 6576 | 6586 | 6596 | 6606 | 6616 | 6626 | 6636 | 6646 | 6656 | 6666 | 6676 | 6686 | 6696 | 6706 | 6716 | 6726 | 6736 | 6746 | 6756 | 6766 | 6776 | 6786 | 6796 | 6806 | 6816 | 6826 | 6836 | 6846 | 6856 | 6866 | 6876 | 6886 | 6896 | 6906 | 6916 | 6926 | 6936 | 6946 | 6956 | 6966 | 6976 | 6986 | 6996 | 7006 | 7016 | 7026 | 7036 | 7046 | 7056 | 7066 | 7076 | 7086 | 7096 | 7106 | 7116 | 7126 | 7136 | 7146 | 7156 | 7166 | 7176 | 7186 | 7196 | 7206 | 7216 | 7226 | 7236 | 7246 | 7256 | 7266 | 7276 | 7286 | 7296 | 7306 | 7316 | 7326 | 7336 | 7346 | 7356 | 7366 | 7376 | 7386 | 7396 | 7406 | 7416 | 7426 | 7436 | 7446 | 7456 | 7466 | 7476 | 7486 | 7496 | 7506 | 7516 | 7526 | 7536 | 7546 | 7556 | 7566 | 7576 | 7586 | 7596 | 7606 | 7616 | 7626 | 7636 | 7646 | 7656 | 7666 | 7676 | 7686 | 7696 | 7706 | 7716 | 7726 | 7736 | 7746 | 7756 | 7766 | 7776 | 7786 | 7796 | 7806 | 7816 | 7826 | 7836 | 7846 | 7856 | 7866 | 7876 | 7886 | 7896 | 7906 | 7916 | 7926 | 7936 | 7946 | 7956 | 7966 | 7976 | 7986 | 7996 | 8006 | 8016 | 8026 | 8036 | 8046 | 8056 | 8066 | 8076 | 8086 | 8096 | 8106 | 8116 | 8126 | 8136 | 8146 | 8156 | 8166 | 8176 | 8186 | 8196 | 8206 | 8216 | 8226 | 8236 | 8246 | 8256 | 8266 | 8276 | 8286 | 8296 | 8306 | 8316 | 8326 | 8336 | 8346 | 8356 | 8366 | 8376 | 8386 | 8396 | 8406 | 8416 | 8426 | 8436 | 8446 | 8456 | 8466 | 8476 | 8486 | 8496 | 8506 | 8516 | 8526 | 8536 | 8546 | 8556 | 8566 | 8576 | 8586 | 8596 | 8606 | 8616 | 8626 | 8636 | 8646 | 8656 | 8666 | 8676 | 8686 | 8696 | 8706 | 8716 | 8726 | 8736 | 8746 | 8756 | 8766 | 8776 | 8786 | 8796 | 8806 | 8816 | 8826 | 8836 | 8846 | 8856 | 8866 | 8876 | 8886 | 8896 | 8906 | 8916 | 8926 | 8936 | 8946 | 8956 | 8966 | 8976 | 8986 | 8996 | 9006 | 9016 | 9026 | 9036 | 9046 | 9056 | 9066 | 9076 | 9086 | 9096 | 9106 | 9116 | 9126 | 9136 | 9146 | 9156 | 9166 | 9176 | 9186 | 9196 | 9206 | 9216 | 9226 | 9236 | 9246 | 9256 | 9266 | 9276 | 9286 | 9296 | 9306 | 9316 | 9326 | 9336 | 9346 | 9356 | 9366 | 9376 | 9386 | 9396 | 9406 | 9416 | 9426 | 9436 | 9446 | 9456 | 9466 | 9476 | 9486 | 9496 | 9506 | 9516 | 9526 | 9536 | 9546 | 9556 | 9566 | 9576 | 9586 | 9596 | 9606 | 9616 | 9626 | 9636 | 9646 | 9656 | 9666 | 9676 | 9686 | 9696 | 9706 | 9716 | 9726 | 9736 | 9746 | 9756 | 9766 | 9776 | 9786 | 9796 | 9806 | 9816 | 9826 | 9836 | 9846 | 9856 | 9866 | 9876 | 9886 | 9896 | 9906 | 9916 | 9926 | 9936 | 9946 | 9956 | 9966 | 9976 | 9986 | 9996 | 10006 | 10016 | 10026 | 10036 | 10046 | 10056 | 10066 | 10076 | 10086 | 10096 | 10106 | 10116 | 10126 | 10136 | 10146 | 10156 | 10166 | 10176 | 10186 | 10196 | 10206 | 10216 | 10226 | 10236 | 10246 | 10256 | 10266 | 10276 | 10286 | 10296 | 10306 | 10316 | 10326 | 10336 | 10346 | 10356 | 10366 | 10376 | 10386 | 10396 | 10406 | 10416 | 10426 | 10436 | 10446 | 10456 | 10466 | 10476 | 10486 | 10496 | 10506 | 10516 | 10526 | 10536 | 10546 | 10556 | 10566 | 10576 | 10586 | 10596 | 10606 | 10616 | 10626 | 10636 | 10646 | 10656 | 10666 | 10676 | 10686 | 10696 | 10706 | 10716 | 10726 | 10736 | 10746 | 10756 | 10766 | 10776 | 10786 | 10796 | 10806 | 10816 | 10826 | 10836 | 10846 | 10856 | 10866 | 10876 | 10886 | 10896 | 10906 | 10916 | 10926 | 10936 | 10946 | 10956 | 10966 | 10976 | 10986 | 10996 | 11006 | 11016 | 11026 | 11036 | 11046 | 11056 | 11066 | 11076 | 11086 | 11096 | 11106 | 11116 | 11126 | 11136 | 11146 | 11156 | 11166 | 11176 | 11186 | 11196 | 11206 | 11216 | 11226 | 11236 | 11246 | 11256 | 11266 | 11276 | 11286 | 11296 | 11306 | 11316 | 11326 | 11336 | 11346 | 11356 | 11366 | 11376 | 11386 | 11396 | 11406 | 11416 | 11426 | 11436 | 11446 | 11456 | 11466 | 11476 | 11486 | 11496 | 11506 | 11516 | 11526 | 11536 | 11546 | 11556 | 11566 | 11576 | 11586 | 11596 | 11606 | 11616 | 11626 | 11636 | 11646 | 11656 | 11666 | 11676 | 11686 | 11696 | 11706 | 11716 | 11726 | 11736 | 11746 | 11756 | 11766 | 11776 | 11786 | 11796 | 11806 | 11816 | 11826 | 11836 | 11846 | 11856 | 11866 | 11876 | 11886 | 11896 | 11906 | 11916 | 11926 | 11936 | 11946 | 11956 | 11966 | 11976 | 11986 | 11996 | 12006 | 12016 | 12026 | 12036 | 12046 | 12056 | 12066 | 12076 | 12086 | 12096 | 12106 | 12116 | 12126 | 12136 | 12146 | 12156 | 12166 | 12176 | 12186 | 12196 | 12206 | 12216 | 12226 | 12236 | 12246 | 12256 | 12266 | 12276 | 12286 | 12296 | 12306 | 12316 | 12326 | 12336 | 12346 | 12356 | 12366 | 12376 | 12386 | 12396 | 12406 | 12416 | 12426 | 12436 | 12446 | 12456 | 12466 | 12476 | 12486 | 12496 | 12506 | 12516 | 12526 | 12536 | 12546 | 12556 | 12566 | 12576 | 12586 | 12596 | 12606 | 12616 | 12626 | 12636 | 12646 | 12656 | 12666 | 12676 | 12686 | 12696 | 12706 | 12716 | 12726 | 12736 | 12746 | 12756 | 12766 | 12776 | 12786 | 12796 | 12806 | 12816 | 12826 | 12836 | 12846 | 12856 | 12866 | 12876 | 12886 | 12896 | 12906 | 12916 | 12926 | 12936 | 12946 | 12956 | 12966 | 12976 | 12986 | 12996 | 13006 | 13016 | 13026 | 13036 | 13046 | 13056 | 13066 | 13076 | 13086 | 13096 | 13106 | 13116 | 13126 | 13136 | 13146 | 13156 | 13166 | 13176 | 13186 | 13196 | 13206 | 13216 | 13226 | 13236 | 13246 | 13256 | 13266 | 13276 | 13286 | 13296 | 13306 | 13316 | 13326 | 13336 | 13346 | 13356 | 13366 | 13376 | 13386 | 13396 |



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>625 mg/l           | DAY ON TEST |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          | * TOTALS |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|----------|
|   | 078         | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078  | 078      |          |
| ANIMAL ID                                     | 0051        | 0052 | 0058 | 0051 | 0057 | 0054 | 0056 | 0050 | 0050 | 0050 | 0050 | 0050 | 0050 | 0050 | 0050 | 0050 | 0050 | 0050 | 0050 | 0050 | 0050 | 0050 | 0050 | 0050     |          |
| Squamous Cell Papilloma                       |             |      |      |      |      |      |      |      |      | X    |      |      |      |      |      |      |      |      |      |      |      |      |      | 1        |          |
| <b>CARDIOVASCULAR SYSTEM</b>                  |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |          |
| Blood Vessel                                  | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50       |          |
| Heart   | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50       |          |
| <b>ENDOCRINE SYSTEM</b>                       |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |          |          |
| Adrenal Cortex<br>Adenoma                     | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50<br>3  |          |
| Adrenal Medulla<br>Pheochromocytoma Malignant | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50<br>1  |          |
| Islets, Pancreatic<br>Adenoma                 | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50<br>1  |          |
| Parathyroid Gland                             | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 48       |          |
| Pituitary Gland<br>Pars Distalis, Adenoma     | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50<br>26 |          |
| Pars Nervosa, Craniopharyngioma               | X           |      |      | X    | X    |      |      | X    |      |      |      | X    | X    |      |      | X    |      |      | X    |      |      | X    | X    | 1        |          |
| Thyroid Gland<br>Carcinoma                    | +           | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | +    | 50<br>1  |          |
| C-cell, Adenoma                               |             |      |      |      |      |      |      |      |      |      |      |      | X    | X    | X    |      | X    |      |      |      |      |      |      | 6        |          |
| C-cell, Carcinoma                             |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | X    | 1        |          |
| Follicular Cell, Adenoma                      |             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 1        |          |

**GENERAL BODY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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



TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>625 mg/l | DAY ON TEST |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | * TOTALS |
|-------------------------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
|                                     | 078         | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 |          |
| ANIMAL ID                           | 001         | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 010 | 011 | 012 | 013 | 014 | 015 | 016 | 017 | 018 | 019 | 020 | 021      |

NONE

**GENITAL SYSTEM**

|                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Clitoral Gland                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma                         |   |   |   |   |   |   |   |   |   | X |   | X | X |   |   |   |   |   |   |   | X | 8  |
| Carcinoma                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   | 2  |
| Ovary                           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Granulosa-Theca Tumor Malignant |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Uterus                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Polyp Stromal                   |   |   |   | X |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   | X |   | 6  |
| Vagina                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Polyp                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |

**HEMATOPOIETIC SYSTEM**

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + | 2  |
| Lymph Node, Mandibular | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 0  |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Spleen                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Thymus                 | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | M | M | + | + | + | 47 |

**INTEGUMENTARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

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

TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| FISCHER 344 RATS FEMALE<br>625 mg/l  | DAY ON TEST |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | * TOTALS |  |
|--------------------------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|--|
|                                      | 078         | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 |     |          |  |
| ANIMAL ID                            | 001         | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 010 | 011 | 012 | 013 | 014 | 015 | 016 | 017 | 018 | 019 | 020 | 021 | 022 | 023 | 024 |          |  |
| Mammary Gland                        | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | 50  |          |  |
| Adenoma                              |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1   |          |  |
| Fibroadenoma                         |             | X   |     |     |     |     |     | X   | X   |     |     |     | X   | X   | X   |     | X   |     |     |     |     |     |     | 17  |          |  |
| Fibroadenoma, Multiple               | X           |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     | X   |     | X   |     |     |     | 6   |          |  |
| Skin                                 | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | 50  |          |  |
| Keratoacanthoma                      |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |     | 1   |          |  |
| Subcutaneous Tissue, Lipoma          |             |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1   |          |  |
| Subcutaneous Tissue, Sarcoma         |             |     |     |     | X   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1   |          |  |
| <b>MUSCULOSKELETAL SYSTEM</b>        |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |  |
| Bone                                 | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | 50  |          |  |
| Osteosarcoma                         |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1   |          |  |
| <b>NERVOUS SYSTEM</b>                |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |  |
| Brain                                | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | 50  |          |  |
| <b>RESPIRATORY SYSTEM</b>            |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |  |
| Lung                                 | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | 50  |          |  |
| Alveolar/Bronchiolar Adenoma         |             |     |     |     |     |     |     |     |     |     |     | X   |     | X   |     | X   |     |     |     |     |     |     |     | 5   |          |  |
| Carcinoma, Metastatic, Thyroid Gland |             |     |     |     |     |     |     |     |     |     |     |     |     | X   |     |     |     |     |     |     |     |     |     | 1   |          |  |
| Nose                                 | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | 50  |          |  |
| Trachea                              | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | 50  |          |  |
| <b>SPECIAL SENSES SYSTEM</b>         |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |  |
| Eye                                  | +           | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | 50  |          |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
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TDMS No. 20009 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 05/27/2011  
 Time Report Requested: 10:09:56  
 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

| DAY ON TEST             | FISCHER 344 RATS FEMALE |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | * TOTALS |     |
|-------------------------|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|-----|
|                         | 078                     | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 | 078 |          | 078 |
| 625 mg/l                | 001                     | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 010 | 011 | 012 | 013 | 014 | 015 | 016 | 017 | 018 | 019 | 020 | 021      |     |
| ANIMAL ID               | 035                     | 033 | 033 | 033 | 033 | 033 | 033 | 033 | 033 | 033 | 033 | 033 | 033 | 033 | 033 | 033 | 033 | 033 | 033 | 033 | 033      |     |
| Harderian Gland         | +                       | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +        | 50  |
| Zymbal's Gland          |                         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          | 1   |
| <b>URINARY SYSTEM</b>   |                         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |     |
| Kidney                  | +                       | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +        | 50  |
| Urinary Bladder         | +                       | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +        | 50  |
| <b>SYSTEMIC LESIONS</b> |                         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          |     |
| Multiple Organ          | +                       | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +   | +        | 50  |
| Histiocytic Sarcoma     |                         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | X   |          | 1   |
| Leukemia Mononuclear    | X                       |     |     |     | X   |     |     |     |     |     |     | X   |     |     | X   |     | X   |     |     | X   |          | 10  |
| Lymphoma Malignant      |                         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |          | 1   |

\*\*\* END OF REPORT \*\*\*

\* .. Total animals with tissue examined microscopically; Total animals with tumor  
 + .. Tissue examined microscopically  
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