

**Experiment Number:** 20009-01  
**Test Type:** 90-DAY  
**Route:** DOSED WATER  
**Species/Strain:** Rat/F 344/N

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

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

**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 15:40:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**C Number:** C20009  
**Lock Date:** 07/30/2004  
**Cage Range:** All  
**Date Range:** All  
**Reasons For Removal:** All  
**Removal Date Range:** All  
**Treatment Groups:** All  
**Study Gender:** Both  
**PWG Approval Date:** NONE

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:30

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male  
0 MG/L

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
	9	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3	3
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1	0
	1	2	3	4	5	6	7	8	9		
	*TOTALS										

Alimentary System

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Mesentery								+			1
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

Cardiovascular System

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10

Endocrine System

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

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Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male  
0 MG/L

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Parathyroid Gland	+	+	+	+	M	+	+	+	+	+	9
Pituitary Gland	+	+	+	+	+	+	+	+	+	M	9
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10

General Body System

NONE

Genital System

Coagulating Gland						+					1
Epididymis	+	+	+	+	+	+	+	+	+	+	10
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10
Prostate	+	+	+	+	+	+	+	+	+	+	10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Testes	+	+	+	+	+	+	+	+	+	+	10

Hematopoietic System

Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	M	M	M	M	M	M	M	M	M	M	0
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10

Integumentary System

Mammary Gland	+	+	+	+	+	+	+	+	+	+	10
Skin	+	+	+	+	+	+	+	+	+	+	10

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Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:30

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male  
0 MG/L

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
ANIMAL ID	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0
	<b>*TOTALS</b>									
Skin	+	+	+	+	+	+	+	+	+	+
<b>Musculoskeletal System</b>										
Bone	+	+	+	+	+	+	+	+	+	+
<b>Nervous System</b>										
Brain	+	+	+	+	+	+	+	+	+	+
<b>Respiratory System</b>										
Lung	+	+	+	+	+	+	+	+	+	+
Nose	+	+	+	+	+	+	+	+	+	+
Trachea	+	+	+	+	+	+	+	+	+	+
<b>Special Senses System</b>										
Eye	+	+	+	+	+	+	+	+	+	+
Harderian Gland	+	+	+	+	+	+	+	+	+	+
<b>Urinary System</b>										
Kidney	+	+	+	+	+	+	+	+	+	+
Urinary Bladder	+	+	+	+	+	+	+	+	+	+
<b>SYSTEMIC LESIONS</b>										
Multiple Organ	+	+	+	+	+	+	+	+	+	+

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Test Compound: beta-Picoline

Time Report Requested: 15:40:30

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male  
78 MG/L

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	2
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Alimentary System

NONE

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

Preputial Gland

+

1

Adenoma

X

1

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

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Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male  
78 MG/L

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	2
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

NONE  
Respiratory System

NONE  
Special Senses System

NONE  
Urinary System

Kidney	+	+	+	+	+	+	+	+	+	+	10
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SYSTEMIC LESIONS

Multiple Organ	+	+	+	+	+	+	+	+	+	+	10
----------------	---	---	---	---	---	---	---	---	---	---	----

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Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:30

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male  
156 MG/L

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	3
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Alimentary System

NONE

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

NONE

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 Route: DOSED WATER  
 Species/Strain: Rat/F 344/N

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 Time Report Requested: 15:40:30  
 First Dose M/F: NA / NA  
 Lab: BAT

**F 344/N Rat Male**  
**156 MG/L**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	3
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

**Respiratory System**

NONE

**Special Senses System**

NONE

**Urinary System**

Kidney

+ + + + + + + + + + 10

**SYSTEMIC LESIONS**

Multiple Organ

+ + + + + + + + + + 10

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Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:30

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male  
312 MG/L

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

\*TOTALS

Alimentary System

NONE

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

NONE

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Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male  
312 MG/L

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

\*TOTALS

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney

+ + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

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Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:30

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male  
625 MG/L

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

\*TOTALS

Alimentary System

NONE

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

NONE

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Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male  
625 MG/L

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

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney

+ + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

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

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Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:30

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male  
1250 MG/L

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

Alimentary System

|                           |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver                     | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | 10 |
| Tooth                     |   |   | + |   |   |   |   |   |   | + | 2  |

Cardiovascular System

|              |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | 10 |
| Heart        | + | + | + | + | + | + | + | + | + | + | 10 |

Endocrine System

|                    |   |   |   |   |   |   |   |   |   |   |    |
|--------------------|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex     | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla    | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | 10 |

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:30

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male  
1250 MG/L

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

\*TOTALS

|                   |   |   |   |   |   |   |   |   |   |   |    |
|-------------------|---|---|---|---|---|---|---|---|---|---|----|
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | M | 9  |
| Pituitary Gland   | + | + | + | + | + | + | + | + | + | + | 10 |
| Thyroid Gland     | + | + | + | + | + | + | + | + | + | + | 10 |

General Body System

NONE

Genital System

|                   |   |   |   |   |   |   |   |   |   |   |    |
|-------------------|---|---|---|---|---|---|---|---|---|---|----|
| Coagulating Gland |   |   |   |   |   |   |   |   |   | + | 1  |
| Epididymis        | + | + | + | + | + | + | + | + | + | + | 10 |
| Preputial Gland   | + | + | + | + | + | + | + | + | + | + | 10 |
| Prostate          | + | + | + | + | + | + | + | + | + | + | 10 |
| Seminal Vesicle   | + | + | + | + | + | + | + | + | + | + | 10 |
| Testes            | + | + | + | + | + | + | + | + | + | + | 10 |

Hematopoietic System

|                        |   |   |   |   |   |   |   |   |   |   |    |
|------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow            | + | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Mandibular | M | M | M | M | M | M | M | M | M | M | 0  |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | 10 |
| Spleen                 | + | + | + | + | + | + | + | + | + | + | 10 |
| Thymus                 | + | + | + | + | + | + | + | + | + | + | 10 |

Integumentary System

|               |   |   |   |   |   |   |   |   |   |   |    |
|---------------|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland | + | + | M | + | + | + | + | + | + | + | 9  |
| Skin          | + | + | + | + | + | + | + | + | + | + | 10 |

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:30

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male  
1250 MG/L

| DAY ON TEST                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | *TOTALS |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---------|
|                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
| ANIMAL ID                     | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |         |
|                               | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |         |
|                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                               | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 |         |
|                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |         |
| Skin                          | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Musculoskeletal System</b> |   |   |   |   |   |   |   |   |   |   |         |
| Bone                          | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Nervous System</b>         |   |   |   |   |   |   |   |   |   |   |         |
| Brain                         | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Respiratory System</b>     |   |   |   |   |   |   |   |   |   |   |         |
| Lung                          | + | + | + | + | + | + | + | + | + | + | 10      |
| Nose                          | + | + | + | + | + | + | + | + | + | + | 10      |
| Pleura                        |   |   | + |   |   |   |   |   |   |   | 1       |
| Trachea                       | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Special Senses System</b>  |   |   |   |   |   |   |   |   |   |   |         |
| Eye                           | + | + | + | + | + | + | + | + | + | + | 10      |
| Harderian Gland               | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Urinary System</b>         |   |   |   |   |   |   |   |   |   |   |         |
| Kidney                        | + | + | + | + | + | + | + | + | + | + | 10      |
| Urinary Bladder               | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>SYSTEMIC LESIONS</b>       |   |   |   |   |   |   |   |   |   |   |         |
| Multiple Organ                | + | + | + | + | + | + | + | + | + | + | 10      |

\*\*\*END OF MALE DATA\*\*\*

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:30

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Female  
0 MG/L

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

Alimentary System

|                           |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver                     | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | 10 |

Cardiovascular System

|              |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | 10 |
| Heart        | + | + | + | + | + | + | + | + | + | + | 10 |

Endocrine System

|                    |   |   |   |   |   |   |   |   |   |   |    |
|--------------------|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex     | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla    | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | 10 |
| Parathyroid Gland  | + | + | M | + | + | + | + | + | M | + | 8  |

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:31

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

| F 344/N Rat Female<br>0 MG/L  | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | *TOTALS |
|-------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---------|
|                               | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
| Pituitary Gland               |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Thyroid Gland                 |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>General Body System</b>    |             |   |   |   |   |   |   |   |   |   |   |         |
| NONE                          |             |   |   |   |   |   |   |   |   |   |   |         |
| <b>Genital System</b>         |             |   |   |   |   |   |   |   |   |   |   |         |
| Clitoral Gland                |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Ovary                         |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Oviduct                       |             |   |   | + |   |   |   |   |   |   |   | 1       |
| Uterus                        |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Hematopoietic System</b>   |             |   |   |   |   |   |   |   |   |   |   |         |
| Bone Marrow                   |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Lymph Node, Mandibular        |             | M | M | M | M | M | M | M | M | M | M | 0       |
| Lymph Node, Mesenteric        |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Spleen                        |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Thymus                        |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Integumentary System</b>   |             |   |   |   |   |   |   |   |   |   |   |         |
| Mammary Gland                 |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Skin                          |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Musculoskeletal System</b> |             |   |   |   |   |   |   |   |   |   |   |         |
| Bone                          |             | + | + | + | + | + | + | + | + | + | + | 10      |

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:31

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Female  
0 MG/L

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

\*TOTALS

**Nervous System**

Brain + + + + + + + + + + 10

**Respiratory System**

Lung + + + + + + + + + + 10

Nose + + + + + + + + + + 10

Trachea + + + + + + M + + + 9

**Special Senses System**

Eye + + + + + + + + + + 10

Harderian Gland + + + + + + + + + + 10

**Urinary System**

Kidney + + + + + + + + + + 10

Urinary Bladder + + + + + + + + + + 10

**SYSTEMIC LESIONS**

Multiple Organ + + + + + + + + + + 10

\* ..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

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:31

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Female  
78 MG/L

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

Alimentary System

Liver + + + + + + + + + + 10

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

NONE

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:31

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Female  
78 MG/L

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

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney

+ + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

\* ..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

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:31

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Female  
156 MG/L

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

Alimentary System

Liver + + + + + + + + + + 10

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

NONE

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:31

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Female  
156 MG/L

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

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney

+ + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

\* ..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

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:31

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Female  
312 MG/L

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

Alimentary System

|       |   |   |   |   |   |   |   |   |   |   |    |
|-------|---|---|---|---|---|---|---|---|---|---|----|
| Liver | + | + | + | + | + | + | + | + | + | + | 10 |
|-------|---|---|---|---|---|---|---|---|---|---|----|

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

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

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:31

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Female  
312 MG/L

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

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney

+ + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

\* ..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

Experiment Number: 20009-01  
 Test Type: 90-DAY  
 Route: DOSED WATER  
 Species/Strain: Rat/F 344/N

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

Test Compound: beta-Picoline  
 CAS Number: 108-99-6

Date Report Requested: 10/19/2014  
 Time Report Requested: 15:40:31  
 First Dose M/F: NA / NA  
 Lab: BAT

**F 344/N Rat Female  
 625 MG/L**

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

**Alimentary System**

|           |   |   |   |   |   |   |   |   |   |   |    |
|-----------|---|---|---|---|---|---|---|---|---|---|----|
| Liver     | + | + | + | + | + | + | + | + | + | + | 10 |
| Mesentery |   |   |   | + |   |   |   |   |   |   | 1  |

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

NONE

**Musculoskeletal System**

NONE

**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

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:31

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Female  
625 MG/L

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

\*TOTALS

NONE  
Respiratory System

NONE  
Special Senses System

NONE  
Urinary System

|        |   |   |   |   |   |   |   |   |   |   |    |
|--------|---|---|---|---|---|---|---|---|---|---|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | 10 |
|--------|---|---|---|---|---|---|---|---|---|---|----|

SYSTEMIC LESIONS

|                |   |   |   |   |   |   |   |   |   |   |    |
|----------------|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | 10 |
|----------------|---|---|---|---|---|---|---|---|---|---|----|

\* ..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

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:31

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Female  
1250 MG/L

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

Alimentary System

|                           |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver                     | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | 10 |

Cardiovascular System

|              |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | 10 |
| Heart        | + | + | + | + | + | + | + | + | + | + | 10 |

Endocrine System

|                    |   |   |   |   |   |   |   |   |   |   |    |
|--------------------|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex     | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla    | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | 10 |
| Parathyroid Gland  | + | + | + | + | + | M | + | + | + | + | 9  |

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:31

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Female  
1250 MG/L

| DAY ON TEST                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | *TOTALS |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---------|
|                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
| ANIMAL ID                     | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |         |
|                               | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |         |
|                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                               | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |         |
|                               | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |         |
|                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |         |
| Pituitary Gland               | + | + | + | + | + | + | + | + | + | + | 10      |
| Thyroid Gland                 | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>General Body System</b>    |   |   |   |   |   |   |   |   |   |   |         |
| NONE                          |   |   |   |   |   |   |   |   |   |   |         |
| <b>Genital System</b>         |   |   |   |   |   |   |   |   |   |   |         |
| Clitoral Gland                | + | + | + | + | + | + | + | + | + | + | 10      |
| Ovary                         | + | + | + | + | + | + | + | + | + | + | 10      |
| Uterus                        | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Hematopoietic System</b>   |   |   |   |   |   |   |   |   |   |   |         |
| Bone Marrow                   | + | + | + | + | + | + | + | + | + | + | 10      |
| Lymph Node, Mandibular        | M | M | M | M | M | M | M | M | M | M | 0       |
| Lymph Node, Mesenteric        | + | + | + | + | + | + | + | + | + | + | 10      |
| Spleen                        | + | + | + | + | + | + | + | + | + | + | 10      |
| Thymus                        | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Integumentary System</b>   |   |   |   |   |   |   |   |   |   |   |         |
| Mammary Gland                 | + | + | + | + | + | + | + | + | + | + | 10      |
| Skin                          | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Musculoskeletal System</b> |   |   |   |   |   |   |   |   |   |   |         |
| Bone                          | + | + | + | + | + | + | + | + | + | + | 10      |

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20009-01

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:40:31

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Female  
1250 MG/L

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

**Nervous System**

Brain + + + + + + + + + + 10

**Respiratory System**

Lung + + + + + + + + + + 10

Nose + + + + + + + + + + 10

Trachea + + + + + + + + + + 10

**Special Senses System**

Eye + + + + + + + + + + 10

Harderian Gland + + + + + + + + + + 10

**Urinary System**

Kidney + + + + + + + + + + 10

Urinary Bladder + + + + + + + + + + 10

**SYSTEMIC LESIONS**

Multiple Organ + + + + + + + + + + 10

\*\* END OF REPORT \*\*

\* ..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