

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Test Compound: beta-Picoline
CAS Number: 108-99-6

Date Report Requested: 10/19/2014
Time Report Requested: 15:42:13
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

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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	1
	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	
Hematopoietic Cell Proliferation	1	1	1		1	1	1	1	1		8	1.0
Inflammation, Chronic Active	1	1	1	1	1	1	1	1	1	1	10	1.0
Mesentery									+		1	
Inflammation, Chronic Active									1		1	1.0
Pancreas	+	+	+	+	+	+	+	+	+	+	10	
Infiltration Cellular, Lymphocyte		1	1	1			1	1	1	1	7	1.0
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10	
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10	
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10	

Cardiovascular System

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10	
Heart	+	+	+	+	+	+	+	+	+	+	10	
Cardiomyopathy	2	3	2	3	2	2	1	2	1	2	10	2.0

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

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BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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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	1
	1	2	3	4	5	6	7	8	9	0

*TOTALS

Endocrine System

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	M	+	+	+	+	+	9
Pituitary Gland	+	+	+	+	+	+	+	+	+	M	9
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10

General Body System

NONE

Genital System

Coagulating Gland						+					1
Epididymis	+	+	+	+	+	+	+	+	+	+	10
Infiltration Cellular, Mononuclear CI							1				1 1.0
Mesothelium, Hyperplasia				3							1 3.0
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic Active		1		1	1	1	1	1	1	1	8 1.0
Inflammation, Granulomatous					1						1 1.0
Prostate	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic Active								1			1 1.0
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Testes	+	+	+	+	+	+	+	+	+	+	10

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

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

Musculoskeletal System

Bone	+	+	+	+	+	+	+	+	+	+	10
------	---	---	---	---	---	---	---	---	---	---	----

Nervous System

Brain	+	+	+	+	+	+	+	+	+	+	10
-------	---	---	---	---	---	---	---	---	---	---	----

Respiratory System

Lung	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic Active				1		1	1	1	1	1	6 1.0
Nose	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Suppurative									1		1 1.0
Trachea	+	+	+	+	+	+	+	+	+	+	10

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

Special Senses System

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

Urinary System

Kidney	+	+	+	+	+	+	+	+	+	+	10
Medulla, Mineralization	1						1	1	1	1	5 1.0
Nephropathy	1	1	1	2	2	1	1	1	1	1	10 1.2
Renal Tubule, Accumulation, Hyaline Droplet	1	2	1	1	1	2	1	2	1	1	10 1.3
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10

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CAS Number: 108-99-6

Date Report Requested: 10/19/2014

Time Report Requested: 15:42:13

First Dose M/F: NA / NA

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

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

NONE

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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

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney	+	+	+	+	+	+	+	+	+	+	10	
Medulla, Mineralization	1		1	1		1	1	1		1	7	1.0
Nephropathy	1	1	1	1	1	1	1	1	1	1	10	1.0
Renal Tubule, Accumulation, Hyaline Droplet	1	1	1	1	1	1	2	1	1	1	10	1.1

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Test Compound: beta-Picoline

Time Report Requested: 15:42:13

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

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

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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

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney	+	+	+	+	+	+	+	+	+	+	10	
Medulla, Mineralization		1	1			1	1		1	1	6	1.0
Nephropathy	1	1	1	1	1	1	1	1	1	1	10	1.0
Renal Tubule, Accumulation, Hyaline Droplet	1	2	1	1	1	1	1	1	1	2	10	1.2

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Species/Strain: Rat/F 344/N

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Test Compound: beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 10/19/2014

Time Report Requested: 15:42:13

First Dose M/F: NA / NA

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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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

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney	+	+	+	+	+	+	+	+	+	+	10
Medulla, Mineralization	1	1	1		1	1		1			6 1.0
Nephropathy	1	1	2	1	1	2	1	1	1	1	10 1.2
Renal Tubule, Accumulation, Hyaline Droplet	1	1	1	1	1	1	2	1	1	1	10 1.1

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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
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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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

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney	+	+	+	+	+	+	+	+	+	+	10
Medulla, Mineralization			1	1						1	3 1.0
Nephropathy	2	2	2	2	2	3	2	3	2	2	10 2.2
Renal Tubule, Accumulation, Hyaline Droplet	1	1	1	1	1	1	1	1	1	1	10 1.0

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2) Mild 4) Marked

Experiment Number: 20009-01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:42:14

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	
Inflammation, Chronic Active								1			1	1.0
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10	
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10	
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10	
Liver	+	+	+	+	+	+	+	+	+	+	10	
Hematopoietic Cell Proliferation		1	1	1	1	1	1	1	1	1	9	1.0
Inflammation, Chronic Active	1	1	1	1	2	1	2	1	1	1	10	1.2
Pancreas	+	+	+	+	+	+	+	+	+	+	10	
Infiltration Cellular, Lymphocyte		1		1	1				2		4	1.3
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10	
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10	
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10	
Glands, Ectasia				1							1	1.0
Inflammation, Chronic Active				1							1	1.0
Tooth			+							+	2	

Cardiovascular System

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10	
--------------	---	---	---	---	---	---	---	---	---	---	----	--

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20009-01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:42:14

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		
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	*TOTALS	
	3	3	3	3	3	3	3	3	3	3		
Heart	0	0	0	0	0	0	0	0	0	0	10	
Cardiomyopathy	9	9	9	9	9	9	9	9	9	9	10	1.3
Endocrine System	3	3	3	3	3	3	3	3	3	3		
Adrenal Cortex	0	0	0	0	0	0	0	0	0	0	10	
Adrenal Medulla	0	0	0	0	0	0	0	0	0	0	10	
Islets, Pancreatic	0	0	0	0	0	0	0	0	0	0	10	
Parathyroid Gland	5	5	5	5	5	5	5	5	5	6	9	
Pituitary Gland	1	2	3	4	5	5	6	7	8	9	10	
Thyroid Gland											10	
Infiltration Cellular, Mononuclear CI						1					1	1.0
General Body System												
NONE												
Genital System												
Coagulating Gland										+	1	
Inflammation, Chronic Active										1	1	1.0
Epididymis	+	+	+	+	+	+	+	+	+	+	10	
Epithelium, Degeneration										1	1	1.0
Infiltration Cellular, Mononuclear CI			1							1 1	3	1.0
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10	
Inflammation, Chronic Active	1	1	1	1	2	1	1	1	1	1	10	1.1
Prostate	+	+	+	+	+	+	+	+	+	+	10	

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+ ..Tissue examined microscopically
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I ..Insufficient tissue

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BLANK ..Not examined microscopically

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

Experiment Number: 20009-01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:42:14

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										*TOTALS
	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	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	
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Testes	+	+	+	+	+	+	+	+	+	+	10
Tunic, Inflammation, Chronic Active										1	1 1.0
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
Musculoskeletal System											
Bone	+	+	+	+	+	+	+	+	+	+	10
Cartilage, Atypia Cellular										1	1 1.0
Nervous System											
Brain	+	+	+	+	+	+	+	+	+	+	10
Respiratory System											
Lung	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic Active	1				1		1	1	1	1	6 1.0

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

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BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20009-01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 10/19/2014

Time Report Requested: 15:42:14

First Dose M/F: NA / NA

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

Metaplasia, Osseous					1						1	1.0
Metaplasia, Squamous								2			1	2.0
Nose	+	+	+	+	+	+	+	+	+	+	10	
Pleura			+								1	
Trachea	+	+	+	+	+	+	+	+	+	+	10	
Special Senses System												
Eye	+	+	+	+	+	+	+	+	+	+	10	
Harderian Gland	+	+	+	+	+	+	+	+	+	+	10	
Infiltration Cellular, Mononuclear CI								1			1	1.0
Urinary System												
Kidney	+	+	+	+	+	+	+	+	+	+	10	
Medulla, Mineralization		1	1		1		1	1	1	1	7	1.0
Nephropathy	3	3	3	3	3	3	2	3	3	3	10	2.9
Renal Tubule, Accumulation, Hyaline Droplet	2	2	2	2	2	2	2	2	2	2	10	2.0
Renal Tubule, Pigmentation			1								1	1.0
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10	
Infiltration Cellular, Mononuclear CI							1		1		2	1.0

END OF MALE DATA

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

+ ..Tissue examined microscopically

X ..Lesion present

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1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

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Experiment Number: 20009-01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:42:14

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	*TOTALS
	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		

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	
Hematopoietic Cell Proliferation			1					1		1	3	1.0
Hepatodiaphragmatic Nodule			X			X					2	
Inflammation, Chronic Active	1	1	1	1	1	1	1	2	1	1	10	1.1
Pancreas	+	+	+	+	+	+	+	+	+	+	10	
Infiltration Cellular, Lymphocyte			1	2			1	1		1	6	1.2
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10	
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10	
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10	

Cardiovascular System

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10	
Heart	+	+	+	+	+	+	+	+	+	+	10	
Cardiomyopathy	1	1	1	1	1	1	1	1	1	1	9	1.0

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

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1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20009-01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:42:14

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

Endocrine System

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	M	+	+	+	+	+	M	+	8
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10

General Body System

NONE

Genital System

Clitoral Gland	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic Active	1	1					1	1	1	1	6 1.0
Ovary	+	+	+	+	+	+	+	+	+	+	10
Oviduct			+								1
Infiltration Cellular, Mixed Cell			1								1 1.0
Uterus	+	+	+	+	+	+	+	+	+	+	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

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

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1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20009-01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:42:14

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										*TOTALS
	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	3	3	3	3	3	3	3	3	3	3	
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
Integumentary System											
Mammary Gland	+	+	+	+	+	+	+	+	+	+	10
Infiltration Cellular, Mixed Cell			1								1 1.0
Skin	+	+	+	+	+	+	+	+	+	+	10
Musculoskeletal System											
Bone	+	+	+	+	+	+	+	+	+	+	10
Nervous System											
Brain	+	+	+	+	+	+	+	+	+	+	10
Respiratory System											
Lung	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic Active			1					1	1		3 1.0
Interstitialium, Infiltration Cellular, Mononuclear	1										1 1.0
Cl Metaplasia, Osseous								1	1		2 1.0
Nose	+	+	+	+	+	+	+	+	+	+	10
Olfactory Epi, Foreign Body			1								1 1.0
Trachea	+	+	+	+	+	+	M	+	+	+	9
Special Senses System											

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

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1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20009-01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:42:14

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										*TOTALS
	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	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	
Eye	+	+	+	+	+	+	+	+	+	+	10
Harderian Gland	+	+	+	+	+	+	+	+	+	+	10
Infiltration Cellular, Mononuclear CI					1						1 1.0
Inflammation, Chronic Active			3					4			2 3.5
Metaplasia, Squamous			2					1			2 1.5
Urinary System											
Kidney	+	+	+	+	+	+	+	+	+	+	10
Capsule, Inflammation, Chronic Active								1			1 1.0
Medulla, Mineralization	1	1	1	1				1			5 1.0
Nephropathy			1		1	1	1	1	1		7 1.0
Renal Tubule, Crystals					1						1 1.0
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic Active			2								1 2.0

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20009-01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 10/19/2014

Time Report Requested: 15:42:14

First Dose M/F: NA / NA

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
Hepatodiaphragmatic Nodule	X										1
Inflammation, Chronic Active	2	1	1	1	1	1	1	2	1		9 1.2

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20009-01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 10/19/2014

Time Report Requested: 15:42:14

First Dose M/F: NA / NA

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

Nervous System

NONE

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney	+	+	+	+	+	+	+	+	+	+	10	
Medulla, Mineralization			1	1	1			1	1	1	6	1.0
Nephropathy	1	1	1	1	1	1	1	1	1	1	10	1.0

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

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1-4 ..Lesion qualified as:

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2) Mild 4) Marked

Experiment Number: 20009-01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 10/19/2014

Time Report Requested: 15:42:14

First Dose M/F: NA / NA

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
Inflammation, Chronic Active	1	2	1	1	2	2	1	1	1	1	10 1.3

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 lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20009-01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:42:14

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

NONE
Respiratory System

NONE
Special Senses System

NONE
Urinary System

Kidney	+	+	+	+	+	+	+	+	+	+	10
Medulla, Mineralization			1			1	1		1	1	5 1.0
Nephropathy		1	1	1	1	1			1	1	7 1.0

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

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2) Mild 4) Marked

Experiment Number: 20009-01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 10/19/2014

Time Report Requested: 15:42:14

First Dose M/F: NA / NA

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
Inflammation, Chronic Active	1	1	1		1	2	1	1	2	1	9 1.2

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 lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

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Experiment Number: 20009-01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 10/19/2014

Time Report Requested: 15:42:15

First Dose M/F: NA / NA

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

NONE
Respiratory System

NONE
Special Senses System

NONE
Urinary System

Kidney	+	+	+	+	+	+	+	+	+	+	10
Medulla, Mineralization	1							1		1	3 1.0
Nephropathy	1	1	1	1	1			1	1	1	8 1.0

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

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BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20009-01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 10/19/2014

Time Report Requested: 15:42:15

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

Alimentary System

Liver	+	+	+	+	+	+	+	+	+	+	10
Hematopoietic Cell Proliferation										1	1 1.0
Hepatodiaphragmatic Nodule								X			1
Inflammation, Chronic Active	1	1	1	1		1	1		1		7 1.0
Mesentery					+						1
Fat, Inflammation, Chronic Active					2						1 2.0

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

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Experiment Number: 20009-01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 10/19/2014

Time Report Requested: 15:42:15

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

*TOTALS

Musculoskeletal System

NONE

Nervous System

NONE

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney

+ + + + + + + + + + 10

Cortex, Angiectasis

2 1 2.0

Medulla, Mineralization

1 1 1 1 4 1.0

Nephropathy

1 1 1 1 1 1 1 1 1 9 1.0

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

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1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20009-01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:42:15

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 | |
| | | 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 | |

Alimentary System

| | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|--------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | 10 |
| Parasite Metazoan | | | X | | | | | | | | 1 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver | + | + | + | + | + | + | + | + | + | + | 10 |
| Hematopoietic Cell Proliferation | | | | | | | 1 | | | | 1 1.0 |
| Hepatodiaphragmatic Nodule | | | X | | | | | | | | 1 |
| Inflammation, Chronic Active | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 10 1.7 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | 10 |
| Acinus, Atrophy | | | 2 | | | | | | | | 1 2.0 |
| Infiltration Cellular, Lymphocyte | 1 | 1 | | 1 | 1 | | | | 1 | 1 | 6 1.0 |
| Inflammation, Chronic Active | | | | | | | | | 1 | | 1 1.0 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | 10 |

Cardiovascular System

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

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X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

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1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20009-01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 10/19/2014

Time Report Requested: 15:42:15

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female
1250 MG/L

| | DAY ON TEST | | | | | | | | | | |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | *TOTALS |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | |
| Heart | + | + | + | + | + | + | + | + | + | + | 10 |
| Cardiomyopathy | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 9 1.0 |
| Endocrine System | | | | | | | | | | | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | 10 |
| Parathyroid Gland | + | + | + | + | + | M | + | + | + | + | 9 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | 10 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | 10 |
| General Body System | | | | | | | | | | | |
| NONE | | | | | | | | | | | |
| Genital System | | | | | | | | | | | |
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | 10 |
| Inflammation, Chronic Active | 1 | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 8 1.0 |
| Ovary | + | + | + | + | + | + | + | + | + | + | 10 |
| Uterus | + | + | + | + | + | + | + | + | + | + | 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 |

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

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1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20009-01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: beta-Picoline

Time Report Requested: 15:42:15

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 | | | | | | | | | | *TOTALS |
|---------------------------------|-------------|---|---|---|---|---|---|---|---|---|---------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ANIMAL ID | 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 | |
| Spleen | + | + | + | + | + | + | + | + | + | + | 10 |
| Thymus | + | + | + | + | + | + | + | + | + | + | 10 |
| Integumentary System | | | | | | | | | | | |
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | 10 |
| Skin | + | + | + | + | + | + | + | + | + | + | 10 |
| Inflammation, Chronic Active | | | | 1 | | | | | | | 1 1.0 |
| Musculoskeletal System | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | 10 |
| Nervous System | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | 10 |
| Respiratory System | | | | | | | | | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | 10 |
| Inflammation, Chronic Active | 1 | | 1 | | 1 | 1 | 1 | | 1 | 1 | 7 1.0 |
| Nose | + | + | + | + | + | + | + | + | + | + | 10 |
| Trachea | + | + | + | + | + | + | + | + | + | + | 10 |
| Inflammation, Chronic Active | | | | | | | | | 1 | | 1 1.0 |
| Special Senses System | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | 10 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | 10 |
| Inflammation, Chronic Active | | | | | | | | 1 | | | 1 1.0 |

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+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

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1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20009-01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 10/19/2014

Time Report Requested: 15:42:15

First Dose M/F: NA / NA

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 |

Urinary System

| | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|--------|
| Kidney | + | + | + | + | + | + | + | + | + | + | 10 |
| Medulla, Mineralization | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 9 1.0 |
| Nephropathy | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 10 1.2 |
| Papilla, Casts Granular | | | 1 | | | | | | | | 1 1.0 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | 10 |
| Inflammation, Chronic Active | | | | | | | | | 1 | | 1 1.0 |

** END OF REPORT **

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

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1) Minimal 3) Moderate

2) Mild 4) Marked