

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

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

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

**NTP Study Number:** C20009  
**Lock Date:** 07/30/2004  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 3.0.2.3\_002  
**PWG Approval Date:** NONE

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 1

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406649

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mesenteric | * Mammary Gland            |
| * Nose                    | * Pancreas                  | * Parathyroid Gland      | * Pituitary Gland          |
| * Preputial Gland         | * Prostate                  | * Salivary Glands        | * Seminal Vesicle          |
| * Skin                    | * Spleen                    | * Stomach, Forestomach   | * Stomach, Glandular       |
| * Testes                  | * Thymus                    | * Thyroid Gland          | * Trachea                  |
| * Urinary Bladder         |                             |                          |                            |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |          |              |                                  |                         |
|----------|--------------|----------------------------------|-------------------------|
| * Heart  |              | Cardiomyopathy                   | Mild                    |
| * Kidney | Renal Tubule | Accumulation, Hyaline Droplet    | Minimal                 |
|          | Medulla      | Mineralization                   | Minimal                 |
|          |              | Nephropathy                      | Minimal                 |
| * Liver  |              | Hematopoietic Cell Proliferation | Minimal                 |
|          |              | Inflammation                     | Chronic Active, Minimal |

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 2

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406650

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mesenteric | * Mammary Gland            |
| * Nose                    | * Parathyroid Gland         | * Pituitary Gland        | * Prostate                 |
| * Salivary Glands         | * Seminal Vesicle           | * Skin                   | * Spleen                   |
| * Stomach, Forestomach    | * Stomach, Glandular        | * Testes                 | * Thymus                   |
| * Thyroid Gland           | * Trachea                   | * Urinary Bladder        |                            |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                   |              |                                  |                         |
|-------------------|--------------|----------------------------------|-------------------------|
| * Heart           |              | Cardiomyopathy                   | Moderate                |
| * Kidney          | Renal Tubule | Accumulation, Hyaline Droplet    | Mild                    |
|                   |              | Nephropathy                      | Minimal                 |
| * Liver           |              | Hematopoietic Cell Proliferation | Minimal                 |
|                   |              | Inflammation                     | Chronic Active, Minimal |
| * Pancreas        |              | Infiltration Cellular            | Lymphocyte, Minimal     |
| * Preputial Gland |              | Inflammation                     | Chronic Active, Minimal |

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 3

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406651

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mesenteric | * Mammary Gland            |
| * Nose                    | * Parathyroid Gland         | * Pituitary Gland        | * Preputial Gland          |
| * Prostate                | * Salivary Glands           | * Seminal Vesicle        | * Skin                     |
| * Spleen                  | * Stomach, Forestomach      | * Stomach, Glandular     | * Testes                   |
| * Thymus                  | * Thyroid Gland             | * Trachea                | * Urinary Bladder          |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |            |              |                                  |                         |
|------------|--------------|----------------------------------|-------------------------|
| * Heart    |              | Cardiomyopathy                   | Mild                    |
| * Kidney   | Renal Tubule | Accumulation, Hyaline Droplet    | Minimal                 |
|            |              | Nephropathy                      | Minimal                 |
| * Liver    |              | Hematopoietic Cell Proliferation | Minimal                 |
|            |              | Inflammation                     | Chronic Active, Minimal |
| * Pancreas |              | Infiltration Cellular            | Lymphocyte, Minimal     |

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 4

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406652

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Adrenal Medulla        | * Blood Vessel             | * Bone                    |
| * Bone Marrow               | * Brain                  | * Esophagus                | * Eye                     |
| * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lymph Node, Mesenteric    | * Mammary Gland          | * Nose                     | * Parathyroid Gland       |
| * Pituitary Gland           | * Prostate               | * Salivary Glands          | * Seminal Vesicle         |
| * Skin                      | * Spleen                 | * Stomach, Forestomach     | * Stomach, Glandular      |
| * Testes                    | * Thymus                 | * Thyroid Gland            | * Trachea                 |
| * Urinary Bladder           |                          |                            |                           |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                   |              |                               |                         |
|-------------------|--------------|-------------------------------|-------------------------|
| * Epididymis      | Mesothelium  | Hyperplasia                   | Moderate                |
| * Heart           |              | Cardiomyopathy                | Moderate                |
| * Kidney          | Renal Tubule | Accumulation, Hyaline Droplet | Minimal                 |
|                   |              | Nephropathy                   | Mild                    |
| * Liver           |              | Inflammation                  | Chronic Active, Minimal |
| * Lung            |              | Inflammation                  | Chronic Active, Minimal |
| * Pancreas        |              | Infiltration Cellular         | Lymphocyte, Minimal     |
| * Preputial Gland |              | Inflammation                  | Chronic Active, Minimal |

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 5

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406653

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mesenteric | * Mammary Gland            |
| * Nose                    | * Pancreas                  | * Pituitary Gland        | * Prostate                 |
| * Salivary Glands         | * Seminal Vesicle           | * Skin                   | * Spleen                   |
| * Stomach, Forestomach    | * Stomach, Glandular        | * Testes                 | * Thymus                   |
| * Thyroid Gland           | * Trachea                   | * Urinary Bladder        |                            |

MISSING

- |                          |                     |
|--------------------------|---------------------|
| * Lymph Node, Mandibular | * Parathyroid Gland |
|--------------------------|---------------------|

OBSERVATIONS

- |                   |              |                                  |                         |
|-------------------|--------------|----------------------------------|-------------------------|
| * Heart           |              | Cardiomyopathy                   | Mild                    |
| * Kidney          | Renal Tubule | Accumulation, Hyaline Droplet    | Minimal                 |
|                   |              | Nephropathy                      | Mild                    |
| * Liver           |              | Hematopoietic Cell Proliferation | Minimal                 |
|                   |              | Inflammation                     | Chronic Active, Minimal |
| * Preputial Gland |              | Inflammation                     | Chronic Active, Minimal |

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

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
beta-Picoline  
CAS Number: 108-99-6

Date Report Requested: 08/29/2016  
Time Report Requested: 11:29:47  
First Dose M/F: 11/17/03 / 11/18/03  
Lab: BAT

ANIMAL ID: 6

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406654

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	Coagulating Gland	* Epididymis
* Esophagus	* Eye	* Harderian Gland	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder

MISSING

\* Lymph Node, Mandibular

OBSERVATIONS

* Heart		Cardiomyopathy	Mild
* Kidney	Renal Tubule	Accumulation, Hyaline Droplet	Mild
		Nephropathy	Minimal
* Liver		Hematopoietic Cell Proliferation	Minimal
		Inflammation	Chronic Active, Minimal
* Lung		Inflammation	Chronic Active, Minimal
* Preputial Gland		Inflammation	Granulomatous, Minimal
		Inflammation	Chronic Active, Minimal

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 7

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406655

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Adrenal Medulla        | * Blood Vessel             | * Bone                    |
| * Bone Marrow               | * Brain                  | * Esophagus                | * Eye                     |
| * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lymph Node, Mesenteric    | * Mammary Gland          | * Nose                     | * Parathyroid Gland       |
| * Pituitary Gland           | * Prostate               | * Salivary Glands          | * Seminal Vesicle         |
| * Skin                      | * Spleen                 | * Stomach, Forestomach     | * Stomach, Glandular      |
| * Testes                    | * Thymus                 | * Thyroid Gland            | * Trachea                 |
| * Urinary Bladder           |                          |                            |                           |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                   |              |                                  |                         |
|-------------------|--------------|----------------------------------|-------------------------|
| * Epididymis      |              | Infiltration Cellular            | Mononuclear CI, Minimal |
| * Heart           |              | Cardiomyopathy                   | Minimal                 |
| * Kidney          | Renal Tubule | Accumulation, Hyaline Droplet    | Minimal                 |
|                   | Medulla      | Mineralization                   | Minimal                 |
|                   |              | Nephropathy                      | Minimal                 |
| * Liver           |              | Hematopoietic Cell Proliferation | Minimal                 |
|                   |              | Inflammation                     | Chronic Active, Minimal |
| * Lung            |              | Inflammation                     | Chronic Active, Minimal |
| * Pancreas        |              | Infiltration Cellular            | Lymphocyte, Minimal     |
| * Preputial Gland |              | Inflammation                     | Chronic Active, Minimal |



Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 8

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406656

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Adrenal Medulla
- \* Blood Vessel
- \* Bone
- \* Bone Marrow
- \* Brain
- \* Epididymis
- \* Esophagus
- \* Eye
- \* Harderian Gland
- \* Intestine Large, Cecum
- \* Intestine Large, Colon
- \* Intestine Large, Rectum
- \* Intestine Small, Duodenum
- \* Intestine Small, Ileum
- \* Intestine Small, Jejunum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Mammary Gland
- \* Nose
- \* Parathyroid Gland
- \* Pituitary Gland
- \* Prostate
- \* Salivary Glands
- \* Seminal Vesicle
- \* Skin
- \* Spleen
- \* Stomach, Forestomach
- \* Stomach, Glandular
- \* Testes
- \* Thymus
- \* Thyroid Gland
- \* Trachea
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Heart
  - \* Kidney
  - \* Liver
  - \* Lung
  - Mesentery
  - \* Pancreas
  - \* Preputial Gland
- Renal Tubule  
Medulla
- Cardiomyopathy  
Accumulation, Hyaline Droplet  
Mineralization  
Nephropathy  
Hematopoietic Cell Proliferation  
Inflammation  
Inflammation  
Inflammation
- Mild  
Mild  
Minimal  
Minimal  
Minimal  
Chronic Active, Minimal  
Chronic Active, Minimal  
Chronic Active, Minimal
- Note: The mesentery is attached to the capsule of the spleen
- Infiltration Cellular  
Inflammation
- Lymphocyte, Minimal  
Chronic Active, Minimal

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 9

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406657

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lymph Node, Mesenteric    | * Mammary Gland          | * Parathyroid Gland        |
| * Pituitary Gland         | * Salivary Glands           | * Seminal Vesicle        | * Skin                     |
| * Spleen                  | * Stomach, Forestomach      | * Stomach, Glandular     | * Testes                   |
| * Thymus                  | * Thyroid Gland             | * Trachea                | * Urinary Bladder          |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                   |              |                                  |                         |
|-------------------|--------------|----------------------------------|-------------------------|
| * Heart           |              | Cardiomyopathy                   | Minimal                 |
| * Kidney          | Renal Tubule | Accumulation, Hyaline Droplet    | Minimal                 |
|                   | Medulla      | Mineralization                   | Minimal                 |
|                   |              | Nephropathy                      | Minimal                 |
| * Liver           |              | Hematopoietic Cell Proliferation | Minimal                 |
|                   |              | Inflammation                     | Chronic Active, Minimal |
| * Lung            |              | Inflammation                     | Chronic Active, Minimal |
| * Nose            |              | Inflammation                     | Suppurative, Minimal    |
| * Pancreas        |              | Infiltration Cellular            | Lymphocyte, Minimal     |
| * Preputial Gland |              | Inflammation                     | Chronic Active, Minimal |
| * Prostate        |              | Inflammation                     | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 10

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406658

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lymph Node, Mesenteric    | * Mammary Gland          | * Nose                     |
| * Parathyroid Gland       | * Prostate                  | * Salivary Glands        | * Seminal Vesicle          |
| * Skin                    | * Spleen                    | * Stomach, Forestomach   | * Stomach, Glandular       |
| * Testes                  | * Thymus                    | * Thyroid Gland          | * Trachea                  |
| * Urinary Bladder         |                             |                          |                            |

MISSING

- |                          |                   |
|--------------------------|-------------------|
| * Lymph Node, Mandibular | * Pituitary Gland |
|--------------------------|-------------------|

OBSERVATIONS

- |                   |              |                               |                         |
|-------------------|--------------|-------------------------------|-------------------------|
| * Heart           |              | Cardiomyopathy                | Mild                    |
| * Kidney          | Renal Tubule | Accumulation, Hyaline Droplet | Minimal                 |
|                   | Medulla      | Mineralization                | Minimal                 |
|                   |              | Nephropathy                   | Minimal                 |
| * Liver           |              | Inflammation                  | Chronic Active, Minimal |
| * Lung            |              | Inflammation                  | Chronic Active, Minimal |
| * Pancreas        |              | Infiltration Cellular         | Lymphocyte, Minimal     |
| * Preputial Gland |              | Inflammation                  | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 11	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 78 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406659
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet	Minimal
	Medulla	Mineralization	Minimal
		Nephropathy	Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 12	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 78 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406660
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 13	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 78 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406661
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule Medulla	Accumulation, Hyaline Droplet Mineralization Nephropathy	Minimal Minimal Minimal
Preputial Gland [ Adenoma TGLs = 1-13 ]		Adenoma	

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 14	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 78 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406662
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet	Minimal
	Medulla	Mineralization	Minimal
		Nephropathy	Minimal

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 15	<b>TRT#:</b> 3 <b>DOSE:</b> 78 MG/L	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406663
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Minimal

---



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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
CAS Number: 108-99-6

Date Report Requested: 08/29/2016  
Time Report Requested: 11:29:47  
First Dose M/F: 11/17/03 / 11/18/03  
Lab: BAT

---

<b>ANIMAL ID:</b> 16	<b>TRT#:</b> 3 <b>DOSE:</b> 78 MG/L	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406664
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule Medulla	Accumulation, Hyaline Droplet Mineralization Nephropathy	Minimal Minimal Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 17	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 78 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406665
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule Medulla	Accumulation, Hyaline Droplet Mineralization Nephropathy	Mild Minimal Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 18	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 78 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406666
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet	Minimal
	Medulla	Mineralization	Minimal
		Nephropathy	Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 19	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 78 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406667
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 20	<b>TRT#:</b> 3	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 78 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406668
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet	Minimal
	Medulla	Mineralization	Minimal
		Nephropathy	Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 21	<b>TRT#:</b> 5	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 156 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406669
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Minimal

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 22	<b>TRT#:</b> 5	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 156 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406670
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule Medulla	Accumulation, Hyaline Droplet Mineralization Nephropathy	Mild Minimal Minimal

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 23	<b>TRT#:</b> 5	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 156 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406671
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet	Minimal
	Medulla	Mineralization	Minimal
		Nephropathy	Minimal

---



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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
CAS Number: 108-99-6

Date Report Requested: 08/29/2016  
Time Report Requested: 11:29:47  
First Dose M/F: 11/17/03 / 11/18/03  
Lab: BAT

---

<b>ANIMAL ID:</b> 24	<b>TRT#:</b> 5	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 156 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406672
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 25	<b>TRT#:</b> 5	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 156 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406673
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 26	<b>TRT#:</b> 5	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 156 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406674
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet	Minimal
	Medulla	Mineralization	Minimal
		Nephropathy	Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 27	<b>TRT#:</b> 5	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 156 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406675
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet	Minimal
	Medulla	Mineralization	Minimal
		Nephropathy	Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 28	<b>TRT#:</b> 5	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 156 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406676
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Minimal

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 29	<b>TRT#:</b> 5 <b>DOSE:</b> 156 MG/L	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406677
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule Medulla	Accumulation, Hyaline Droplet Mineralization Nephropathy	Minimal Minimal Minimal

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
CAS Number: 108-99-6

Date Report Requested: 08/29/2016  
Time Report Requested: 11:29:47  
First Dose M/F: 11/17/03 / 11/18/03  
Lab: BAT

---

<b>ANIMAL ID:</b> 30	<b>TRT#:</b> 5 <b>DOSE:</b> 156 MG/L	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406678
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule Medulla	Accumulation, Hyaline Droplet Mineralization Nephropathy	Mild Minimal Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 31	<b>TRT#:</b> 7	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 312 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406679
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet	Minimal
	Medulla	Mineralization	Minimal
		Nephropathy	Minimal

---



Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 32	<b>TRT#:</b> 7	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 312 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406680
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet	Minimal
	Medulla	Mineralization	Minimal
		Nephropathy	Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 33	<b>TRT#:</b> 7	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 312 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406681
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule Medulla	Accumulation, Hyaline Droplet Mineralization Nephropathy	Minimal Minimal Mild

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 34	<b>TRT#:</b> 7	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 312 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406682
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 35	<b>TRT#:</b> 7	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 312 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406683
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet	Minimal
	Medulla	Mineralization	Minimal
		Nephropathy	Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 36	<b>TRT#:</b> 7	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 312 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406684
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule Medulla	Accumulation, Hyaline Droplet Mineralization Nephropathy	Minimal Minimal Mild

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 37	<b>TRT#:</b> 7	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 312 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406685
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Mild Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 38	<b>TRT#:</b> 7	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 312 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406686
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet	Minimal
	Medulla	Mineralization	Minimal
		Nephropathy	Minimal

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 39	<b>TRT#:</b> 7	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 312 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406687
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Minimal

---



Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 40	<b>TRT#:</b> 7	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 312 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406688
<b>OBSERVATIONS</b>			
Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Minimal

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

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

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 41	<b>TRT#:</b> 9 <b>DOSE:</b> 625 MG/L	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406689
<b>OBSERVATIONS</b> * Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Mild

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 42	<b>TRT#:</b> 9 <b>DOSE:</b> 625 MG/L	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406690
<b>OBSERVATIONS</b> * Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Mild

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 43	<b>TRT#:</b> 9	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 625 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406691

---

<b>OBSERVATIONS</b>			
* Kidney	Renal Tubule	Accumulation, Hyaline Droplet	Minimal
	Medulla	Mineralization	Minimal
		Nephropathy	Mild

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 44

**TRT#:** 9

**SEX:** Male

**DAY ON TEST:** 93

**DOSE:** 625 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406692

---

**OBSERVATIONS**

\* Kidney

Renal Tubule  
Medulla

Accumulation, Hyaline Droplet  
Mineralization  
Nephropathy

Minimal  
Minimal  
Mild

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 45	<b>TRT#:</b> 9 <b>DOSE:</b> 625 MG/L	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406693
<b>OBSERVATIONS</b> * Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Mild

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 46	<b>TRT#:</b> 9	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 625 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406694
<b>OBSERVATIONS</b>			
* Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Moderate

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 47	<b>TRT#:</b> 9	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 625 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406695
<b>OBSERVATIONS</b>			
* Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Mild

---



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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 48	<b>TRT#:</b> 9 <b>DOSE:</b> 625 MG/L	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406696
<b>OBSERVATIONS</b> * Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Moderate

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 49	<b>TRT#:</b> 9	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 625 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406697
<b>OBSERVATIONS</b>			
* Kidney	Renal Tubule	Accumulation, Hyaline Droplet Nephropathy	Minimal Mild

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 50	<b>TRT#:</b> 9 <b>DOSE:</b> 625 MG/L	<b>SEX:</b> Male <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406698
<b>OBSERVATIONS</b>			
* Kidney	Renal Tubule Medulla	Accumulation, Hyaline Droplet Mineralization Nephropathy	Minimal Minimal Mild

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 51

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406699

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lymph Node, Mesenteric    | * Mammary Gland          | * Nose                     |
| * Pancreas                | * Parathyroid Gland         | * Pituitary Gland        | * Prostate                 |
| * Salivary Glands         | * Seminal Vesicle           | * Skin                   | * Spleen                   |
| * Stomach, Forestomach    | * Stomach, Glandular        | * Testes                 | * Thymus                   |
| * Thyroid Gland           | * Trachea                   | * Urinary Bladder        |                            |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                   |              |                               |                         |
|-------------------|--------------|-------------------------------|-------------------------|
| * Heart           |              | Cardiomyopathy                | Minimal                 |
| * Kidney          | Renal Tubule | Accumulation, Hyaline Droplet | Mild                    |
|                   |              | Nephropathy                   | Moderate                |
| * Liver           |              | Inflammation                  | Chronic Active, Minimal |
| * Lung            |              | Inflammation                  | Chronic Active, Minimal |
| * Preputial Gland |              | Inflammation                  | Chronic Active, Minimal |

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 52

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406700

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Adrenal Medulla        | * Blood Vessel             | * Bone                    |
| * Bone Marrow               | * Brain                  | * Esophagus                | * Eye                     |
| * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lung                      | * Lymph Node, Mesenteric | * Mammary Gland            | * Nose                    |
| * Parathyroid Gland         | * Pituitary Gland        | * Prostate                 | * Salivary Glands         |
| * Seminal Vesicle           | * Skin                   | * Spleen                   | * Stomach, Forestomach    |
| * Stomach, Glandular        | * Testes                 | * Thymus                   | * Thyroid Gland           |
| * Trachea                   | * Urinary Bladder        |                            |                           |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                   |              |                                  |                         |
|-------------------|--------------|----------------------------------|-------------------------|
| * Epididymis      |              | Infiltration Cellular            | Mononuclear CI, Minimal |
| * Heart           |              | Cardiomyopathy                   | Mild                    |
| * Kidney          | Renal Tubule | Accumulation, Hyaline Droplet    | Mild                    |
|                   | Medulla      | Mineralization                   | Minimal                 |
|                   |              | Nephropathy                      | Moderate                |
| * Liver           |              | Hematopoietic Cell Proliferation | Minimal                 |
|                   |              | Inflammation                     | Chronic Active, Minimal |
| * Pancreas        |              | Infiltration Cellular            | Lymphocyte, Minimal     |
| * Preputial Gland |              | Inflammation                     | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 53

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406701

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mesenteric | * Nose                     |
| * Pancreas                | * Parathyroid Gland         | * Pituitary Gland        | Pleura                     |
| * Prostate                | * Salivary Glands           | * Seminal Vesicle        | * Skin                     |
| * Spleen                  | * Stomach, Forestomach      | * Stomach, Glandular     | * Testes                   |
| * Thymus                  | * Thyroid Gland             | Tooth                    | * Trachea                  |
| * Urinary Bladder         |                             |                          |                            |

MISSING

- |                          |                 |
|--------------------------|-----------------|
| * Lymph Node, Mandibular | * Mammary Gland |
|--------------------------|-----------------|

OBSERVATIONS

- |                   |              |                                  |                         |
|-------------------|--------------|----------------------------------|-------------------------|
| * Heart           |              | Cardiomyopathy                   | Minimal                 |
| * Kidney          | Renal Tubule | Accumulation, Hyaline Droplet    | Mild                    |
|                   | Medulla      | Mineralization                   | Minimal                 |
|                   |              | Nephropathy                      | Moderate                |
|                   | Renal Tubule | Pigmentation                     | Minimal                 |
| * Liver           |              | Hematopoietic Cell Proliferation | Minimal                 |
|                   |              | Inflammation                     | Chronic Active, Minimal |
| * Preputial Gland |              | Inflammation                     | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 54

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406702

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Adrenal Medulla
- \* Blood Vessel
- \* Bone
- \* Bone Marrow
- \* Brain
- \* Epididymis
- \* Esophagus
- \* Eye
- \* Harderian Gland
- \* Intestine Large, Cecum
- \* Intestine Large, Colon
- \* Intestine Large, Rectum
- \* Intestine Small, Duodenum
- \* Intestine Small, Ileum
- \* Intestine Small, Jejunum
- \* Islets, Pancreatic
- \* Lung
- \* Lymph Node, Mesenteric
- \* Mammary Gland
- \* Nose
- \* Parathyroid Gland
- \* Pituitary Gland
- \* Prostate
- \* Salivary Glands
- \* Seminal Vesicle
- \* Skin
- \* Spleen
- \* Stomach, Forestomach
- \* Testes
- \* Thymus
- \* Thyroid Gland
- \* Trachea
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                      |              |                                  |                         |
|----------------------|--------------|----------------------------------|-------------------------|
| * Heart              |              | Cardiomyopathy                   | Minimal                 |
| * Kidney             | Renal Tubule | Accumulation, Hyaline Droplet    | Mild                    |
|                      |              | Nephropathy                      | Moderate                |
| * Liver              |              | Hematopoietic Cell Proliferation | Minimal                 |
|                      |              | Inflammation                     | Chronic Active, Minimal |
| * Pancreas           |              | Infiltration Cellular            | Lymphocyte, Minimal     |
| * Preputial Gland    |              | Inflammation                     | Chronic Active, Minimal |
| * Stomach, Glandular | Glands       | Ectasia                          | Minimal                 |
|                      |              | Inflammation                     | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 55

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406703

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lymph Node, Mesenteric    | * Mammary Gland          | * Nose                     |
| * Parathyroid Gland       | * Pituitary Gland           | * Prostate               | * Salivary Glands          |
| * Seminal Vesicle         | * Skin                      | * Spleen                 | * Stomach, Forestomach     |
| * Stomach, Glandular      | * Testes                    | * Thymus                 | * Thyroid Gland            |
| * Trachea                 | * Urinary Bladder           |                          |                            |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                   |              |                                  |                         |
|-------------------|--------------|----------------------------------|-------------------------|
| * Heart           |              | Cardiomyopathy                   | Mild                    |
| * Kidney          | Renal Tubule | Accumulation, Hyaline Droplet    | Mild                    |
|                   | Medulla      | Mineralization                   | Minimal                 |
|                   |              | Nephropathy                      | Moderate                |
| * Liver           |              | Hematopoietic Cell Proliferation | Minimal                 |
|                   |              | Inflammation                     | Chronic Active, Mild    |
| * Lung            |              | Inflammation                     | Chronic Active, Minimal |
|                   |              | Metaplasia                       | Osseous, Minimal        |
| * Pancreas        |              | Infiltration Cellular            | Lymphocyte, Minimal     |
| * Preputial Gland |              | Inflammation                     | Chronic Active, Mild    |

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 56

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406704

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mesenteric | * Mammary Gland            |
| * Nose                    | * Pancreas                  | * Parathyroid Gland      | * Pituitary Gland          |
| * Prostate                | * Salivary Glands           | * Seminal Vesicle        | * Skin                     |
| * Spleen                  | * Stomach, Forestomach      | * Stomach, Glandular     | * Testes                   |
| * Thymus                  | * Trachea                   | * Urinary Bladder        |                            |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                   |              |                                  |                         |
|-------------------|--------------|----------------------------------|-------------------------|
| * Heart           |              | Cardiomyopathy                   | Minimal                 |
| * Kidney          | Renal Tubule | Accumulation, Hyaline Droplet    | Mild                    |
|                   |              | Nephropathy                      | Moderate                |
| * Liver           |              | Hematopoietic Cell Proliferation | Minimal                 |
|                   |              | Inflammation                     | Chronic Active, Minimal |
| * Preputial Gland |              | Inflammation                     | Chronic Active, Minimal |
| * Thyroid Gland   |              | Infiltration Cellular            | Mononuclear CI, Minimal |

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 57

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406705

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Epididymis             | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lymph Node, Mesenteric    | * Mammary Gland          | * Nose                     |
| * Pancreas                | * Parathyroid Gland         | * Pituitary Gland        | * Prostate                 |
| * Salivary Glands         | * Seminal Vesicle           | * Skin                   | * Spleen                   |
| * Stomach, Forestomach    | * Stomach, Glandular        | * Testes                 | * Thymus                   |
| * Thyroid Gland           | * Trachea                   |                          |                            |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                   |              |                                  |                         |
|-------------------|--------------|----------------------------------|-------------------------|
| * Heart           |              | Cardiomyopathy                   | Minimal                 |
| * Kidney          | Renal Tubule | Accumulation, Hyaline Droplet    | Mild                    |
|                   | Medulla      | Mineralization                   | Minimal                 |
|                   |              | Nephropathy                      | Mild                    |
| * Liver           |              | Hematopoietic Cell Proliferation | Minimal                 |
|                   |              | Inflammation                     | Chronic Active, Mild    |
| * Lung            |              | Inflammation                     | Chronic Active, Minimal |
| * Preputial Gland |              | Inflammation                     | Chronic Active, Minimal |
| * Urinary Bladder |              | Infiltration Cellular            | Mononuclear CI, Minimal |

\* PROTOCOL REQUIRED TISSUE

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

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
beta-Picoline  
CAS Number: 108-99-6

Date Report Requested: 08/29/2016  
Time Report Requested: 11:29:47  
First Dose M/F: 11/17/03 / 11/18/03  
Lab: BAT

ANIMAL ID: 58

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406706

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Eye	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

MISSING

\* Lymph Node, Mandibular

OBSERVATIONS

* Harderian Gland		Infiltration Cellular	Mononuclear CI, Minimal
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Rectum		Inflammation	Chronic Active, Minimal
* Kidney	Renal Tubule Medulla	Accumulation, Hyaline Droplet Mineralization Nephropathy	Mild Minimal Moderate
* Liver		Hematopoietic Cell Proliferation Inflammation	Minimal Chronic Active, Minimal
* Lung		Inflammation	Chronic Active, Minimal
* Preputial Gland		Inflammation	Chronic Active, Minimal

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 59

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406707

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                          |                            |                           |                             |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex         | * Adrenal Medulla          | * Blood Vessel            | * Bone Marrow               |
| * Brain                  | * Esophagus                | * Eye                     | * Harderian Gland           |
| * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lymph Node, Mesenteric    |
| * Mammary Gland          | * Nose                     | * Parathyroid Gland       | * Pituitary Gland           |
| * Prostate               | * Salivary Glands          | * Seminal Vesicle         | * Skin                      |
| * Spleen                 | * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    |
| * Thyroid Gland          | * Trachea                  | * Urinary Bladder         |                             |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                   |              |                                  |                         |
|-------------------|--------------|----------------------------------|-------------------------|
| * Bone            | Cartilage    | Atypia Cellular                  | Minimal                 |
| Coagulating Gland |              | Inflammation                     | Chronic Active, Minimal |
| * Epididymis      | Epithelium   | Degeneration                     | Minimal                 |
|                   |              | Infiltration Cellular            | Mononuclear CI, Minimal |
| * Heart           |              | Cardiomyopathy                   | Mild                    |
| * Kidney          | Renal Tubule | Accumulation, Hyaline Droplet    | Mild                    |
|                   | Medulla      | Mineralization                   | Minimal                 |
|                   |              | Nephropathy                      | Moderate                |
| * Liver           |              | Hematopoietic Cell Proliferation | Minimal                 |
|                   |              | Inflammation                     | Chronic Active, Minimal |
| * Lung            |              | Inflammation                     | Chronic Active, Minimal |
|                   |              | Metaplasia                       | Squamous, Mild          |
| * Pancreas        |              | Infiltration Cellular            | Lymphocyte, Mild        |
| * Preputial Gland |              | Inflammation                     | Chronic Active, Minimal |
| * Testes          | Tunic        | Inflammation                     | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE



Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 61

TRT#: 2

SEX: Female

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406709

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Adrenal Medulla
- \* Blood Vessel
- \* Bone
- \* Bone Marrow
- \* Brain
- \* Esophagus
- \* Eye
- \* Harderian Gland
- \* Intestine Large, Cecum
- \* Intestine Large, Colon
- \* Intestine Large, Rectum
- \* Intestine Small, Duodenum
- \* Intestine Small, Ileum
- \* Intestine Small, Jejunum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Mammary Gland
- \* Nose
- \* Ovary
- \* Pancreas
- \* Parathyroid Gland
- \* Pituitary Gland
- \* Salivary Glands
- \* Skin
- \* Spleen
- \* Stomach, Forestomach
- \* Stomach, Glandular
- \* Thymus
- \* Thyroid Gland
- \* Trachea
- \* Urinary Bladder
- \* Uterus

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                  |              |                       |                         |
|------------------|--------------|-----------------------|-------------------------|
| * Clitoral Gland |              | Inflammation          | Chronic Active, Minimal |
| * Heart          |              | Cardiomyopathy        | Minimal                 |
| * Kidney         | Medulla      | Mineralization        | Minimal                 |
| * Liver          |              | Inflammation          | Chronic Active, Minimal |
| * Lung           | Interstitium | Infiltration Cellular | Mononuclear Cl, Minimal |

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 62

TRT#: 2

SEX: Female

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406710

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Adrenal Medulla        | * Blood Vessel             | * Bone                    |
| * Bone Marrow               | * Brain                  | * Esophagus                | * Eye                     |
| * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lung                      | * Lymph Node, Mesenteric | * Mammary Gland            | * Ovary                   |
| * Parathyroid Gland         | * Pituitary Gland        | * Salivary Glands          | * Skin                    |
| * Spleen                    | * Stomach, Forestomach   | * Stomach, Glandular       | * Thymus                  |
| * Thyroid Gland             | * Trachea                | * Urinary Bladder          | * Uterus                  |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                  |                              |                                  |                         |
|------------------|------------------------------|----------------------------------|-------------------------|
| * Clitoral Gland |                              | Inflammation                     | Chronic Active, Minimal |
| * Heart          |                              | Cardiomyopathy                   | Minimal                 |
| * Kidney         | Medulla                      | Mineralization                   | Minimal                 |
| * Liver          |                              | Hematopoietic Cell Proliferation | Minimal                 |
|                  |                              | Hepatodiaphragmatic Nodule       |                         |
|                  |                              | Inflammation                     | Chronic Active, Minimal |
|                  | [ Hepatodiaphragmatic Nodule |                                  |                         |
| * Nose           | TGLs = 1-6 ]                 | Foreign Body                     | Minimal                 |
| * Pancreas       | Olfactory Epi                | Infiltration Cellular            | Lymphocyte, Minimal     |

\* PROTOCOL REQUIRED TISSUE

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

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
beta-Picoline  
CAS Number: 108-99-6

Date Report Requested: 08/29/2016  
Time Report Requested: 11:29:47  
First Dose M/F: 11/17/03 / 11/18/03  
Lab: BAT

ANIMAL ID: 63

TRT#: 2

SEX: Female

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406711

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Eye	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Uterus			

MISSING

* Lymph Node, Mandibular	* Parathyroid Gland
--------------------------	---------------------

OBSERVATIONS

* Harderian Gland		Inflammation	Chronic Active, Moderate
		Metaplasia	Squamous, Mild
* Heart		Cardiomyopathy	Minimal
* Kidney	Medulla	Mineralization	Minimal
		Nephropathy	Minimal
* Liver		Inflammation	Chronic Active, Minimal
* Lung		Inflammation	Chronic Active, Minimal
* Mammary Gland		Infiltration Cellular	Mixed Cell, Minimal
Oviduct		Infiltration Cellular	Mixed Cell, Minimal
* Pancreas		Infiltration Cellular	Lymphocyte, Mild
* Urinary Bladder		Inflammation	Chronic Active, Mild



Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 64

TRT#: 2

SEX: Female

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406712

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Clitoral Gland         | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mesenteric | * Mammary Gland            |
| * Nose                    | * Ovary                     | * Pancreas               | * Parathyroid Gland        |
| * Pituitary Gland         | * Salivary Glands           | * Skin                   | * Spleen                   |
| * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 | * Thyroid Gland            |
| * Trachea                 | * Urinary Bladder           | * Uterus                 |                            |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Eye  
Note: Both optic nerves are missing. Tissue was not examined
- \* Heart  
Cardiomyopathy  
Minimal
- \* Kidney  
Medulla  
Mineralization  
Minimal
- \* Liver  
Inflammation  
Chronic Active, Minimal

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 65

TRT#: 2

SEX: Female

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406713

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Adrenal Medulla        | * Blood Vessel             | * Bone                    |
| * Bone Marrow               | * Brain                  | * Clitoral Gland           | * Esophagus               |
| * Eye                       | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lung                      | * Lymph Node, Mesenteric | * Mammary Gland            | * Nose                    |
| * Ovary                     | * Pancreas               | * Parathyroid Gland        | * Pituitary Gland         |
| * Salivary Glands           | * Skin                   | * Spleen                   | * Stomach, Forestomach    |
| * Stomach, Glandular        | * Thymus                 | * Thyroid Gland            | * Trachea                 |
| * Urinary Bladder           | * Uterus                 |                            |                           |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Eye  
Note: Both optic nerves missing. Tissue not examined.
- \* Harderian Gland  
Infiltration Cellular  
Mononuclear CI, Minimal
- \* Heart  
Cardiomyopathy  
Minimal
- \* Kidney  
Nephropathy  
Minimal
- \* Liver  
Hepatodiaphragmatic Nodule  
Inflammation  
Chronic Active, Minimal

[ Hepatodiaphragmatic Nodule TGLs = 1-6 ]

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 66

TRT#: 2

SEX: Female

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406714

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Clitoral Gland         | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lung                      | * Lymph Node, Mesenteric | * Mammary Gland            |
| * Nose                    | * Ovary                     | * Parathyroid Gland      | * Pituitary Gland          |
| * Salivary Glands         | * Skin                      | * Spleen                 | * Stomach, Forestomach     |
| * Stomach, Glandular      | * Thymus                    | * Thyroid Gland          | * Trachea                  |
| * Urinary Bladder         | * Uterus                    |                          |                            |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |            |              |                       |                         |
|------------|--------------|-----------------------|-------------------------|
| * Heart    |              | Cardiomyopathy        | Minimal                 |
| * Kidney   | Renal Tubule | Crystals              | Minimal                 |
|            |              | Nephropathy           | Minimal                 |
| * Liver    |              | Inflammation          | Chronic Active, Minimal |
| * Pancreas |              | Infiltration Cellular | Lymphocyte, Minimal     |

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 67

TRT#: 2

SEX: Female

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406715

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Adrenal Medulla        | * Blood Vessel             | * Bone                    |
| * Bone Marrow               | * Brain                  | * Esophagus                | * Eye                     |
| * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lung                      | * Lymph Node, Mesenteric | * Mammary Gland            | * Nose                    |
| * Ovary                     | * Parathyroid Gland      | * Pituitary Gland          | * Salivary Glands         |
| * Skin                      | * Spleen                 | * Stomach, Forestomach     | * Stomach, Glandular      |
| * Thymus                    | * Thyroid Gland          | * Urinary Bladder          | * Uterus                  |

MISSING

- |                          |           |
|--------------------------|-----------|
| * Lymph Node, Mandibular | * Trachea |
|--------------------------|-----------|

OBSERVATIONS

- |                  |                       |                         |
|------------------|-----------------------|-------------------------|
| * Clitoral Gland | Inflammation          | Chronic Active, Minimal |
| * Heart          | Cardiomyopathy        | Minimal                 |
| * Kidney         | Nephropathy           | Minimal                 |
| * Liver          | Inflammation          | Chronic Active, Minimal |
| * Pancreas       | Infiltration Cellular | Lymphocyte, Minimal     |

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 68

TRT#: 2

SEX: Female

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406716

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                          |                            |                           |                             |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex         | * Adrenal Medulla          | * Blood Vessel            | * Bone                      |
| * Bone Marrow            | * Brain                    | * Esophagus               | * Eye                       |
| * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lymph Node, Mesenteric    |
| * Mammary Gland          | * Nose                     | * Ovary                   | * Pancreas                  |
| * Parathyroid Gland      | * Pituitary Gland          | * Salivary Glands         | * Skin                      |
| * Spleen                 | * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    |
| * Thyroid Gland          | * Trachea                  | * Urinary Bladder         | * Uterus                    |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                   |         |                                  |                         |
|-------------------|---------|----------------------------------|-------------------------|
| * Clitoral Gland  |         | Inflammation                     | Chronic Active, Minimal |
| * Harderian Gland |         | Metaplasia                       | Squamous, Minimal       |
| * Heart           |         | Cardiomyopathy                   | Minimal                 |
| * Kidney          | Medulla | Mineralization                   | Minimal                 |
|                   |         | Nephropathy                      | Minimal                 |
| * Liver           |         | Hematopoietic Cell Proliferation | Minimal                 |
|                   |         | Inflammation                     | Chronic Active, Mild    |
| * Lung            |         | Inflammation                     | Chronic Active, Minimal |
|                   |         | Metaplasia                       | Osseous, Minimal        |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 69

TRT#: 2

SEX: Female

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406717

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                          |                            |                           |                             |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex         | * Adrenal Medulla          | * Blood Vessel            | * Bone                      |
| * Bone Marrow            | * Brain                    | * Esophagus               | * Eye                       |
| * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lymph Node, Mesenteric    |
| * Mammary Gland          | * Nose                     | * Ovary                   | * Pituitary Gland           |
| * Salivary Glands        | * Skin                     | * Spleen                  | * Stomach, Forestomach      |
| * Stomach, Glandular     | * Thymus                   | * Thyroid Gland           | * Trachea                   |
| * Urinary Bladder        | * Uterus                   |                           |                             |

MISSING

- |                          |                     |
|--------------------------|---------------------|
| * Lymph Node, Mandibular | * Parathyroid Gland |
|--------------------------|---------------------|

OBSERVATIONS

- |                   |         |                       |                         |
|-------------------|---------|-----------------------|-------------------------|
| * Clitoral Gland  |         | Inflammation          | Chronic Active, Minimal |
| * Harderian Gland |         | Inflammation          | Chronic Active, Marked  |
| * Heart           |         | Cardiomyopathy        | Minimal                 |
| * Kidney          | Capsule | Inflammation          | Chronic Active, Minimal |
|                   |         | Nephropathy           | Minimal                 |
| * Liver           |         | Inflammation          | Chronic Active, Minimal |
| * Lung            |         | Inflammation          | Chronic Active, Minimal |
|                   |         | Metaplasia            | Osseous, Minimal        |
| * Pancreas        |         | Infiltration Cellular | Lymphocyte, Minimal     |

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

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
beta-Picoline  
CAS Number: 108-99-6

Date Report Requested: 08/29/2016  
Time Report Requested: 11:29:47  
First Dose M/F: 11/17/03 / 11/18/03  
Lab: BAT

ANIMAL ID: 70

TRT#: 2

SEX: Female

DAY ON TEST: 93

DOSE: 0 MG/L

DISP: Terminal Sacrifice

HISTO: 0406718

ORGAN AND ACCOUNTABLE SITE STATUS

**NORMAL**

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Eye
* Harderian Gland	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lung	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		

**MISSING**

\* Lymph Node, Mandibular

**OBSERVATIONS**

* Clitoral Gland	Inflammation	Chronic Active, Minimal
* Kidney	Nephropathy	Minimal
* Liver	Hematopoietic Cell Proliferation	Minimal
	Inflammation	Chronic Active, Minimal
* Pancreas	Infiltration Cellular	Lymphocyte, Minimal

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 71

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 78 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406719

---

**OBSERVATIONS**

Kidney

Nephropathy

Minimal

Liver

Hepatodiaphragmatic Nodule

Inflammation

Chronic Active, Mild

[ Hepatodiaphragmatic Nodule TGLs = 1-8 ]

---



Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 72

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 78 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406720

---

**OBSERVATIONS**

Kidney

Nephropathy

Minimal

Liver

Inflammation

Chronic Active, Minimal

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 73	<b>TRT#:</b> 4 <b>DOSE:</b> 78 MG/L	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406721
<b>OBSERVATIONS</b>			
Kidney	Medulla	Mineralization Nephropathy	Minimal Minimal
Liver		Inflammation	Chronic Active, Minimal

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 74	<b>TRT#:</b> 4 <b>DOSE:</b> 78 MG/L	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406722
<b>OBSERVATIONS</b>			
Kidney	Medulla	Mineralization Nephropathy	Minimal Minimal
Liver		Inflammation	Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 75	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 78 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406723
<b>OBSERVATIONS</b>			
Kidney	Medulla	Mineralization Nephropathy	Minimal Minimal
Liver		Inflammation	Chronic Active, Minimal

---

**Experiment Number:** 20009 - 01

**Test Type:** 90-DAY

**Route:** DOSED WATER

**Species/Strain:** RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

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

**Date Report Requested:** 08/29/2016

**Time Report Requested:** 11:29:47

**First Dose M/F:** 11/17/03 / 11/18/03

**Lab:** BAT

---

**ANIMAL ID:** 76

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 78 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406724

---

**OBSERVATIONS**

Kidney

Nephropathy

Minimal

Liver

Inflammation

Chronic Active, Minimal

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 77	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 78 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406725

---

**OBSERVATIONS**

Kidney	Nephropathy	Minimal
Liver	Inflammation	Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 78	<b>TRT#:</b> 4	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 78 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406726
<b>OBSERVATIONS</b>			
Kidney	Medulla	Mineralization Nephropathy	Minimal Minimal
Liver		Inflammation	Chronic Active, Mild

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 79	<b>TRT#:</b> 4 <b>DOSE:</b> 78 MG/L	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406727
<b>OBSERVATIONS</b>			
Kidney	Medulla	Mineralization Nephropathy	Minimal Minimal
Liver		Inflammation	Chronic Active, Minimal

---



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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

**ANIMAL ID:** 80

**TRT#:** 4

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 78 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406728

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Liver

---

**OBSERVATIONS**

Kidney

Medulla

Mineralization  
Nephropathy

Minimal  
Minimal

---

**Experiment Number:** 20009 - 01

**Test Type:** 90-DAY

**Route:** DOSED WATER

**Species/Strain:** RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

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

**Date Report Requested:** 08/29/2016

**Time Report Requested:** 11:29:47

**First Dose M/F:** 11/17/03 / 11/18/03

**Lab:** BAT

---

**ANIMAL ID:** 81

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 156 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406729

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Kidney

---

**OBSERVATIONS**

Liver

Inflammation

Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 82

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 156 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406730

---

**OBSERVATIONS**

Kidney

Nephropathy

Minimal

Liver

Inflammation

Chronic Active, Mild

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 83	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 156 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406731
<b>OBSERVATIONS</b>			
Kidney	Medulla	Mineralization Nephropathy	Minimal Minimal
Liver		Inflammation	Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 84

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 156 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406732

---

**OBSERVATIONS**

Kidney

Nephropathy

Minimal

Liver

Inflammation

Chronic Active, Minimal

---

**Experiment Number:** 20009 - 01

**Test Type:** 90-DAY

**Route:** DOSED WATER

**Species/Strain:** RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

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

**Date Report Requested:** 08/29/2016

**Time Report Requested:** 11:29:47

**First Dose M/F:** 11/17/03 / 11/18/03

**Lab:** BAT

---

**ANIMAL ID:** 85

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 156 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406733

---

**OBSERVATIONS**

Kidney

Nephropathy

Minimal

Liver

Inflammation

Chronic Active, Mild

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 86	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 156 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406734
<b>OBSERVATIONS</b>			
Kidney	Medulla	Mineralization Nephropathy	Minimal Minimal
Liver		Inflammation	Chronic Active, Mild

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 87	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 156 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406735
<b>OBSERVATIONS</b>			
Kidney	Medulla	Mineralization	Minimal
Liver		Inflammation	Chronic Active, Minimal

---



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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

**ANIMAL ID:** 88

**TRT#:** 6

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 156 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406736

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Kidney

---

**OBSERVATIONS**

Liver

Inflammation

Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 89	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 156 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406737
<b>OBSERVATIONS</b>			
Kidney	Medulla	Mineralization Nephropathy	Minimal Minimal
Liver		Inflammation	Chronic Active, Minimal

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 90	<b>TRT#:</b> 6	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 156 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406738
<b>OBSERVATIONS</b>			
Kidney	Medulla	Mineralization Nephropathy	Minimal Minimal
Liver		Inflammation	Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 91	<b>TRT#:</b> 8	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 312 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406739
<b>OBSERVATIONS</b>			
Kidney	Medulla	Mineralization Nephropathy	Minimal Minimal
Liver		Inflammation	Chronic Active, Minimal

---

**Experiment Number:** 20009 - 01

**Test Type:** 90-DAY

**Route:** DOSED WATER

**Species/Strain:** RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

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

**Date Report Requested:** 08/29/2016

**Time Report Requested:** 11:29:47

**First Dose M/F:** 11/17/03 / 11/18/03

**Lab:** BAT

---

**ANIMAL ID:** 92

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 312 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406740

---

**OBSERVATIONS**

Kidney

Nephropathy

Minimal

Liver

Inflammation

Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 93

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 312 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406741

---

**OBSERVATIONS**

Kidney

Nephropathy

Minimal

Liver

Inflammation

Chronic Active, Minimal

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

**ANIMAL ID:** 94

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 312 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406742

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Liver

---

**OBSERVATIONS**

Kidney

Nephropathy

Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 95

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 312 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406743

---

**OBSERVATIONS**

Kidney

Nephropathy

Minimal

Liver

Inflammation

Chronic Active, Minimal

---



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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

**ANIMAL ID:** 96

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 312 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406744

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Kidney

---

**OBSERVATIONS**

Liver

Inflammation

Chronic Active, Mild

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

**ANIMAL ID:** 97

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 312 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406745

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

**NORMAL**

Kidney

---

**OBSERVATIONS**

Liver

Inflammation

Chronic Active, Minimal

---

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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 98	<b>TRT#:</b> 8 <b>DOSE:</b> 312 MG/L	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406746
<b>OBSERVATIONS</b>			
Kidney	Medulla	Mineralization Nephropathy	Minimal Minimal
Liver		Inflammation	Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 99

**TRT#:** 8

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 312 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406747

---

**OBSERVATIONS**

Kidney

Nephropathy

Minimal

Liver

Inflammation

Chronic Active, Mild

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 100	<b>TRT#:</b> 8	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 312 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406748
<b>OBSERVATIONS</b>			
Kidney	Medulla	Mineralization	Minimal
		Nephropathy	Minimal
Liver		Inflammation	Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 101	<b>TRT#:</b> 10	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 625 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406749
<b>OBSERVATIONS</b>			
* Kidney	Medulla	Mineralization	Minimal
Liver		Inflammation	Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 102

**TRT#:** 10

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 625 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406750

---

**OBSERVATIONS**

\* Kidney

Nephropathy

Minimal

Liver

Inflammation

Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 103

**TRT#:** 10

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 625 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406751

---

**OBSERVATIONS**

\* Kidney

Nephropathy

Minimal

Liver

Inflammation

Chronic Active, Minimal

---



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

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
beta-Picoline  
**CAS Number:** 108-99-6

**Date Report Requested:** 08/29/2016  
**Time Report Requested:** 11:29:47  
**First Dose M/F:** 11/17/03 / 11/18/03  
**Lab:** BAT

---

<b>ANIMAL ID:</b> 104	<b>TRT#:</b> 10 <b>DOSE:</b> 625 MG/L	<b>SEX:</b> Female <b>DISP:</b> Terminal Sacrifice	<b>DAY ON TEST:</b> 93 <b>HISTO:</b> 0406752
<b>OBSERVATIONS</b>			
* Kidney	Medulla	Mineralization Nephropathy	Minimal Minimal
Liver		Inflammation	Chronic Active, Minimal

---

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

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
beta-Picoline  
CAS Number: 108-99-6

Date Report Requested: 08/29/2016  
Time Report Requested: 11:29:47  
First Dose M/F: 11/17/03 / 11/18/03  
Lab: BAT

ANIMAL ID: 105

TRT#: 10

SEX: Female

DAY ON TEST: 93

DOSE: 625 MG/L

DISP: Terminal Sacrifice

HISTO: 0406753

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

OBSERVATIONS

\* Kidney

Cortex

Angiectasis

Mild

Nephropathy

Minimal

Mesentery

Fat

Inflammation

Chronic Active, Mild

[ Inflammation TGLs = 1-6 ]

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

<b>ANIMAL ID:</b> 106	<b>TRT#:</b> 10	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 93
	<b>DOSE:</b> 625 MG/L	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 0406754
<b>OBSERVATIONS</b>			
* Kidney	Medulla	Mineralization	Minimal
		Nephropathy	Minimal
Liver		Inflammation	Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 107

**TRT#:** 10

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 625 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406755

---

**OBSERVATIONS**

\* Kidney

Nephropathy

Minimal

Liver

Inflammation

Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 108

**TRT#:** 10

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 625 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406756

---

**OBSERVATIONS**

\* Kidney

Medulla

Mineralization

Minimal

Nephropathy

Minimal

Liver

Hepatodiaphragmatic Nodule

[ Hepatodiaphragmatic Nodule TGLs = 1-6 ]

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 109

**TRT#:** 10

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 625 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406757

---

**OBSERVATIONS**

\* Kidney

Nephropathy

Minimal

Liver

Inflammation

Chronic Active, Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

---

**ANIMAL ID:** 110

**TRT#:** 10

**SEX:** Female

**DAY ON TEST:** 93

**DOSE:** 625 MG/L

**DISP:** Terminal Sacrifice

**HISTO:** 0406758

---

**OBSERVATIONS**

\* Kidney

Nephropathy

Minimal

Liver

Hematopoietic Cell Proliferation

Minimal

---

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 111

TRT#: 12

SEX: Female

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406759

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Adrenal Medulla        | * Blood Vessel             | * Bone                    |
| * Bone Marrow               | * Brain                  | * Esophagus                | * Eye                     |
| * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lymph Node, Mesenteric    | * Mammary Gland          | * Nose                     | * Ovary                   |
| * Parathyroid Gland         | * Pituitary Gland        | * Salivary Glands          | * Skin                    |
| * Spleen                    | * Stomach, Forestomach   | * Stomach, Glandular       | * Thymus                  |
| * Thyroid Gland             | * Trachea                | * Urinary Bladder          | * Uterus                  |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                  |         |                       |                         |
|------------------|---------|-----------------------|-------------------------|
| * Clitoral Gland |         | Inflammation          | Chronic Active, Minimal |
| * Heart          |         | Cardiomyopathy        | Minimal                 |
| * Kidney         | Medulla | Mineralization        | Minimal                 |
|                  |         | Nephropathy           | Minimal                 |
| * Liver          |         | Inflammation          | Chronic Active, Mild    |
| * Lung           |         | Inflammation          | Chronic Active, Minimal |
| * Pancreas       |         | Infiltration Cellular | Lymphocyte, Minimal     |



Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 112

TRT#: 12

SEX: Female

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406760

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Adrenal Medulla
- \* Blood Vessel
- \* Bone
- \* Bone Marrow
- \* Brain
- \* Clitoral Gland
- \* Esophagus
- \* Eye
- \* Harderian Gland
- \* Heart
- \* Intestine Large, Cecum
- \* Intestine Large, Colon
- \* Intestine Small, Duodenum
- \* Intestine Small, Ileum
- \* Intestine Small, Jejunum
- \* Islets, Pancreatic
- \* Lung
- \* Lymph Node, Mesenteric
- \* Mammary Gland
- \* Nose
- \* Ovary
- \* Parathyroid Gland
- \* Pituitary Gland
- \* Salivary Glands
- \* Skin
- \* Spleen
- \* Stomach, Forestomach
- \* Stomach, Glandular
- \* Thymus
- \* Thyroid Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Uterus
- \* Trachea

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Intestine Large, Rectum
- \* Kidney
- \* Liver
- \* Pancreas
- Parasite Metazoan
- Mineralization
- Nephropathy
- Hepatodiaphragmatic Nodule
- Inflammation
- Atrophy
- Infiltration Cellular
- Medulla
- TGLs = 1-14 ]
- Acinus
- Minimal
- Minimal
- Chronic Active, Mild
- Mild
- Lymphocyte, Minimal

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 113

TRT#: 12

SEX: Female

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406761

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Adrenal Medulla        | * Blood Vessel             | * Bone                    |
| * Bone Marrow               | * Brain                  | * Esophagus                | * Eye                     |
| * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lymph Node, Mesenteric    | * Mammary Gland          | * Nose                     | * Ovary                   |
| * Pancreas                  | * Parathyroid Gland      | * Pituitary Gland          | * Salivary Glands         |
| * Skin                      | * Spleen                 | * Stomach, Forestomach     | * Stomach, Glandular      |
| * Thymus                    | * Thyroid Gland          | * Trachea                  | * Urinary Bladder         |
| * Uterus                    |                          |                            |                           |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                  |         |                |                         |
|------------------|---------|----------------|-------------------------|
| * Clitoral Gland |         | Inflammation   | Chronic Active, Minimal |
| * Heart          |         | Cardiomyopathy | Minimal                 |
| * Kidney         | Papilla | Casts Granular | Minimal                 |
|                  | Medulla | Mineralization | Minimal                 |
|                  |         | Nephropathy    | Minimal                 |
| * Liver          |         | Inflammation   | Chronic Active, Minimal |
| * Lung           |         | Inflammation   | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 114

TRT#: 12

SEX: Female

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406762

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Adrenal Medulla        | * Blood Vessel             | * Bone                    |
| * Bone Marrow               | * Brain                  | * Esophagus                | * Eye                     |
| * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lung                      | * Lymph Node, Mesenteric | * Mammary Gland            | * Nose                    |
| * Ovary                     | * Parathyroid Gland      | * Pituitary Gland          | * Salivary Glands         |
| * Spleen                    | * Stomach, Forestomach   | * Stomach, Glandular       | * Thymus                  |
| * Thyroid Gland             | * Trachea                | * Urinary Bladder          | * Uterus                  |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                  |         |                       |                         |
|------------------|---------|-----------------------|-------------------------|
| * Clitoral Gland |         | Inflammation          | Chronic Active, Minimal |
| * Heart          |         | Cardiomyopathy        | Minimal                 |
| * Kidney         | Medulla | Mineralization        | Minimal                 |
|                  |         | Nephropathy           | Mild                    |
| * Liver          |         | Inflammation          | Chronic Active, Minimal |
| * Pancreas       |         | Infiltration Cellular | Lymphocyte, Minimal     |
| * Skin           |         | Inflammation          | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 115

TRT#: 12

SEX: Female

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406763

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Blood Vessel           | * Bone                     |
| * Bone Marrow             | * Brain                     | * Clitoral Gland         | * Esophagus                |
| * Eye                     | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Lymph Node, Mesenteric    | * Mammary Gland          | * Nose                     |
| * Ovary                   | * Parathyroid Gland         | * Pituitary Gland        | * Salivary Glands          |
| * Skin                    | * Spleen                    | * Stomach, Forestomach   | * Stomach, Glandular       |
| * Thymus                  | * Thyroid Gland             | * Trachea                | * Urinary Bladder          |
| * Uterus                  |                             |                          |                            |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |            |         |                       |                         |
|------------|---------|-----------------------|-------------------------|
| * Heart    |         | Cardiomyopathy        | Minimal                 |
| * Kidney   | Medulla | Mineralization        | Minimal                 |
|            |         | Nephropathy           | Minimal                 |
| * Liver    |         | Inflammation          | Chronic Active, Mild    |
| * Lung     |         | Inflammation          | Chronic Active, Minimal |
| * Pancreas |         | Infiltration Cellular | Lymphocyte, Minimal     |

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 116

TRT#: 12

SEX: Female

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406764

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Adrenal Medulla        | * Blood Vessel             | * Bone                    |
| * Bone Marrow               | * Brain                  | * Esophagus                | * Eye                     |
| * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lymph Node, Mesenteric    | * Mammary Gland          | * Nose                     | * Ovary                   |
| * Pancreas                  | * Pituitary Gland        | * Salivary Glands          | * Skin                    |
| * Spleen                    | * Stomach, Forestomach   | * Stomach, Glandular       | * Thymus                  |
| * Thyroid Gland             | * Trachea                | * Urinary Bladder          | * Uterus                  |

MISSING

- |                          |                     |
|--------------------------|---------------------|
| * Lymph Node, Mandibular | * Parathyroid Gland |
|--------------------------|---------------------|

OBSERVATIONS

- |                                     |         |                |                         |
|-------------------------------------|---------|----------------|-------------------------|
| * Clitoral Gland                    |         | Inflammation   | Chronic Active, Minimal |
| * Eye                               |         |                |                         |
| Note: One optic nerve examined only |         |                |                         |
| * Heart                             |         | Cardiomyopathy | Minimal                 |
| * Kidney                            | Medulla | Mineralization | Minimal                 |
|                                     |         | Nephropathy    | Minimal                 |
| * Liver                             |         | Inflammation   | Chronic Active, Mild    |
| * Lung                              |         | Inflammation   | Chronic Active, Minimal |

\* PROTOCOL REQUIRED TISSUE

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 117

TRT#: 12

SEX: Female

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406765

ORGAN AND ACCOUNTABLE SITE STATUS

**NORMAL**

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Adrenal Medulla        | * Blood Vessel             | * Bone                    |
| * Bone Marrow               | * Brain                  | * Esophagus                | * Eye                     |
| * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lymph Node, Mesenteric    | * Mammary Gland          | * Nose                     | * Ovary                   |
| * Pancreas                  | * Parathyroid Gland      | * Pituitary Gland          | * Salivary Glands         |
| * Skin                      | * Spleen                 | * Stomach, Forestomach     | * Stomach, Glandular      |
| * Thymus                    | * Thyroid Gland          | * Trachea                  | * Urinary Bladder         |
| * Uterus                    |                          |                            |                           |

**MISSING**

- \* Lymph Node, Mandibular

**OBSERVATIONS**

- |   |                                  |                         |
|---|----------------------------------|-------------------------|
| * Clitoral Gland  | Inflammation                     | Chronic Active, Minimal |
| * Eye   |                                  |                         |
| Note: One optic nerve examined the other not available    |                                  |                         |
| * Heart   | Cardiomyopathy                   | Minimal                 |
| * Kidney  | Nephropathy                      | Mild                    |
| * Liver   | Hematopoietic Cell Proliferation | Minimal                 |
|   | Inflammation                     | Chronic Active, Mild    |
| * Lung  | Inflammation                     | Chronic Active, Minimal |
| * Thyroid GI  |                                  |                         |
| Note: One thyroid gland examined, the other not available |                                  |                         |

Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 118

TRT#: 12

SEX: Female

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406766

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                          |                            |                           |                             |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Cortex         | * Adrenal Medulla          | * Blood Vessel            | * Bone                      |
| * Bone Marrow            | * Brain                    | * Esophagus               | * Eye                       |
| * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      | * Lung                      |
| * Lymph Node, Mesenteric | * Mammary Gland            | * Nose                    | * Ovary                     |
| * Pancreas               | * Parathyroid Gland        | * Pituitary Gland         | * Salivary Glands           |
| * Skin                   | * Spleen                   | * Stomach, Forestomach    | * Stomach, Glandular        |
| * Thymus                 | * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |
| * Uterus                 |                            |                           |                             |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                   |         |                |                         |
|-------------------|---------|----------------|-------------------------|
| * Clitoral Gland  |         | Inflammation   | Chronic Active, Minimal |
| * Harderian Gland |         | Inflammation   | Chronic Active, Minimal |
| * Heart           |         | Cardiomyopathy | Minimal                 |
| * Kidney          | Medulla | Mineralization | Minimal                 |
|                   |         | Nephropathy    | Minimal                 |
| * Liver           |         | Inflammation   | Chronic Active, Mild    |

\* PROTOCOL REQUIRED TISSUE

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

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
beta-Picoline  
CAS Number: 108-99-6

Date Report Requested: 08/29/2016  
Time Report Requested: 11:29:47  
First Dose M/F: 11/17/03 / 11/18/03  
Lab: BAT

ANIMAL ID: 119

TRT#: 12

SEX: Female

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406767

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex	* Adrenal Medulla	* Blood Vessel	* Bone
* Bone Marrow	* Brain	* Esophagus	* Eye
* Harderian Gland	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Ovary
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

\* Lymph Node, Mandibular

OBSERVATIONS

* Clitoral Gland		Inflammation	Chronic Active, Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney	Medulla	Mineralization	Minimal
		Nephropathy	Minimal
* Liver		Inflammation	Chronic Active, Minimal
* Lung		Inflammation	Chronic Active, Minimal
* Pancreas		Infiltration Cellular	Lymphocyte, Minimal
		Inflammation	Chronic Active, Minimal



Experiment Number: 20009 - 01

Test Type: 90-DAY

Route: DOSED WATER

Species/Strain: RATS/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

beta-Picoline

CAS Number: 108-99-6

Date Report Requested: 08/29/2016

Time Report Requested: 11:29:47

First Dose M/F: 11/17/03 / 11/18/03

Lab: BAT

ANIMAL ID: 120

TRT#: 12

SEX: Female

DAY ON TEST: 93

DOSE: 1250 MG/L

DISP: Terminal Sacrifice

HISTO: 0406768

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Adrenal Medulla        | * Blood Vessel             | * Bone                    |
| * Bone Marrow               | * Brain                  | * Esophagus                | * Eye                     |
| * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Lymph Node, Mesenteric    | * Mammary Gland          | * Nose                     | * Ovary                   |
| * Parathyroid Gland         | * Pituitary Gland        | * Salivary Glands          | * Skin                    |
| * Spleen                    | * Stomach, Forestomach   | * Stomach, Glandular       | * Thymus                  |
| * Thyroid Gland             | * Uterus                 |                            |                           |

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |   |         |                       |                         |
|---|---------|-----------------------|-------------------------|
| * Adren Cortex  |         |                       |                         |
| Note: One adrenal gland is missing                      |         |                       |                         |
| * Clitoral Gland  |         | Inflammation          | Chronic Active, Minimal |
| * Eye   |         |                       |                         |
| Note: One optic nerve examined, the other not available |         |                       |                         |
| * Heart   |         | Cardiomyopathy        | Minimal                 |
| * Kidney  | Medulla | Mineralization        | Minimal                 |
|   |         | Nephropathy           | Minimal                 |
| * Liver   |         | Inflammation          | Chronic Active, Mild    |
| * Lung  |         | Inflammation          | Chronic Active, Minimal |
| * Pancreas  |         | Infiltration Cellular | Lymphocyte, Minimal     |
| * Trachea   |         | Inflammation          | Chronic Active, Minimal |
| * Urinary Bladder                                       |         | Inflammation          | Chronic Active, Minimal |

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