

Experiment Number: 20009 - 01

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH  
AVERAGE SEVERITY GRADES[b]**

Date Report Requested: 08/29/2016

Test Type: 90-DAY

beta-Picoline

Time Report Requested: 11:29:47

Route: DOSED WATER

CAS Number: 108-99-6

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

Species/Strain: RATS/F 344/N

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

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FISCHER 344 RATS MALE	0 MG/L	78 MG/L	156 MG/L	312 MG/L	625 MG/L	1250 MG/L
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**Disposition Summary**

Animals Initially In Study	10	10	10	10	10	10
Early Deaths						
Survivors						
Terminal Sacrifice	10	10	10	10	10	10
Animals Examined Microscopically	10	10	10	10	10	10

## ALIMENTARY SYSTEM

Esophagus	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active						1 [1.0]
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(0)	(10)
Liver	(10)	(0)	(0)	(0)	(0)	(10)
Hematopoietic Cell Proliferation	8 [1.0]					9 [1.0]
Inflammation, Chronic Active	10 [1.0]					10 [1.2]
Mesentery	(1)	(0)	(0)	(0)	(0)	(0)
Inflammation, Chronic Active	1 [1.0]					
Pancreas	(10)	(0)	(0)	(0)	(0)	(10)
Infiltration Cellular, Lymphocyte	7 [1.0]					4 [1.3]
Salivary Glands	(10)	(0)	(0)	(0)	(0)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(0)	(0)	(10)
Stomach, Glandular	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active						1 [1.0]
Glands, Ectasia						1 [1.0]
Tooth	(0)	(0)	(0)	(0)	(0)	(2)

## CARDIOVASCULAR SYSTEM

Blood Vessel	(10)	(0)	(0)	(0)	(0)	(10)
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a - Number of animals examined microscopically at site and number of animals with lesion

b-Average severity grade(1-minimal;2-mild;3-moderate;4-marked)

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FISCHER 344 RATS MALE	0 MG/L	78 MG/L	156 MG/L	312 MG/L	625 MG/L	1250 MG/L
Heart	(10)	(0)	(0)	(0)	(0)	(10)
Cardiomyopathy	10 [2.0]					10 [1.3]
<b>ENDOCRINE SYSTEM</b>						
Adrenal Cortex	(10)	(0)	(0)	(0)	(0)	(10)
Adrenal Medulla	(10)	(0)	(0)	(0)	(0)	(10)
Islets, Pancreatic	(10)	(0)	(0)	(0)	(0)	(10)
Parathyroid Gland	(9)	(0)	(0)	(0)	(0)	(9)
Pituitary Gland	(9)	(0)	(0)	(0)	(0)	(10)
Thyroid Gland	(10)	(0)	(0)	(0)	(0)	(10)
Infiltration Cellular, Mononuclear Cell						1 [1.0]
<b>GENERAL BODY SYSTEM</b>						
None						
<b>GENITAL SYSTEM</b>						
Coagulating Gland	(1)	(0)	(0)	(0)	(0)	(1)
Inflammation, Chronic Active						1 [1.0]
Epididymis	(10)	(0)	(0)	(0)	(0)	(10)
Infiltration Cellular, Mononuclear Cell	1 [1.0]					3 [1.0]
Epithelium, Degeneration						1 [1.0]
Mesothelium, Hyperplasia	1 [3.0]					
Preputial Gland	(10)	(1)	(0)	(0)	(0)	(10)
Inflammation, Granulomatous	1 [1.0]					
Inflammation, Chronic Active	8 [1.0]					10 [1.1]
Prostate	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active	1 [1.0]					
Seminal Vesicle	(10)	(0)	(0)	(0)	(0)	(10)
Testes	(10)	(0)	(0)	(0)	(0)	(10)
Tunic, Inflammation, Chronic Active						1 [1.0]

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FISCHER 344 RATS MALE	0 MG/L	78 MG/L	156 MG/L	312 MG/L	625 MG/L	1250 MG/L
<b>HEMATOPOIETIC SYSTEM</b>						
Bone Marrow	(10)	(0)	(0)	(0)	(0)	(10)
Lymph Node, Mesenteric	(10)	(0)	(0)	(0)	(0)	(10)
Spleen	(10)	(0)	(0)	(0)	(0)	(10)
Thymus	(10)	(0)	(0)	(0)	(0)	(10)
<b>INTEGUMENTARY SYSTEM</b>						
Mammary Gland	(10)	(0)	(0)	(0)	(0)	(9)
Skin	(10)	(0)	(0)	(0)	(0)	(10)
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone	(10)	(0)	(0)	(0)	(0)	(10)
Cartilage, Atypia Cellular						1 [1.0]
<b>NERVOUS SYSTEM</b>						
Brain	(10)	(0)	(0)	(0)	(0)	(10)
<b>RESPIRATORY SYSTEM</b>						
Lung	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active	6 [1.0]					6 [1.0]
Metaplasia, Osseous						1 [1.0]
Metaplasia, Squamous						1 [2.0]
Nose	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Suppurative	1 [1.0]					
Pleura	(0)	(0)	(0)	(0)	(0)	(1)
Trachea	(10)	(0)	(0)	(0)	(0)	(10)

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FISCHER 344 RATS MALE	0 MG/L	78 MG/L	156 MG/L	312 MG/L	625 MG/L	1250 MG/L
<b>SPECIAL SENSES SYSTEM</b>						
Eye	(10)	(0)	(0)	(0)	(0)	(10)
Harderian Gland	(10)	(0)	(0)	(0)	(0)	(10)
Infiltration Cellular, Mononuclear Cell						1 [1.0]
<b>URINARY SYSTEM</b>						
Kidney	(10)	(10)	(10)	(10)	(10)	(10)
Nephropathy	10 [1.2]	10 [1.0]	10 [1.0]	10 [1.2]	10 [2.2]	10 [2.9]
Medulla, Mineralization	5 [1.0]	7 [1.0]	6 [1.0]	6 [1.0]	3 [1.0]	7 [1.0]
Renal Tubule, Accumulation, Hyaline Droplet	10 [1.3]	10 [1.1]	10 [1.2]	10 [1.1]	10 [1.0]	10 [2.0]
Renal Tubule, Pigmentation						1 [1.0]
Urinary Bladder	(10)	(0)	(0)	(0)	(0)	(10)
Infiltration Cellular, Mononuclear Cell						2 [1.0]

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

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**Disposition Summary**

Animals Initially In Study	10	10	10	10	10	10
Early Deaths						
Survivors						
Terminal Sacrifice	10	10	10	10	10	10
Animals Examined Microscopically	10	10	10	10	10	10

## ALIMENTARY SYSTEM

Esophagus	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(0)	(10)
Parasite Metazoan						1
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(0)	(10)
Liver	(10)	(10)	(10)	(10)	(10)	(10)
Hematopoietic Cell Proliferation	3 [1.0]				1 [1.0]	1 [1.0]
Hepatodiaphragmatic Nodule	2	1			1	1
Inflammation, Chronic Active	10 [1.1]	9 [1.2]	10 [1.3]	9 [1.2]	7 [1.0]	10 [1.7]
Mesentery	(0)	(0)	(0)	(0)	(1)	(0)
Fat, Inflammation, Chronic Active					1 [2.0]	
Pancreas	(10)	(0)	(0)	(0)	(0)	(10)
Infiltration Cellular, Lymphocyte	6 [1.2]					6 [1.0]
Inflammation, Chronic Active						1 [1.0]
Acinus, Atrophy						1 [2.0]
Salivary Glands	(10)	(0)	(0)	(0)	(0)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(0)	(0)	(10)
Stomach, Glandular	(10)	(0)	(0)	(0)	(0)	(10)

## CARDIOVASCULAR SYSTEM

Blood Vessel	(10)	(0)	(0)	(0)	(0)	(10)
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Heart	(10)	(0)	(0)	(0)	(0)	(10)
Cardiomyopathy	9 [1.0]					9 [1.0]
<b>ENDOCRINE SYSTEM</b>						
Adrenal Cortex	(10)	(0)	(0)	(0)	(0)	(10)
Adrenal Medulla	(10)	(0)	(0)	(0)	(0)	(10)
Islets, Pancreatic	(10)	(0)	(0)	(0)	(0)	(10)
Parathyroid Gland	(8)	(0)	(0)	(0)	(0)	(9)
Pituitary Gland	(10)	(0)	(0)	(0)	(0)	(10)
Thyroid Gland	(10)	(0)	(0)	(0)	(0)	(10)
<b>GENERAL BODY SYSTEM</b>						
None						
<b>GENITAL SYSTEM</b>						
Clitoral Gland	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active	6 [1.0]					8 [1.0]
Ovary	(10)	(0)	(0)	(0)	(0)	(10)
Oviduct	(1)	(0)	(0)	(0)	(0)	(0)
Infiltration Cellular, Mixed Cell	1 [1.0]					
Uterus	(10)	(0)	(0)	(0)	(0)	(10)
<b>HEMATOPOIETIC SYSTEM</b>						
Bone Marrow	(10)	(0)	(0)	(0)	(0)	(10)
Lymph Node, Mesenteric	(10)	(0)	(0)	(0)	(0)	(10)
Spleen	(10)	(0)	(0)	(0)	(0)	(10)
Thymus	(10)	(0)	(0)	(0)	(0)	(10)

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<b>INTEGUMENTARY SYSTEM</b>						
Mammary Gland	(10)	(0)	(0)	(0)	(0)	(10)
Infiltration Cellular, Mixed Cell	1 [1.0]					
Skin	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active						1 [1.0]
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone	(10)	(0)	(0)	(0)	(0)	(10)
<b>NERVOUS SYSTEM</b>						
Brain	(10)	(0)	(0)	(0)	(0)	(10)
<b>RESPIRATORY SYSTEM</b>						
Lung	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active	3 [1.0]					7 [1.0]
Metaplasia, Osseous	2 [1.0]					
Interstitial, Infiltration Cellular, Mononuclear Cell	1 [1.0]					
Nose	(10)	(0)	(0)	(0)	(0)	(10)
Olfactory Epithelium, Foreign Body	1 [1.0]					
Trachea	(9)	(0)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active						1 [1.0]
<b>SPECIAL SENSES SYSTEM</b>						
Eye	(10)	(0)	(0)	(0)	(0)	(10)
Harderian Gland	(10)	(0)	(0)	(0)	(0)	(10)
Infiltration Cellular, Mononuclear Cell	1 [1.0]					
Inflammation, Chronic Active	2 [3.5]					1 [1.0]
Metaplasia, Squamous	2 [1.5]					

a - Number of animals examined microscopically at site and number of animals with lesion

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FISCHER 344 RATS FEMALE	0 MG/L	78 MG/L	156 MG/L	312 MG/L	625 MG/L	1250 MG/L
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URINARY SYSTEM

Kidney	(10)	(10)	(10)	(10)	(10)	(10)
Nephropathy	7 [1.0]	10 [1.0]	7 [1.0]	8 [1.0]	9 [1.0]	10 [1.2]
Capsule, Inflammation, Chronic Active	1 [1.0]					
Cortex, Angiectasis					1 [2.0]	
Medulla, Mineralization	5 [1.0]	6 [1.0]	5 [1.0]	3 [1.0]	4 [1.0]	9 [1.0]
Papilla, Casts Granular						1 [1.0]
Renal Tubule, Crystals	1 [1.0]					
Urinary Bladder	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active	1 [2.0]					1 [1.0]

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

a - Number of animals examined microscopically at site and number of animals with lesion

b-Average severity grade(1-minimal;2-mild;3-moderate;4-marked)