

Experiment Number: 20702 - 01

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

Date Report Requested: 12/03/2020

Test Type: 90-DAY

Usnea Lichen

Time Report Requested: 12:51:12

Route: DOSED FEED

CAS Number: USNEALICHEN

First Dose M/F: 02/14/09 / 02/14/09

Species/Strain: RATS/F 344/NCTR

Lab: NCTR

NTP Study Number: C20702
Lock Date: 07/01/2013
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

Test Type: 90-DAY

Usnea Lichen

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Species/Strain: RATS/F 344/NCTR

Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE	Control 0 PPM	USNEA 30 PPM	USNEA 60 PPM	USNEA 120 PPM	USNEA 360 PPM	USNEA 720 PPM
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Disposition Summary

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

ALIMENTARY SYSTEM

Esophagus	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(10)	(9)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(10)	(9)
Liver	(10)	(10)	(10)	(10)	(10)	(10)
Cyst				1 [2.0]		
Deformity		1				
Inflammation, Chronic Active	5 [1.0]	1 [2.0]	3 [1.0]	4 [1.0]	3 [1.0]	
Necrosis		1 [1.0]				
Tension Lipidosis					1 [2.0]	
Hepatocyte, Degeneration	1 [1.0]		1 [2.0]	6 [1.2]	10 [1.8]	10 [3.7]
Pancreas	(10)	(0)	(0)	(0)	(10)	(10)
Infiltration Cellular, Lymphocyte						1 [1.0]
Vacuolization Cytoplasmic	1 [2.0]					
Salivary Glands	(10)	(0)	(0)	(0)	(10)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(0)	(10)	(10)
Stomach, Glandular	(10)	(0)	(0)	(0)	(10)	(10)

CARDIOVASCULAR SYSTEM

Blood Vessel	(10)	(0)	(0)	(0)	(10)	(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-NCTR RATS MALE	Control 0 PPM	USNEA 30 PPM	USNEA 60 PPM	USNEA 120 PPM	USNEA 360 PPM	USNEA 720 PPM
Heart	(10)	(0)	(0)	(0)	(10)	(10)
Cardiomyopathy	7 [1.3]				7 [1.0]	
Myocardium, Vacuolization Cytoplasmic						1 [2.0]
ENDOCRINE SYSTEM						
Adrenal Cortex	(10)	(0)	(0)	(0)	(10)	(10)
Vacuolization Cytoplasmic	4 [1.5]				2 [1.5]	10 [4.0]
Adrenal Medulla	(10)	(0)	(0)	(0)	(10)	(10)
Islets, Pancreatic	(10)	(0)	(0)	(0)	(10)	(10)
Parathyroid Gland	(10)	(0)	(0)	(0)	(10)	(10)
Pituitary Gland	(10)	(0)	(0)	(0)	(10)	(10)
Thyroid Gland	(10)	(0)	(0)	(0)	(10)	(10)
Ectopic Thymus	1					1
GENERAL BODY SYSTEM						
Tissue NOS	(1)	(0)	(0)	(0)	(0)	(0)
Mediastinum, Hemorrhage	1 [4.0]					
GENITAL SYSTEM						
Epididymis	(10)	(0)	(0)	(0)	(10)	(10)
Exfoliated Germ Cell						10 [3.1]
Hypospermia						10 [4.0]
Preputial Gland	(10)	(0)	(0)	(0)	(10)	(10)
Infiltration Cellular, Lymphocyte					1 [1.0]	
Inflammation, Suppurative	2 [1.5]				4 [2.0]	8 [3.0]
Inflammation, Chronic Active	3 [2.3]					
Duct, Ectasia					2 [2.5]	
Prostate	(10)	(0)	(0)	(0)	(10)	(10)
Atrophy						10 [4.0]
Seminal Vesicle	(10)	(0)	(0)	(0)	(10)	(10)
Atrophy						10 [4.0]

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FISCHER 344 RATS-NCTR RATS MALE	Control 0 PPM	USNEA 30 PPM	USNEA 60 PPM	USNEA 120 PPM	USNEA 360 PPM	USNEA 720 PPM
Testes Seminiferous Tubule, Degeneration	(10)	(0)	(0)	(0)	(10)	(10) 10 [4.0]
HEMATOPOIETIC SYSTEM						
Bone Marrow Congestion Hypocellularity	(10)	(0)	(0)	(0)	(10)	(10) 1 [4.0] 10 [3.6]
Lymph Node Lumbar, Hyperplasia, Lymphoid	(0)	(0)	(0)	(0)	(0)	(1) 1 [2.0]
Lymph Node, Mandibular Hyperplasia, Lymphoid	(10)	(0)	(0)	(0)	(10) 1 [2.0]	(10) 2 [1.5]
Lymph Node, Mesenteric Hyperplasia, Lymphoid	(10) 2 [2.0]	(0)	(0)	(0)	(10) 3 [2.0]	(10)
Spleen	(10)	(0)	(0)	(0)	(10)	(10)
Thymus Atrophy Cyst	(10)	(0)	(0)	(0)	(10)	(10) 9 [3.8] 1 [2.0]
INTEGUMENTARY SYSTEM						
Mammary Gland Atrophy	(10)	(0)	(0)	(0)	(10)	(10) 9 [2.3]
Skin	(10)	(0)	(0)	(0)	(10)	(10)
MUSCULOSKELETAL SYSTEM						
Bone, Femur	(10)	(0)	(0)	(0)	(10)	(10)
NERVOUS SYSTEM						
Brain, Brain Stem	(10)	(0)	(0)	(0)	(10)	(10)
Brain, Cerebellum	(10)	(0)	(0)	(0)	(10)	(10)

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Species/Strain: RATS/F 344/NCTR

Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE	Control 0 PPM	USNEA 30 PPM	USNEA 60 PPM	USNEA 120 PPM	USNEA 360 PPM	USNEA 720 PPM
Brain, Cerebrum	(10)	(0)	(0)	(0)	(10)	(10)
Gliosis	1 [2.0]					
Mineralization	1 [2.0]					
RESPIRATORY SYSTEM						
Lung	(10)	(0)	(0)	(0)	(10)	(10)
Congestion						1 [3.0]
Hemorrhage	1 [2.0]					
Infiltration Cellular, Histiocyte Alveolar Epithelium, Hyperplasia					1 [1.0]	1 [1.0]
Nose	(10)	(0)	(0)	(0)	(10)	(10)
Malformation						1
Trachea	(10)	(0)	(0)	(0)	(10)	(10)
SPECIAL SENSES SYSTEM						
Eye	(10)	(0)	(0)	(0)	(10)	(10)
Harderian Gland	(10)	(0)	(0)	(0)	(10)	(10)
Infiltration Cellular, Lymphocyte					1 [1.0]	
URINARY SYSTEM						
Kidney	(10)	(0)	(0)	(0)	(10)	(10)
Casts Protein					2 [1.0]	
Hyaline Droplet	1 [3.0]					
Hydronephrosis	1 [2.0]					2 [2.0]
Mineralization	1 [1.0]					
Nephropathy	3 [1.0]				4 [1.0]	5 [1.0]
Urinary Bladder	(10)	(0)	(0)	(0)	(10)	(10)
Lumen, Dilatation						1 [4.0]

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Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE

Control 0 PPM

USNEA 30 PPM

USNEA 60 PPM

USNEA 120 PPM

USNEA 360 PPM

USNEA 720 PPM

*** END OF MALE ***

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

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First Dose M/F: 02/14/09 / 02/14/09

Species/Strain: RATS/F 344/NCTR

Lab: NCTR

FISCHER 344 RATS-NCTR RATS FEMALE	Control 0 PPM	USNEA 30 PPM	USNEA 60 PPM	USNEA 120 PPM	USNEA 360 PPM	USNEA 720 PPM
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Disposition Summary

Animals Initially In Study	10	10	10	10	10	10
Early Deaths						
Moribund Sacrifice						8
Natural Death						1
Survivors						
Terminal Sacrifice	10	10	10	10	10	1
Animals Examined Microscopically	10				10	10

ALIMENTARY SYSTEM

Esophagus	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(10)	(9)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(10)	(9)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(10)	(9)
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(10)	(9)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(10)	(9)
Hyperplasia, Lymphoid	1 [2.0]				1 [2.0]	
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(10)	(9)
Liver	(10)	(0)	(0)	(0)	(10)	(10)
Hepatocyte, Degeneration						10 [3.2]
Pancreas	(10)	(0)	(0)	(0)	(10)	(10)
Vacuolization Cytoplasmic Acinus, Degeneration					1 [1.0]	1 [2.0]
Salivary Glands	(10)	(0)	(0)	(0)	(10)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(0)	(10)	(10)
Stomach, Glandular	(10)	(0)	(0)	(0)	(10)	(10)

CARDIOVASCULAR SYSTEM

Blood Vessel	(10)	(0)	(0)	(0)	(10)	(10)
Heart	(10)	(0)	(0)	(0)	(10)	(10)
Cardiomyopathy	3 [1.0]				1 [1.0]	1 [1.0]

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FISCHER 344 RATS-NCTR RATS FEMALE	Control 0 PPM	USNEA 30 PPM	USNEA 60 PPM	USNEA 120 PPM	USNEA 360 PPM	USNEA 720 PPM
ENDOCRINE SYSTEM						
Adrenal Cortex	(10)	(0)	(0)	(0)	(10)	(9)
Vacuolization Cytoplasmic						8 [3.6]
Adrenal Medulla	(10)	(0)	(0)	(0)	(10)	(8)
Islets, Pancreatic	(10)	(0)	(0)	(0)	(10)	(10)
Parathyroid Gland	(10)	(0)	(0)	(0)	(10)	(10)
Pituitary Gland	(10)	(0)	(0)	(0)	(10)	(9)
Pars Distalis, Cyst					2 [2.0]	
Thyroid Gland	(10)	(0)	(0)	(0)	(10)	(9)
Cyst, Squamous					1 [1.0]	
Ectopic Thymus	1				2	1
GENERAL BODY SYSTEM						
None						
GENITAL SYSTEM						
Clitoral Gland	(10)	(0)	(0)	(0)	(10)	(10)
Infiltration Cellular, Lymphocyte	1 [1.0]					2 [1.5]
Inflammation, Suppurative	4 [2.0]				1 [2.0]	4 [2.8]
Inflammation, Chronic Active	2 [2.5]					
Duct, Ectasia	1 [3.0]					1 [3.0]
Ovary	(10)	(0)	(0)	(0)	(10)	(10)
Uterus	(10)	(0)	(0)	(0)	(10)	(9)
Lumen, Dilatation	2 [3.0]				3 [3.0]	1 [2.0]
HEMATOPOIETIC SYSTEM						
Bone Marrow	(10)	(0)	(0)	(0)	(10)	(9)
Hypocellularity						8 [3.9]
Lymph Node	(0)	(0)	(0)	(0)	(0)	(1)
Lumbar, Hyperplasia, Lymphoid						1 [2.0]

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Lymph Node, Mandibular Hyperplasia, Lymphoid	(10) 2 [2.0]	(0)	(0)	(0)	(10)	(9)
Lymph Node, Mesenteric Hyperplasia, Lymphoid	(10) 4 [2.0]	(0)	(0)	(0)	(10) 4 [1.8]	(9)
Spleen	(10)	(0)	(0)	(0)	(10)	(10)
Thymus Atrophy	(10)	(0)	(0)	(0)	(10)	(10) 8 [3.9]
INTEGUMENTARY SYSTEM						
Mammary Gland	(10)	(0)	(0)	(0)	(10)	(9)
Skin	(10)	(0)	(0)	(0)	(10)	(10)
MUSCULOSKELETAL SYSTEM						
Bone, Femur	(10)	(0)	(0)	(0)	(10)	(10)
NERVOUS SYSTEM						
Brain, Brain Stem	(10)	(0)	(0)	(0)	(10)	(10)
Brain, Cerebellum	(10)	(0)	(0)	(0)	(10)	(10)
Brain, Cerebrum	(10)	(0)	(0)	(0)	(10)	(10)
RESPIRATORY SYSTEM						
Lung	(10)	(0)	(0)	(0)	(10)	(10)
Nose	(10)	(0)	(0)	(0)	(10)	(9)
Trachea	(10)	(0)	(0)	(0)	(10)	(10)
SPECIAL SENSES SYSTEM						
Eye	(10)	(0)	(0)	(0)	(10)	(9)
Harderian Gland	(10)	(0)	(0)	(0)	(10)	(10)

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FISCHER 344 RATS-NCTR RATS FEMALE	Control 0 PPM	USNEA 30 PPM	USNEA 60 PPM	USNEA 120 PPM	USNEA 360 PPM	USNEA 720 PPM
Infiltration Cellular, Lymphocyte	2 [1.0]					1 [1.0]
<hr/>						
URINARY SYSTEM						
Kidney	(10)	(0)	(0)	(0)	(10)	(10)
Casts Protein					5 [1.6]	
Infarct						1 [1.0]
Mineralization	10 [4.0]				10 [3.9]	9 [3.1]
Urinary Bladder	(10)	(0)	(0)	(0)	(10)	(9)

*** END OF REPORT ***

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