

Experiment Number: 20609 - 01
Test Type: 90-DAY
Route: DOSED FEED
Species/Strain: RATS/F 344/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
(+)-Usnic Acid
CAS Number: 7562-61-0

Date Report Requested: 12/03/2020
Time Report Requested: 12:50:16
First Dose M/F: 08/07/08 / 08/07/08
Lab: NCTR

NTP Study Number: C20609
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

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	FISCHER 344 RATS-NCTR RATS MALE	9	9	9	9	9	9	9	9	9
Control 0 ppm	5	5	5	5	5	5	5	5	5	5
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	1	1
	2	2	3	3	6	6	8	9	1	1
	1	3	3	5	1	3	9	1	7	9
* TOTALS										

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Hepatocyte, Degeneration								1			1 1.0
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
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DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	FISCHER 344 RATS-NCTR RATS MALE	9	9	9	9	9	9	9	9	9
Control 0 ppm	5	5	5	5	5	5	5	5	5	5
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	1	1
	2	2	3	3	6	6	8	9	1	1
	1	3	3	5	1	3	9	1	7	9
* TOTALS										

Heart	+	+	+	+	+	+	+	+	+	+	10
Cardiomyopathy	1	1		2	1	2	1	1	2	1	9 1.3

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	10
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Pars Distalis, Cyst		1						2			2 1.5
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10
Ectopic Thymus		X		X		X		X			4

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Epididymis	+	+	+	+	+	+	+	+	+	+	10
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Suppurative	3	3									2 3.0
Inflammation, Chronic Active				2							1 2.0

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	9	9	9	9	9	9	9	9	9	9	
FISCHER 344 RATS-NCTR RATS MALE	5	5	5	5	5	5	5	5	5	5	
Control 0 ppm											* TOTALS
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	2	2	3	3	6	6	8	9	1	1	
	1	3	3	5	1	3	9	1	7	9	
Prostate	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Suppurative		1									1 1.0
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Testes	+	+	+	+	+	+	+	+	+	+	10
HEMATOPOIETIC SYSTEM											
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Hyperplasia, Lymphoid						2					1 2.0
Infiltration Cellular, Mast Cell	2		1	1	2	2	2	2			8 1.8
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
INTEGUMENTARY SYSTEM											
Mammary Gland	+	+	M	+	+	+	+	+	+	+	9
Skin	+	+	+	+	+	+	+	+	+	+	10
MUSCULOSKELETAL SYSTEM											
Bone, Femur	+	+	+	+	+	+	+	+	+	+	10

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	FISCHER 344 RATS-NCTR RATS MALE	9	9	9	9	9	9	9	9	9
Control 0 ppm	5	5	5	5	5	5	5	5	5	5
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	1	1
	2	2	3	3	6	6	8	9	1	1
	1	3	3	5	1	3	9	1	7	9
* TOTALS										

NERVOUS SYSTEM

Brain, Brain Stem	+	+	+	+	+	+	+	+	+	+	10
Brain, Cerebellum	+	+	+	+	+	+	+	+	+	+	10
Brain, Cerebrum	+	+	+	+	+	+	+	+	+	+	10

RESPIRATORY SYSTEM

Lung	+	+	+	+	+	+	+	+	+	+	10
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10

SPECIAL SENSES SYSTEM

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

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	10
Nephropathy	1	1	2	1	1	1	2	1	1	2	10 1.3
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10

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		0	0	0	0	0	0	0	0	0	
DAY ON TEST		0	0	0	0	0	0	0	0	0	
FISCHER 344 RATS-NCTR RATS		9	9	9	9	9	9	9	9	9	
MALE		5	5	5	5	5	5	5	5	5	
Usnic 30 ppm											
ANIMAL ID		0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	1	1	
		0	0	4	4	5	5	7	7	0	
		1	3	5	7	3	5	3	5	1	
										* TOTALS	

ALIMENTARY SYSTEM

Liver	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic						1					1 1.0

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

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 + .. Tissue examined microscopically
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 Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE Usnic 30 ppm	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	
		9	9	9	9	9	9	9	9	9	9	
		5	5	5	5	5	5	5	5	5		
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0		
		0	0	0	0	0	0	0	1	1		
		0	0	4	4	5	5	7	7	0	0	
		1	3	5	7	3	5	3	5	1	3	* TOTALS

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

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		0	0	0	0	0	0	0	0	0	0	0	0	0	0
DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0	0
FISCHER 344 RATS-NCTR RATS		9	9	9	9	9	9	9	9	9	9	9	9	9	9
MALE		5	5	5	5	5	5	5	5	5	5	5	5	5	5
Usnic 60 ppm															
ANIMAL ID		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	1	1	0	0	0
		9	1	9	1	9	1	9	1	3	5	7			
														* TOTALS	

ALIMENTARY SYSTEM

Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic	1			1									1		3 1.0
Hepatocyte, Degeneration				1	1								1		3 1.0

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	FISCHER 344 RATS-NCTR RATS MALE	0	0	0	0	0	0	0	0	0
Usnic 60 ppm	9	9	9	9	9	9	9	9	9	9
ANIMAL ID	5	5	5	5	5	5	5	5	5	5
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	1	0
	0	1	2	3	6	7	8	8	0	0
	9	1	9	1	9	1	3	5	7	
* TOTALS										

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
FISCHER 344 RATS-NCTR RATS MALE	9	9	9	9	9	9	9	9	9	9	
Usnic 120 ppm	5	5	5	5	5	5	5	5	5	5	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	1	1	3	3	5	5	7	7	9	9	
	7	9	7	9	7	9	7	9	7	9	* TOTALS

ALIMENTARY SYSTEM

Liver	+	+	+	+	+	+	+	+	+	+	10	
Angiectasis					2							1 2.0
Inflammation, Chronic		1					1			1		3 1.0
Hepatocyte, Degeneration					1	1		1		2		4 1.3

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

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DAY ON TEST		0	0	0	0	0	0	0	0	0	0
FISCHER 344 RATS-NCTR RATS MALE		0	0	0	0	0	0	0	0	0	0
		9	9	9	9	9	9	9	9	9	9
		5	5	5	5	5	5	5	5	5	5
	Usnic 120 ppm	0	0	0	0	0	0	0	0	0	0
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	
	1	1	3	3	5	5	7	7	9	9	
	7	9	7	9	7	9	7	9	7	9	
* TOTALS											

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	10
Nephropathy	1	1	1	1	1	1	1	1	1	1	10 1.0

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DAY ON TEST		0	0	0	0	0	0	0	0	0	0
FISCHER 344 RATS-NCTR RATS MALE		0	0	0	0	0	0	0	0	0	0
		9	9	9	9	9	9	9	9	9	9
Usnic 360 ppm		5	5	5	5	5	5	5	5	5	5
		0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	1	1	
		0	0	4	4	6	6	9	9	1	1
		5	7	1	3	5	7	3	5	3	5
* TOTALS											

ALIMENTARY SYSTEM

Liver	+	+	+	+	+	+	+	+	+	+	10
Eosinophilic Focus									X		1
Inflammation, Chronic	1	1	1	2	2	1			1	1	8 1.3
Hepatocyte, Degeneration	1	2	2	3	3	2	1	1	2	2	10 1.9

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

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FISCHER 344 RATS-NCTR RATS MALE Usnic 360 ppm	DAY ON TEST	0	0	0	0	0	0	0	0	0		
		0	0	0	0	0	0	0	0	0		
		9	9	9	9	9	9	9	9	9		
		5	5	5	5	5	5	5	5	5		
	ANIMAL ID	0	0	0	0	0	0	0	0	0		
		0	0	0	0	0	0	0	0	0		
		0	0	0	0	0	0	0	1	1		
		0	0	4	4	6	6	9	9	1		1
		5	7	1	3	5	7	3	5	3		5
* TOTALS												

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	10
Hydronephrosis					2			1			2 1.5
Nephropathy	1	1	1	1	1	1	1	1	1	1	10 1.0

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

Experiment Number: 20609 - 01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: RATS/F 344/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 (+)-Usnic Acid
 CAS Number: 7562-61-0

Date Report Requested: 12/03/2020
 Time Report Requested: 12:50:16
 First Dose M/F: 08/07/08 / 08/07/08
 Lab: NCTR

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	FISCHER 344 RATS-NCTR RATS MALE	9	9	9	9	9	9	9	9	9
Usnic 720 ppm	5	5	5	5	5	5	5	5	5	5
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	1	
	1	1	2	2	4	5	8	8	0	1
	3	5	5	7	9	1	5	7	9	1
* TOTALS										

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic	1	2	1	1	1	1	1	1	2	2	10 1.3
Hepatocyte, Degeneration	4	4	4	3	3	4	4	3	4	3	10 3.6
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Acinus, Degeneration				2							1 2.0
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

CARDIOVASCULAR SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

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

Experiment Number: 20609 - 01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: RATS/F 344/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 (+)-Usnic Acid
 CAS Number: 7562-61-0

Date Report Requested: 12/03/2020
 Time Report Requested: 12:50:16
 First Dose M/F: 08/07/08 / 08/07/08
 Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE Usnic 720 ppm	DAY ON TEST										* TOTALS	
	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5		
	ANIMAL ID											
	0 0 0 1 3	0 0 0 1 5	0 0 0 2 5	0 0 0 2 7	0 0 0 4 9	0 0 0 5 1	0 0 0 8 5	0 0 0 8 7	0 0 0 8 9	0 0 0 0 1	0 0 0 1 1	
Blood Vessel	+	+	+	+	+	+	+	+	+	+	10	
Heart	+	+	+	+	+	+	+	+	+	+	10	
Cardiomyopathy	2	1	1	2		1	1	1			7 1.3	
ENDOCRINE SYSTEM												
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10	
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10	
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10	
Parathyroid Gland	+	+	+	+	+	+	+	+	+	M	9	
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10	
Pars Intermedia, Cyst									2		1 2.0	
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10	
Ectopic Thymus			X								1	
GENERAL BODY SYSTEM												
NONE												
GENITAL SYSTEM												
Epididymis	+	+	+	+	+	+	+	+	+	+	10	
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10	
Inflammation, Suppurative	3	1		2		3	3		3		6 2.5	

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

+ .. Tissue examined microscopically

X .. Lesion present

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M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20609 - 01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: RATS/F 344/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 (+)-Usnic Acid
 CAS Number: 7562-61-0

Date Report Requested: 12/03/2020
 Time Report Requested: 12:50:16
 First Dose M/F: 08/07/08 / 08/07/08
 Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE Usnic 720 ppm	DAY ON TEST										ANIMAL ID				
	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5					
	0	0	0	0	0	0	0	0	0	0	0 0 1 3				* TOTALS
Inflammation, Chronic Active Duct, Dilatation									2						1 2.0 4 3.8
Prostate	+	+	+	+	+	+	+	+	+	+					10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+					10
Testes	+	+	+	+	+	+	+	+	+	+					10
HEMATOPOIETIC SYSTEM															
Bone Marrow	+	+	+	+	+	+	+	+	+	+					10
Lymph Node, Mandibular Infiltration Cellular, Plasma Cell	+	+	+	+	+	+	+	+	+	+		3			10 1 3.0
Lymph Node, Mesenteric Hyperplasia, Lymphoid Infiltration Cellular, Mast Cell	+	+	+	+	+	+	+	+	+	+		2 2 2	2 3		10 2 2.0 7 2.3
Spleen	+	+	+	+	+	+	+	+	+	+					10
Thymus	+	+	+	+	+	+	+	+	+	+					10
INTEGUMENTARY SYSTEM															
Mammary Gland	+	+	+	M	M	+	M	+	+	+					7
Skin	+	+	+	+	+	+	+	+	+	+					10
MUSCULOSKELETAL SYSTEM															

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
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 BLANK .. Not examined microscopically

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

Experiment Number: 20609 - 01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: RATS/F 344/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 (+)-Usnic Acid
 CAS Number: 7562-61-0

Date Report Requested: 12/03/2020
 Time Report Requested: 12:50:16
 First Dose M/F: 08/07/08 / 08/07/08
 Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE Usnic 720 ppm	DAY ON TEST										ANIMAL ID			
	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5				
	0	0	0	0	0	0	0	0	0	0	0 0 0 1 3			* TOTALS
Bone, Femur	+	+	+	+	+	+	+	+	+	+			10	
NERVOUS SYSTEM														
Brain, Brain Stem	+	+	+	+	+	+	+	+	+	+			10	
Brain, Cerebellum	+	+	+	+	+	+	+	+	+	+			10	
Brain, Cerebrum	+	+	+	+	+	+	+	+	+	+			10	
RESPIRATORY SYSTEM														
Lung Infiltration Cellular, Histiocyte	+	+	+	+	+	+	+	+	+	+	1		10 1 1.0	
Nose	+	+	+	+	+	+	+	+	+	+			10	
Trachea	+	+	+	+	+	+	+	+	+	+			10	
SPECIAL SENSES SYSTEM														
Eye	+	+	+	+	+	+	+	+	+	+			10	
Harderian Gland	+	+	+	+	+	+	+	+	+	+			10	
URINARY SYSTEM														
Kidney Hydronephrosis Nephropathy	+	+	+	+	+	+	+	+	+	+	2 1 1	1 1 2	10 5 1.4 9 1.2	

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
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 BLANK .. Not examined microscopically

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

Experiment Number: 20609 - 01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: RATS/F 344/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 (+)-Usnic Acid
 CAS Number: 7562-61-0

Date Report Requested: 12/03/2020
 Time Report Requested: 12:50:16
 First Dose M/F: 08/07/08 / 08/07/08
 Lab: NCTR

		0	0	0	0	0	0	0	0	0	
FISCHER 344 RATS-NCTR RATS MALE	DAY ON TEST	0	0	0	0	0	0	0	0	0	
		9	9	9	9	9	9	9	9	9	
		5	5	5	5	5	5	5	5	5	
	Usnic 720 ppm										
	ANIMAL ID	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	1	1		
	1	1	2	2	4	5	8	8	0	1	
	3	5	5	7	9	1	5	7	9	1	
* TOTALS											
Urinary Bladder		+	+	+	+	+	+	+	+	+	10

*** END OF MALE DATA ***

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

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

Experiment Number: 20609 - 01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: RATS/F 344/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 (+)-Usnic Acid
 CAS Number: 7562-61-0

Date Report Requested: 12/03/2020
 Time Report Requested: 12:50:16
 First Dose M/F: 08/07/08 / 08/07/08
 Lab: NCTR

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	FISCHER 344 RATS-NCTR RATS FEMALE	9	9	9	9	9	9	9	9	9
Control 0 ppm	5	5	5	5	5	5	5	5	5	5
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	1	1
	2	2	3	3	6	6	9	9	1	2
	2	4	4	6	2	4	0	2	8	0
* TOTALS										

ALIMENTARY SYSTEM

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

CARDIOVASCULAR SYSTEM

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

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

Experiment Number: 20609 - 01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: RATS/F 344/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 (+)-Usnic Acid
 CAS Number: 7562-61-0

Date Report Requested: 12/03/2020
 Time Report Requested: 12:50:16
 First Dose M/F: 08/07/08 / 08/07/08
 Lab: NCTR

DAY ON TEST	FISCHER 344 RATS-NCTR RATS FEMALE										* TOTALS
	0	0	0	0	0	0	0	0	0	0	
95	95	95	95	95	95	95	95	95	95	95	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
00022	00022	00034	00034	00066	00062	00044	00090	00022	00018	00020	
Cardiomyopathy	1	2	1	1	1			1	1		7 1.1

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	10
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10
Ectopic Thymus										X	1

GENERAL BODY SYSTEM

NONE											
------	--	--	--	--	--	--	--	--	--	--	--

GENITAL SYSTEM

Clitoral Gland	+	+	+	+	+	+	+	+	+	+	10
Infiltration Cellular, Lymphocyte	2		2						2		3 2.0
Inflammation, Suppurative		2									1 2.0
Inflammation, Chronic Active					2			3			2 2.5
Ovary	+	+	+	+	+	+	+	+	+	+	10
Uterus	+	+	+	+	+	+	+	+	+	+	10

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1-4 .. Lesion qualified as:
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Experiment Number: 20609 - 01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: RATS/F 344/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 (+)-Usnic Acid
 CAS Number: 7562-61-0

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 Time Report Requested: 12:50:16
 First Dose M/F: 08/07/08 / 08/07/08
 Lab: NCTR

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
FISCHER 344 RATS-NCTR RATS FEMALE	5	5	5	5	5	5	5	5	5	5	
Control 0 ppm											
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	1	1		
	2	2	3	3	6	6	9	9	1	2	
	2	4	4	6	2	4	0	2	8	0	
* TOTALS											
Lumen, Dilatation				3			4		2		
3 3.0											

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Hyperplasia, Lymphoid		2	1		2						3 1.7
Infiltration Cellular, Mast Cell	2	2	2	2	1	2	2		1	2	9 1.8
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10

INTEGUMENTARY SYSTEM

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

MUSCULOSKELETAL SYSTEM

Bone, Femur	+	+	+	+	+	+	+	+	+	+	10
-------------	---	---	---	---	---	---	---	---	---	---	-----------

NERVOUS SYSTEM

Brain, Brain Stem	+	+	+	+	+	+	+	+	+	+	10
Brain, Cerebellum	+	+	+	+	+	+	+	+	+	+	10

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1-4 .. Lesion qualified as:
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Experiment Number: 20609 - 01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: RATS/F 344/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 (+)-Usnic Acid
 CAS Number: 7562-61-0

Date Report Requested: 12/03/2020
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 First Dose M/F: 08/07/08 / 08/07/08
 Lab: NCTR

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
FISCHER 344 RATS-NCTR RATS FEMALE	5	5	5	5	5	5	5	5	5	5	
Control 0 ppm											* TOTALS
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	1	1		
	2	2	3	3	6	6	9	9	1	2	
	2	4	4	6	2	4	0	2	8	2	
Brain, Cerebrum	+	+	+	+	+	+	+	+	+	+	10
RESPIRATORY SYSTEM											
Lung	+	+	+	+	+	+	+	+	+	+	10
Infiltration Cellular, Histiocyte									1		1 1.0
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10
SPECIAL SENSES SYSTEM											
Eye	+	+	+	+	+	+	+	+	+	+	10
Harderian Gland	+	+	+	+	+	+	+	+	+	+	10
Infiltration Cellular, Lymphocyte	1	2					1				3 1.3
URINARY SYSTEM											
Kidney	+	+	+	+	+	+	+	+	+	+	10
Cyst								3		4	2 3.5
Mineralization	3	2	3	4	3	2	4	3	3	3	10 3.0
Nephropathy				1	1						2 1.0
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10

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Experiment Number: 20609 - 01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: RATS/F 344/NCTR

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 (+)-Usnic Acid
 CAS Number: 7562-61-0

Date Report Requested: 12/03/2020
 Time Report Requested: 12:50:16
 First Dose M/F: 08/07/08 / 08/07/08
 Lab: NCTR

FISCHER 344 RATS-NCTR RATS FEMALE Usnic 720 ppm	DAY ON TEST										ANIMAL ID		
	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5			
	0	0	0	0	0	0	0	0	0	0	0 0 0 1 4		
	* TOTALS												

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+		10	
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+		10	
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+		10	
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+		10	
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+		10	
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+		10	
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+		10	
Liver	+	+	+	+	+	+	+	+	+	+		10	
Angiectasis										1			1 1.0
Bile Duct, Hyperplasia		1											1 1.0
Pancreas	+	+	+	+	+	+	+	+	+	+		10	
Salivary Glands	+	+	+	+	+	+	+	+	+	+		10	
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+		10	
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+		10	

CARDIOVASCULAR SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
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1-4 .. Lesion qualified as:
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 2) Mild 4) Marked

Experiment Number: 20609 - 01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: RATS/F 344/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 (+)-Usnic Acid
 CAS Number: 7562-61-0

Date Report Requested: 12/03/2020
 Time Report Requested: 12:50:16
 First Dose M/F: 08/07/08 / 08/07/08
 Lab: NCTR

FISCHER 344 RATS-NCTR RATS FEMALE Usnic 720 ppm	DAY ON TEST										* TOTALS
	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	1	1	
	1	1	2	2	5	5	8	8	1	1	
Blood Vessel	4	6	6	8	0	2	6	8	0	2	10
Heart	+	+	+	+	+	+	+	+	+	+	10
Cardiomyopathy	1	2	1	2			1	2	1		7 1.4
ENDOCRINE SYSTEM											
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	10
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10
Cyst										1	1 1.0
Ectopic Thymus	X					X				X	3
Ultimobranchial Cyst			2								1 2.0
GENERAL BODY SYSTEM											
NONE											
GENITAL SYSTEM											
Clitoral Gland	+	+	+	+	+	+	+	+	+	+	10
Infiltration Cellular, Lymphocyte	1				2					1	3 1.3

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

Experiment Number: 20609 - 01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: RATS/F 344/NCTR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 (+)-Usnic Acid
 CAS Number: 7562-61-0

Date Report Requested: 12/03/2020
 Time Report Requested: 12:50:16
 First Dose M/F: 08/07/08 / 08/07/08
 Lab: NCTR

FISCHER 344 RATS-NCTR RATS FEMALE Usnic 720 ppm	DAY ON TEST										* TOTALS
	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	00014	00006	00006	00008	00005	00002	00008	00008	00001	00001	
Inflammation, Suppurative						2					1 2.0
Inflammation, Chronic Active Duct, Dilatation		2						2			2 2.0 2 4.0
Ovary	+	+	+	+	+	+	+	+	+	+	10
Uterus Lumen, Dilatation	+	+	+	+	+	4	+	+	+	+	10 1 4.0
HEMATOPOIETIC SYSTEM											
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric Hyperplasia, Lymphoid Infiltration Cellular, Mast Cell	+	+	+	+	+	+	+	+	+	+	10 1 2.0 10 3.0
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
INTEGUMENTARY SYSTEM											
Mammary Gland	+	+	+	+	+	+	+	+	+	+	10
Skin	+	+	+	+	+	+	+	+	+	+	10
MUSCULOSKELETAL SYSTEM											

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		0	0	0	0	0	0	0	0	0		
DAY ON TEST		0	0	0	0	0	0	0	0	0		
FISCHER 344 RATS-NCTR RATS		9	9	9	9	9	9	9	9	9		
FEMALE		5	5	5	5	5	5	5	5	5		
Usnic 720 ppm												
ANIMAL ID		0	0	0	0	0	0	0	0	0		
		0	0	0	0	0	0	0	0	0		
		0	0	0	0	0	0	0	1	1		
		1	1	2	2	5	5	8	8	1		
		4	6	6	8	0	2	6	8	0		
* TOTALS												
Bone, Femur		+	+	+	+	+	+	+	+	+	10	
NERVOUS SYSTEM												
Brain, Brain Stem		+	+	+	+	+	+	+	+	+	10	
Brain, Cerebellum		+	+	+	+	+	+	+	+	+	10	
Brain, Cerebrum		+	+	+	+	+	+	+	+	+	10	
RESPIRATORY SYSTEM												
Lung		+	+	+	+	+	+	+	+	+	10	
Infiltration Cellular, Histiocyte						1					1 1.0	
Nose		+	+	+	+	+	+	+	+	+	10	
Trachea		+	+	+	+	+	+	+	+	+	10	
SPECIAL SENSES SYSTEM												
Eye		+	+	+	+	+	+	+	+	+	10	
Harderian Gland		+	+	+	+	+	+	+	+	+	10	
URINARY SYSTEM												
Kidney		+	+	+	+	+	+	+	+	+	10	
Cyst								4			1 4.0	
Mineralization		4	3	2	4	4	4	3	4	2	4	10 3.4

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	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5	0 9 5			
	0	0	0	0	0	0	0	0	0	0	0 0 0 1 4		
	1	1	2	1	1	1	1	2	1	1			
Nephropathy	1	1	2	1	1	1	1	2	1	1			* TOTALS 10 1.2
Urinary Bladder	+	+	+	+	+	+	+	+	+	+			10

*** END OF REPORT ***

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