

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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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Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE Control 0 ppm	DAY ON TEST												
		0 0 9 5	0 0 9 5										
ANIMAL ID	0 0 0 2 1	0 0 0 3 3	0 0 0 3 5	0 0 0 3 1	0 0 0 3 3	0 0 0 6 1	0 0 0 6 3	0 0 0 8 9	0 0 0 9 1	0 0 0 1 7	0 0 0 1 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
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	10

CARDIOVASCULAR SYSTEM

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

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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First Dose M/F: 08/07/08 / 08/07/08

Lab: NCTR

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

* TOTALS

Heart	+	+	+	+	+	+	+	+	+	+	+	10
-------	---	---	---	---	---	---	---	---	---	---	---	----

ENDOCRINE SYSTEM

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

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Epididymis	+	+	+	+	+	+	+	+	+	+	+	10
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	10
Prostate	+	+	+	+	+	+	+	+	+	+	+	10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	10

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Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE Control 0 ppm	DAY ON TEST ANIMAL ID	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	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	1	
		2	2	3	3	6	6	8	9	1	1	
		1	3	3	5	1	3	9	1	7	9	
		* TOTALS										
Testes		+	+	+	+	+	+	+	+	+	+	10
HEMATOPOIETIC SYSTEM												
Bone Marrow		+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular		+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric		+	+	+	+	+	+	+	+	+	+	10
Spleen		+	+	+	+	+	+	+	+	+	+	10
Thymus		+	+	+	+	+	+	+	+	+	+	10
INTEGUMENTARY SYSTEM												
Mammary Gland		+	+	M	+	+	+	+	+	+	+	9
Skin		+	+	+	+	+	+	+	+	+	+	10
MUSCULOSKELETAL SYSTEM												
Bone, Femur		+	+	+	+	+	+	+	+	+	+	10
NERVOUS SYSTEM												
Brain, Brain Stem		+	+	+	+	+	+	+	+	+	+	10
Brain, Cerebellum		+	+	+	+	+	+	+	+	+	+	10

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Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE Control 0 ppm	DAY ON TEST ANIMAL ID	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	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	1	
		2	2	3	3	6	6	8	9	1	1	
		1	3	3	5	1	3	9	1	7	9	
		* TOTALS										
Brain, Cerebrum		+	+	+	+	+	+	+	+	+	+	10
RESPIRATORY SYSTEM												
Lung		+	+	+	+	+	+	+	+	+	+	10
Nose		+	+	+	+	+	+	+	+	+	+	10
Trachea		+	+	+	+	+	+	+	+	+	+	10
SPECIAL SENSES SYSTEM												
Eye		+	+	+	+	+	+	+	+	+	+	10
Harderian Gland		+	+	+	+	+	+	+	+	+	+	10
URINARY SYSTEM												
Kidney		+	+	+	+	+	+	+	+	+	+	10
Urinary Bladder		+	+	+	+	+	+	+	+	+	+	10
SYSTEMIC LESIONS												
Multiple Organ		+	+	+	+	+	+	+	+	+	+	10

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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 ANIMAL ID												
		0 0 9 5	0 0 9 5	0 0 9 5									
		0 0 0 0 0 0 0 0 0 0 0 0 1	0 0 0 0 0 0 0 0 0 0 0 0 3	0 0 0 0 0 0 0 0 0 0 0 0 5	0 0 0 0 0 0 0 0 0 0 0 0 7	0 0 0 0 0 0 0 0 0 0 0 0 3	0 0 0 0 0 0 0 0 0 0 0 0 5	0 0 0 0 0 0 0 0 0 0 0 0 1	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 3			

* TOTALS

ALIMENTARY SYSTEM

Liver	+	+	+	+	+	+	+	+	+	+	+	+	10
-------	---	---	---	---	---	---	---	---	---	---	---	---	----

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

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First Dose M/F: 08/07/08 / 08/07/08

Lab: NCTR

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

* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + +

10

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

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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 60 ppm | ANIMAL ID | DAY ON TEST | | | | | | | | | | | |
|--|-----------|-------------|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | | 5 | 5 | 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 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| | | 0 | 1 | 2 | 3 | 6 | 7 | 8 | 8 | 0 | 0 | 0 | 0 |
| | | 9 | 1 | 9 | 1 | 9 | 1 | 1 | 3 | 5 | 7 | 7 | 7 |
| * TOTALS | | | | | | | | | | | | | |

ALIMENTARY SYSTEM

Liver

+ + + + + + + + + + +

10

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

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Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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 60 ppm | ANIMAL ID | DAY ON TEST | | | | | | | | | | | |
|--|-----------|-------------|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | | 5 | 5 | 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 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| | | 0 | 1 | 2 | 3 | 6 | 7 | 8 | 8 | 0 | 0 | 0 | 0 |
| | | 9 | 1 | 9 | 1 | 9 | 1 | 1 | 3 | 5 | 7 | 7 | 7 |

* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + +

10

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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Species/Strain: RATS/F 344/NCTR

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(+)-Usnic Acid

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First Dose M/F: 08/07/08 / 08/07/08

Lab: NCTR

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

ALIMENTARY SYSTEM

Liver + + + + + + + + + + + 10

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

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First Dose M/F: 08/07/08 / 08/07/08

Lab: NCTR

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

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney

++ + + + + + + + + +

10

SYSTEMIC LESIONS

Multiple Organ

++ + + + + + + + + +

10

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X .. Lesion present

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

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney

+ + + + + + + + + +

10

SYSTEMIC LESIONS

Multiple Organ

† † † † † † † † †

10

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

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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 | 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 | 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 | |
| | | 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 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | 10 |

CARDIOVASCULAR SYSTEM

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

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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 | | | | | | | | | | | | | * TOTALS |
|---|--------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
| | | 0
0
9
5 | |
| Testes | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| HEMATOPOIETIC SYSTEM | | | | | | | | | | | | | | |
| Bone Marrow | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Mandibular | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Mesenteric | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Spleen | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Thymus | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| INTEGUMENTARY SYSTEM | | | | | | | | | | | | | | |
| Mammary Gland | | + | + | + | M | M | + | M | + | + | + | + | + | 7 |
| Skin | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| MUSCULOSKELETAL SYSTEM | | | | | | | | | | | | | | |
| Bone, Femur | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| NERVOUS SYSTEM | | | | | | | | | | | | | | |
| Brain, Brain Stem | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Brain, Cerebellum | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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 | | | | | | | | | | | | | * TOTALS |
|---|--------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
| | | 0
0
9
5 | |
| Brain, Cerebrum | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| RESPIRATORY SYSTEM | | | | | | | | | | | | | | |
| Lung | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Nose | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Trachea | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | |
| Eye | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Harderian Gland | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| URINARY SYSTEM | | | | | | | | | | | | | | |
| Kidney | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| SYSTEMIC LESIONS | | | | | | | | | | | | | | |
| Multiple Organ | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

*** END OF MALE DATA ***

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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
Control 0 ppm | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|---|-------------|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FISCHER 344 RATS-NCTR RATS
FEMALE
Control 0 ppm | ANIMAL ID | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| FISCHER 344 RATS-NCTR RATS
FEMALE
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 |
| FISCHER 344 RATS-NCTR RATS
FEMALE
Control 0 ppm | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 2 | 2 | 3 | 3 | 6 | 6 | 9 | 9 | 1 | 2 |
| FISCHER 344 RATS-NCTR RATS
FEMALE
Control 0 ppm | ANIMAL ID | 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 |
|--------------|---|---|---|---|---|---|---|---|---|---|---|----|

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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
Control 0 ppm | DAY ON TEST
ANIMAL ID | | | | | | | | | | | | | * TOTALS |
|---|--------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
| | | 0
0
9
5 | |
| Heart | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| ENDOCRINE SYSTEM | | | | | | | | | | | | | | |
| Adrenal Cortex | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Parathyroid Gland | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Pituitary Gland | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Thyroid Gland | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| GENERAL BODY SYSTEM | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | |
| GENITAL SYSTEM | | | | | | | | | | | | | | |
| Clitoral Gland | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Ovary | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Uterus | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| HEMATOPOIETIC SYSTEM | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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
Control 0 ppm | DAY ON TEST
ANIMAL ID | 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 | 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 | |
| | | 2 | 2 | 3 | 3 | 6 | 6 | 9 | 9 | 1 | 2 |
| | | 2 | 4 | 4 | 6 | 2 | 4 | 0 | 2 | 8 | 0 |
| | | * TOTALS | | | | | | | | | |
| Bone Marrow | | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Mandibular | | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Mesenteric | | + | + | + | + | + | + | + | + | + | 10 |
| 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 |
| Brain, Cerebrum | | + | + | + | + | + | + | + | + | + | 10 |
| RESPIRATORY SYSTEM | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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
Control 0 ppm | DAY ON TEST
ANIMAL ID | 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 | 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 | | |
| | | 2 | 2 | 3 | 3 | 6 | 6 | 9 | 9 | 1 | 2 | |
| | | 2 | 4 | 4 | 6 | 2 | 4 | 0 | 2 | 8 | 0 | |
| | | * TOTALS | | | | | | | | | | |
| Lung | | + | + | + | + | + | + | + | + | + | + | 10 |
| Nose | | + | + | + | + | + | + | + | + | + | + | 10 |
| Trachea | | + | + | + | + | + | + | + | + | + | + | 10 |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | |
| Eye | | + | + | + | + | + | + | + | + | + | + | 10 |
| Harderian Gland | | + | + | + | + | + | + | + | + | + | + | 10 |
| URINARY SYSTEM | | | | | | | | | | | | |
| Kidney | | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder | | + | + | + | + | + | + | + | + | + | + | 10 |
| SYSTEMIC LESIONS | | | | | | | | | | | | |
| Multiple Organ | | + | + | + | + | + | + | + | + | + | + | 10 |

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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

Usnic 30 ppm

ANIMAL ID

* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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

Usnic 30 ppm

ANIMAL ID

* **TOTALS**

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

0

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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

Usnic 60 ppm

ANIMAL ID

* **TOTALS**

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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

Usnic 60 ppm

ANIMAL ID

* **TOTALS**

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

0

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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

Usnic 120 ppm

ANIMAL ID

* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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

Usnic 120 ppm

ANIMAL ID

* **TOTALS**

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

0

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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

Usnic 360 ppm

ANIMAL ID

* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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

Usnic 360 ppm

ANIMAL ID

* **TOTALS**

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

0

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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

P04: NEOPLASMS 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
ANIMAL ID | 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 | 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 | |
| | | 1 | 1 | 2 | 2 | 5 | 5 | 8 | 8 | 1 | 1 |
| | | 4 | 6 | 6 | 8 | 0 | 2 | 6 | 8 | 0 | 2 |

* 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 |
|--------------|---|---|---|---|---|---|---|---|---|---|----|

* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20609 - 01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: RATS/F 344/NCTR

P04: NEOPLASMS 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
ANIMAL ID | | | | | | | | | | | | | * TOTALS |
|---|--------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
| | | 0
0
9
5 | |
| Heart | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| ENDOCRINE SYSTEM | | | | | | | | | | | | | | |
| Adrenal Cortex | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Parathyroid Gland | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Pituitary Gland | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Thyroid Gland | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| GENERAL BODY SYSTEM | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | |
| GENITAL SYSTEM | | | | | | | | | | | | | | |
| Clitoral Gland | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Ovary | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Uterus | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| HEMATOPOIETIC SYSTEM | | | | | | | | | | | | | | |

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+ .. Tissue examined microscopically

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|---|--------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
| | | 0
0
9
5 | |
| Bone Marrow | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Mandibular | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Mesenteric | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| 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 |
| Brain, Cerebrum | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| RESPIRATORY SYSTEM | | | | | | | | | | | | | | |

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FEMALE
Usnic 720 ppm | DAY ON TEST
ANIMAL ID | | | | | | | | | | | | | * TOTALS |
|---|--------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
| | | 0
0
9
5 | |
| Lung | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Nose | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Trachea | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | |
| Eye | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Harderian Gland | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| URINARY SYSTEM | | | | | | | | | | | | | | |
| Kidney | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| SYSTEMIC LESIONS | | | | | | | | | | | | | | |
| Multiple Organ | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

*** END OF REPORT ***

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+ .. Tissue examined microscopically

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