

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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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SUMMARY OF STATISTICALLY SIGNIFICANT ($P \leq .05$) RESULTS IN THE ANALYSIS OF (+)-USNIC ACID

MALE RATS

Organ

Kidney
Liver
Liver: Hepatocyte
Preputial Gland
Preputial Gland: Duct

FEMALE RATS

Organ

Harderian Gland
Kidney

Morphology

Hydronephrosis
Inflammation Chronic
Degeneration
Inflammation
Dilatation

Morphology

Infiltration Cellular Lymphocyte
Nephropathy

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STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Harderian Gland						
Infiltration Cellular Lymphocyte						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
STATISTICAL TESTS						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)

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TERMINAL SACRIFICE AT 14 WEEKS

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Heart						
Cardiomyopathy						
LESION RATES						
OVERALL (a)	9/10 (90%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	7/10 (70%)
POLY-3 RATE (b)	9/10.00	0/0.00	0/0.00	0/0.00	0/0.00	7/10.00
POLY-3 PERCENT (g)	90%	0%	0%	0%	0%	70%
TERMINAL (d)	9/10 (90%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	7/10 (70%)
FIRST INCIDENCE	95 (T)	---	---	---	---	95 (T)
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.292N
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.292N
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.292N
COCH-ARM / FISHERS	P=0.201N	(e)	(e)	(e)	(e)	P=0.291N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.135N

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TERMINAL SACRIFICE AT 14 WEEKS

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Kidney Cyst						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/10.00	0/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
STATISTICAL TESTS						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
 TERMINAL SACRIFICE AT 14 WEEKS**

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Kidney						
Hydronephrosis						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)	2/10 (20%)	5/10 (50%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/10.00	2/10.00	5/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	20%	50%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)	2/10 (20%)	5/10 (50%)
FIRST INCIDENCE	---	---	---	---	95 (T)	95 (T)
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	P=0.227	P=0.008**
POLY 1.5	(e)	(e)	(e)	(e)	P=0.227	P=0.008**
POLY 6	(e)	(e)	(e)	(e)	P=0.227	P=0.008**
COCH-ARM / FISHERS	P<0.001**	(e)	(e)	(e)	P=0.237	P=0.016*
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	P=0.067	P=0.002**

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TERMINAL SACRIFICE AT 14 WEEKS

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Kidney Mineralization						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/10.00	0/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
STATISTICAL TESTS						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)

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 TERMINAL SACRIFICE AT 14 WEEKS**

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Kidney						
Nephropathy						
LESION RATES						
OVERALL (a)	10/10 (100%)	0/0 (0%)	0/0 (0%)	10/10 (100%)	10/10 (100%)	9/10 (90%)
POLY-3 RATE (b)	10/10.00	0/0.00	0/0.00	10/10.00	10/10.00	9/10.00
POLY-3 PERCENT (g)	100%	0%	0%	100%	100%	90%
TERMINAL (d)	10/10 (100%)	0/0 (0%)	0/0 (0%)	10/10 (100%)	10/10 (100%)	9/10 (90%)
FIRST INCIDENCE	95 (T)	---	---	95 (T)	95 (T)	95 (T)
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500N
COCH-ARM / FISHERS	P=0.188N	(e)	(e)	(e)	(e)	P=0.500N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.158N

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TERMINAL SACRIFICE AT 14 WEEKS

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Liver						
Angiectasis						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/10 (0%)	0/10 (0%)	1/10 (10%)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/10.00	0/10.00	1/10.00	0/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	0%	10%	0%	0%
TERMINAL (d)	0/10 (0%)	0/10 (0%)	0/10 (0%)	1/10 (10%)	0/10 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---	---	95 (T)	---	---
STATISTICAL TESTS						
POLY 3	P=0.631N	(e)	(e)	P=0.500	(e)	(e)
POLY 1.5	P=0.631N	(e)	(e)	P=0.500	(e)	(e)
POLY 6	P=0.631N	(e)	(e)	P=0.500	(e)	(e)
COCH-ARM / FISHERS	P=0.632N	(e)	(e)	P=0.500	(e)	(e)
MAX-ISO-POLY-3	P=0.518	(e)	(e)	P=0.158	(e)	(e)

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 TERMINAL SACRIFICE AT 14 WEEKS**

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Liver						
Eosinophilic Focus						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	1/10 (10%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/10.00	0/10.00	0/10.00	1/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	10%	0%
TERMINAL (d)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	1/10 (10%)	0/10 (0%)
FIRST INCIDENCE	---	---	---	---	95 (T)	---
STATISTICAL TESTS						
POLY 3	P=0.555	(e)	(e)	(e)	P=0.500	(e)
POLY 1.5	P=0.555	(e)	(e)	(e)	P=0.500	(e)
POLY 6	P=0.555	(e)	(e)	(e)	P=0.500	(e)
COCH-ARM / FISHERS	P=0.555	(e)	(e)	(e)	P=0.500	(e)
MAX-ISO-POLY-3	P=0.359	(e)	(e)	(e)	P=0.158	(e)

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TERMINAL SACRIFICE AT 14 WEEKS

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Liver						
Inflammation Chronic						
LESION RATES						
OVERALL (a)	0/10 (0%)	1/10 (10%)	3/10 (30%)	3/10 (30%)	8/10 (80%)	10/10 (100%)
POLY-3 RATE (b)	0/10.00	1/10.00	3/10.00	3/10.00	8/10.00	10/10.00
POLY-3 PERCENT (g)	0%	10%	30%	30%	80%	100%
TERMINAL (d)	0/10 (0%)	1/10 (10%)	3/10 (30%)	3/10 (30%)	8/10 (80%)	10/10 (100%)
FIRST INCIDENCE	---	95 (T)	95 (T)	95 (T)	95 (T)	95 (T)
STATISTICAL TESTS						
POLY 3	P<0.001**	P=0.500	P=0.095	P=0.095	P<0.001**	P<0.001**
POLY 1.5	P<0.001**	P=0.500	P=0.095	P=0.095	P<0.001**	P<0.001**
POLY 6	P<0.001**	P=0.500	P=0.095	P=0.095	P<0.001**	P<0.001**
COCH-ARM / FISHERS	P<0.001**	P=0.500	P=0.105	P=0.105	P<0.001**	P<0.001**
MAX-ISO-POLY-3	P<0.001**	P=0.158	P=0.024*	P=0.024*	P<0.001**	(e)

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
 TERMINAL SACRIFICE AT 14 WEEKS**

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Liver: Bile Duct Hyperplasia						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/10.00	0/10.00	0/10.00	0/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
STATISTICAL TESTS						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)

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TERMINAL SACRIFICE AT 14 WEEKS

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Liver: Hepatocyte Degeneration						
LESION RATES						
OVERALL (a)	1/10 (10%)	0/10 (0%)	3/10 (30%)	4/10 (40%)	10/10 (100%)	10/10 (100%)
POLY-3 RATE (b)	1/10.00	0/10.00	3/10.00	4/10.00	10/10.00	10/10.00
POLY-3 PERCENT (g)	10%	0%	30%	40%	100%	100%
TERMINAL (d)	1/10 (10%)	0/10 (0%)	3/10 (30%)	4/10 (40%)	10/10 (100%)	10/10 (100%)
FIRST INCIDENCE	95 (T)	---	95 (T)	95 (T)	95 (T)	95 (T)
STATISTICAL TESTS						
POLY 3	P<0.001**	P=0.500N	P=0.292	P=0.148	P<0.001**	P<0.001**
POLY 1.5	P<0.001**	P=0.500N	P=0.292	P=0.148	P<0.001**	P<0.001**
POLY 6	P<0.001**	P=0.500N	P=0.292	P=0.148	P<0.001**	P<0.001**
COCH-ARM / FISHERS	P<0.001**	P=0.500N	P=0.291	P=0.152	P<0.001**	P<0.001**
MAX-ISO-POLY-3	P<0.001**	P=0.158N	P=0.135	P=0.059	P<0.001**	P<0.001**

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TERMINAL SACRIFICE AT 14 WEEKS

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Lung						
Infiltration Cellular Histiocyte						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	10%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
FIRST INCIDENCE	---	---	---	---	---	95 (T)
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500
COCH-ARM / FISHERS	P=0.304	(e)	(e)	(e)	(e)	P=0.500
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.158

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 TERMINAL SACRIFICE AT 14 WEEKS**

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Lymph Node, Mandibular Infiltration Cellular Plasma Cell						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	10%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
FIRST INCIDENCE	---	---	---	---	---	95 (T)
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500
COCH-ARM / FISHERS	P=0.304	(e)	(e)	(e)	(e)	P=0.500
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.158

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 (+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
 TERMINAL SACRIFICE AT 14 WEEKS**

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Lymph Node, Mesenteric Hyperplasia Lymphoid						
LESION RATES						
OVERALL (a)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	2/10 (20%)
POLY-3 RATE (b)	1/10.00	0/0.00	0/0.00	0/0.00	0/0.00	2/10.00
POLY-3 PERCENT (g)	10%	0%	0%	0%	0%	20%
TERMINAL (d)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	2/10 (20%)
FIRST INCIDENCE	95 (T)	---	---	---	---	95 (T)
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500
COCH-ARM / FISHERS	P=0.377	(e)	(e)	(e)	(e)	P=0.500
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.274

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 (+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
 TERMINAL SACRIFICE AT 14 WEEKS**

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Lymph Node, Mesenteric Infiltration Cellular Mast Cell						
LESION RATES						
OVERALL (a)	8/10 (80%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	7/10 (70%)
POLY-3 RATE (b)	8/10.00	0/0.00	0/0.00	0/0.00	0/0.00	7/10.00
POLY-3 PERCENT (g)	80%	0%	0%	0%	0%	70%
TERMINAL (d)	8/10 (80%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	7/10 (70%)
FIRST INCIDENCE	95 (T)	---	---	---	---	95 (T)
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500N
COCH-ARM / FISHERS	P=0.398N	(e)	(e)	(e)	(e)	P=0.500N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.310N

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 (+)-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

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Pancreas: Acinus Degeneration						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	10%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
FIRST INCIDENCE	---	---	---	---	---	95 (T)
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500
COCH-ARM / FISHERS	P=0.304	(e)	(e)	(e)	(e)	P=0.500
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.158

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 (+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
 TERMINAL SACRIFICE AT 14 WEEKS**

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Pituitary Gland: Pars Distalis Cyst						
LESION RATES						
OVERALL (a)	2/10 (20%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	2/10.00	0/0.00	0/0.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	20%	0%	0%	0%	0%	0%
TERMINAL (d)	2/10 (20%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	95 (T)	---	---	---	---	---
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.227N
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.227N
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.227N
COCH-ARM / FISHERS	P=0.132N	(e)	(e)	(e)	(e)	P=0.237N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.067N

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 (+)-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

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Pituitary Gland: Pars Intermedia Cyst						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	10%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
FIRST INCIDENCE	---	---	---	---	---	95 (T)
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500
COCH-ARM / FISHERS	P=0.304	(e)	(e)	(e)	(e)	P=0.500
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.158

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 (+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
 TERMINAL SACRIFICE AT 14 WEEKS**

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Preputial Gland Inflammation						
LESION RATES						
OVERALL (a)	2/10 (20%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	6/10 (60%)
POLY-3 RATE (b)	2/10.00	0/0.00	0/0.00	0/0.00	0/0.00	6/10.00
POLY-3 PERCENT (g)	20%	0%	0%	0%	0%	60%
TERMINAL (d)	2/10 (20%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	6/10 (60%)
FIRST INCIDENCE	95 (T)	---	---	---	---	95 (T)
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.077
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.077
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.077
COCH-ARM / FISHERS	P=0.055	(e)	(e)	(e)	(e)	P=0.085
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.029*

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 (+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
 TERMINAL SACRIFICE AT 14 WEEKS**

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Preputial Gland Inflammation Chronic						
LESION RATES						
OVERALL (a)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
POLY-3 RATE (b)	1/10.00	0/0.00	0/0.00	0/0.00	0/0.00	1/10.00
POLY-3 PERCENT (g)	10%	0%	0%	0%	0%	10%
TERMINAL (d)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
FIRST INCIDENCE	95 (T)	---	---	---	---	95 (T)
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.760
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.760
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.760
COCH-ARM / FISHERS	P=0.645	(e)	(e)	(e)	(e)	P=0.763N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=1.000

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 (+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
 TERMINAL SACRIFICE AT 14 WEEKS**

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Preputial Gland: Duct Dilatation						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	4/10 (40%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	4/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	40%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	4/10 (40%)
FIRST INCIDENCE	---	---	---	---	---	95 (T)
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.033*
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.033*
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.033*
COCH-ARM / FISHERS	P=0.025*	(e)	(e)	(e)	(e)	P=0.043*
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.007**

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 (+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
 TERMINAL SACRIFICE AT 14 WEEKS**

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Prostate Inflammation						
LESION RATES						
OVERALL (a)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	1/10.00	0/0.00	0/0.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	10%	0%	0%	0%	0%	0%
TERMINAL (d)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	95 (T)	---	---	---	---	---
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500N
COCH-ARM / FISHERS	P=0.304N	(e)	(e)	(e)	(e)	P=0.500N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.158N

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 (+)-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

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Thyroid Gland Cyst						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
STATISTICAL TESTS						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 (+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
 TERMINAL SACRIFICE AT 14 WEEKS**

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Thyroid Gland Ectopic Thymus						
LESION RATES						
OVERALL (a)	4/10 (40%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
POLY-3 RATE (b)	4/10.00	0/0.00	0/0.00	0/0.00	0/0.00	1/10.00
POLY-3 PERCENT (g)	40%	0%	0%	0%	0%	10%
TERMINAL (d)	4/10 (40%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
FIRST INCIDENCE	95 (T)	---	---	---	---	95 (T)
STATISTICAL TESTS						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.148N
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.148N
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.148N
COCH-ARM / FISHERS	P=0.098N	(e)	(e)	(e)	(e)	P=0.152N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.059N

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 (+)-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

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS

DOSE	Males					
	Control 0 ppm	Usnic 30 ppm	Usnic 60 ppm	Usnic 120 ppm	Usnic 360 ppm	Usnic 720 ppm
Thyroid Gland						
Ultimobranchial Cyst						
LESION RATES						
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
STATISTICAL TESTS						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
------	---------------	---------------

Clitoral Gland
Infiltration Cellular Lymphocyte

LESION RATES

OVERALL (a)	3/10 (30%)	3/10 (30%)
POLY-3 RATE (b)	3/10.00	3/10.00
POLY-3 PERCENT (g)	30%	30%
TERMINAL (d)	3/10 (30%)	3/10 (30%)
FIRST INCIDENCE	95 (T)	95 (T)

STATISTICAL TESTS

POLY 3	P=0.678
POLY 1.5	P=0.678
POLY 6	P=0.678
COCH-ARM / FISHERS	P=0.686N
MAX-ISO-POLY-3	P=1.000

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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**Clitoral Gland
Inflammation**

LESION RATES

OVERALL (a)	1/10 (10%)	1/10 (10%)
POLY-3 RATE (b)	1/10.00	1/10.00
POLY-3 PERCENT (g)	10%	10%
TERMINAL (d)	1/10 (10%)	1/10 (10%)
FIRST INCIDENCE	95 (T)	95 (T)

STATISTICAL TESTS

POLY 3	P=0.760
POLY 1.5	P=0.760
POLY 6	P=0.760
COCH-ARM / FISHERS	P=0.763N
MAX-ISO-POLY-3	P=1.000

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Clitoral Gland
Inflammation Chronic

LESION RATES

OVERALL (a)	2/10 (20%)	2/10 (20%)
POLY-3 RATE (b)	2/10.00	2/10.00
POLY-3 PERCENT (g)	20%	20%
TERMINAL (d)	2/10 (20%)	2/10 (20%)
FIRST INCIDENCE	95 (T)	95 (T)

STATISTICAL TESTS

POLY 3	P=0.702
POLY 1.5	P=0.702
POLY 6	P=0.702
COCH-ARM / FISHERS	P=0.709N
MAX-ISO-POLY-3	P=1.000

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Clitoral Gland: Duct
Dilatation

LESION RATES

OVERALL (a)	0/10 (0%)	2/10 (20%)
POLY-3 RATE (b)	0/10.00	2/10.00
POLY-3 PERCENT (g)	0%	20%
TERMINAL (d)	0/10 (0%)	2/10 (20%)
FIRST INCIDENCE	---	95 (T)

STATISTICAL TESTS

POLY 3	P=0.227
POLY 1.5	P=0.227
POLY 6	P=0.227
COCH-ARM / FISHERS	P=0.237
MAX-ISO-POLY-3	P=0.066

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Harderian Gland
Infiltration Cellular Lymphocyte

LESION RATES

OVERALL (a)	3/10 (30%)	0/10 (0%)
POLY-3 RATE (b)	3/10.00	0/10.00
POLY-3 PERCENT (g)	30%	0%
TERMINAL (d)	3/10 (30%)	0/10 (0%)
FIRST INCIDENCE	95 (T)	---

STATISTICAL TESTS

POLY 3	P=0.095N
POLY 1.5	P=0.095N
POLY 6	P=0.095N
COCH-ARM / FISHERS	P=0.105N
MAX-ISO-POLY-3	P=0.025N*

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Heart
Cardiomyopathy

LESION RATES

OVERALL (a)	7/10 (70%)	7/10 (70%)
POLY-3 RATE (b)	7/10.00	7/10.00
POLY-3 PERCENT (g)	70%	70%
TERMINAL (d)	7/10 (70%)	7/10 (70%)
FIRST INCIDENCE	95 (T)	95 (T)

STATISTICAL TESTS

POLY 3	P=0.678
POLY 1.5	P=0.678
POLY 6	P=0.678
COCH-ARM / FISHERS	P=0.686N
MAX-ISO-POLY-3	P=1.000

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Kidney
Cyst

LESION RATES

OVERALL (a)	2/10 (20%)	1/10 (10%)
POLY-3 RATE (b)	2/10.00	1/10.00
POLY-3 PERCENT (g)	20%	10%
TERMINAL (d)	2/10 (20%)	1/10 (10%)
FIRST INCIDENCE	95 (T)	95 (T)

STATISTICAL TESTS

POLY 3	P=0.500N
POLY 1.5	P=0.500N
POLY 6	P=0.500N
COCH-ARM / FISHERS	P=0.500N
MAX-ISO-POLY-3	P=0.274N

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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**Kidney
Hydronephrosis**

LESION RATES

OVERALL (a)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%
TERMINAL (d)	0/10 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---

STATISTICAL TESTS

POLY 3	(n)
POLY 1.5	(n)
POLY 6	(n)
COCH-ARM / FISHERS	(n)
MAX-ISO-POLY-3	(n)

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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**Kidney
Mineralization**

LESION RATES

OVERALL (a)	10/10 (100%)	10/10 (100%)
POLY-3 RATE (b)	10/10.00	10/10.00
POLY-3 PERCENT (g)	100%	100%
TERMINAL (d)	10/10 (100%)	10/10 (100%)
FIRST INCIDENCE	95 (T)	95 (T)

STATISTICAL TESTS

POLY 3	(e)
POLY 1.5	(e)
POLY 6	(e)
COCH-ARM / FISHERS	(e)
MAX-ISO-POLY-3	(e)

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Kidney
Nephropathy

LESION RATES

OVERALL (a)	2/10 (20%)	10/10 (100%)
POLY-3 RATE (b)	2/10.00	10/10.00
POLY-3 PERCENT (g)	20%	100%
TERMINAL (d)	2/10 (20%)	10/10 (100%)
FIRST INCIDENCE	95 (T)	95 (T)

STATISTICAL TESTS

POLY 3	P<0.001**
POLY 1.5	P<0.001**
POLY 6	P<0.001**
COCH-ARM / FISHERS	P<0.001**
MAX-ISO-POLY-3	P<0.001**

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Liver
Angiectasis

LESION RATES

OVERALL (a)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	10%
TERMINAL (d)	0/10 (0%)	1/10 (10%)
FIRST INCIDENCE	---	95 (T)

STATISTICAL TESTS

POLY 3	P=0.500
POLY 1.5	P=0.500
POLY 6	P=0.500
COCH-ARM / FISHERS	P=0.500
MAX-ISO-POLY-3	P=0.158

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Liver
Eosinophilic Focus

LESION RATES

OVERALL (a)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%
TERMINAL (d)	0/10 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---

STATISTICAL TESTS

POLY 3	(n)
POLY 1.5	(n)
POLY 6	(n)
COCH-ARM / FISHERS	(n)
MAX-ISO-POLY-3	(n)

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
------	---------------	---------------

Liver
Inflammation Chronic

LESION RATES

OVERALL (a)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%
TERMINAL (d)	0/10 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---

STATISTICAL TESTS

POLY 3	(n)
POLY 1.5	(n)
POLY 6	(n)
COCH-ARM / FISHERS	(n)
MAX-ISO-POLY-3	(n)

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Liver: Bile Duct
Hyperplasia

LESION RATES

OVERALL (a)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	10%
TERMINAL (d)	0/10 (0%)	1/10 (10%)
FIRST INCIDENCE	---	95 (T)

STATISTICAL TESTS

POLY 3	P=0.500
POLY 1.5	P=0.500
POLY 6	P=0.500
COCH-ARM / FISHERS	P=0.500
MAX-ISO-POLY-3	P=0.158

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Liver: Hepatocyte
Degeneration

LESION RATES

OVERALL (a)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%
TERMINAL (d)	0/10 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---

STATISTICAL TESTS

POLY 3	(n)
POLY 1.5	(n)
POLY 6	(n)
COCH-ARM / FISHERS	(n)
MAX-ISO-POLY-3	(n)

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Lung
Infiltration Cellular Histiocyte

LESION RATES

OVERALL (a)	1/10 (10%)	1/10 (10%)
POLY-3 RATE (b)	1/10.00	1/10.00
POLY-3 PERCENT (g)	10%	10%
TERMINAL (d)	1/10 (10%)	1/10 (10%)
FIRST INCIDENCE	95 (T)	95 (T)

STATISTICAL TESTS

POLY 3	P=0.760
POLY 1.5	P=0.760
POLY 6	P=0.760
COCH-ARM / FISHERS	P=0.763N
MAX-ISO-POLY-3	P=1.000

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Lymph Node, Mandibular
Infiltration Cellular Plasma Cell

LESION RATES

OVERALL (a)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%
TERMINAL (d)	0/10 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---

STATISTICAL TESTS

POLY 3	(n)
POLY 1.5	(n)
POLY 6	(n)
COCH-ARM / FISHERS	(n)
MAX-ISO-POLY-3	(n)

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Lymph Node, Mesenteric
Hyperplasia Lymphoid

LESION RATES

OVERALL (a)	3/10 (30%)	1/10 (10%)
POLY-3 RATE (b)	3/10.00	1/10.00
POLY-3 PERCENT (g)	30%	10%
TERMINAL (d)	3/10 (30%)	1/10 (10%)
FIRST INCIDENCE	95 (T)	95 (T)

STATISTICAL TESTS

POLY 3	P=0.292N
POLY 1.5	P=0.292N
POLY 6	P=0.292N
COCH-ARM / FISHERS	P=0.291N
MAX-ISO-POLY-3	P=0.136N

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Lymph Node, Mesenteric
Infiltration Cellular Mast Cell

LESION RATES

OVERALL (a)	9/10 (90%)	10/10 (100%)
POLY-3 RATE (b)	9/10.00	10/10.00
POLY-3 PERCENT (g)	90%	100%
TERMINAL (d)	9/10 (90%)	10/10 (100%)
FIRST INCIDENCE	95 (T)	95 (T)

STATISTICAL TESTS

POLY 3	P=0.500
POLY 1.5	P=0.500
POLY 6	P=0.500
COCH-ARM / FISHERS	P=0.500
MAX-ISO-POLY-3	P=0.158

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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**Pancreas: Acinus
Degeneration**

LESION RATES

OVERALL (a)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%
TERMINAL (d)	0/10 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---

STATISTICAL TESTS

POLY 3	(n)
POLY 1.5	(n)
POLY 6	(n)
COCH-ARM / FISHERS	(n)
MAX-ISO-POLY-3	(n)

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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**Pituitary Gland: Pars Distalis
Cyst**

LESION RATES

OVERALL (a)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%
TERMINAL (d)	0/10 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---

STATISTICAL TESTS

POLY 3	(n)
POLY 1.5	(n)
POLY 6	(n)
COCH-ARM / FISHERS	(n)
MAX-ISO-POLY-3	(n)

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Pituitary Gland: Pars Intermedia
Cyst

LESION RATES

OVERALL (a)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%
TERMINAL (d)	0/10 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---

STATISTICAL TESTS

POLY 3	(n)
POLY 1.5	(n)
POLY 6	(n)
COCH-ARM / FISHERS	(n)
MAX-ISO-POLY-3	(n)

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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Thyroid Gland
Cyst

LESION RATES

OVERALL (a)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	10%
TERMINAL (d)	0/10 (0%)	1/10 (10%)
FIRST INCIDENCE	---	95 (T)

STATISTICAL TESTS

POLY 3	P=0.500
POLY 1.5	P=0.500
POLY 6	P=0.500
COCH-ARM / FISHERS	P=0.500
MAX-ISO-POLY-3	P=0.158

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
------	---------------	---------------

Thyroid Gland
Ectopic Thymus

LESION RATES

OVERALL (a)	1/10 (10%)	3/10 (30%)
POLY-3 RATE (b)	1/10.00	3/10.00
POLY-3 PERCENT (g)	10%	30%
TERMINAL (d)	1/10 (10%)	3/10 (30%)
FIRST INCIDENCE	95 (T)	95 (T)

STATISTICAL TESTS

POLY 3	P=0.292
POLY 1.5	P=0.292
POLY 6	P=0.292
COCH-ARM / FISHERS	P=0.291
MAX-ISO-POLY-3	P=0.136

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
------	---------------	---------------

Thyroid Gland
Ultimobranchial Cyst

LESION RATES

OVERALL (a)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	10%
TERMINAL (d)	0/10 (0%)	1/10 (10%)
FIRST INCIDENCE	---	95 (T)

STATISTICAL TESTS

POLY 3	P=0.500
POLY 1.5	P=0.500
POLY 6	P=0.500
COCH-ARM / FISHERS	P=0.500
MAX-ISO-POLY-3	P=0.158

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-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

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344/NCTR)
TERMINAL SACRIFICE AT 14 WEEKS**

Females

DOSE	Control 0 ppm	Usnic 720 ppm
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**Uterus: Lumen
Dilatation**

LESION RATES

OVERALL (a)	3/10 (30%)	1/10 (10%)
POLY-3 RATE (b)	3/10.00	1/10.00
POLY-3 PERCENT (g)	30%	10%
TERMINAL (d)	3/10 (30%)	1/10 (10%)
FIRST INCIDENCE	95 (T)	95 (T)

STATISTICAL TESTS

POLY 3	P=0.292N
POLY 1.5	P=0.292N
POLY 6	P=0.292N
COCH-ARM / FISHERS	P=0.291N
MAX-ISO-POLY-3	P=0.136N

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

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
(+)-Usnic Acid
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First Dose M/F: 08/07/08 / 08/07/08
Lab: NCTR

LEGEND

- (a) Number of tumor-bearing animals/number of animals examined at site.
 - (b) Number of tumor-bearing animals/Poly-3 number
 - (d) Observed incidence at terminal kill.
 - (e) Value of statistic cannot be computed.
 - (f) Beneath the control incidence are the P-values associated with the trend test. Beneath the dosed group incidence are the P-values corresponding to pairwise comparisons between the controls and that dosed group.
 - (g) Poly-3 adjusted lifetime tumor incidence.
 - (n) No statistics are calculated if all dose groups have fewer than two tumors.
 - (I) Interim sacrifice
 - (T) Terminal sacrifice
 - # Tumor rates based on numbers of animals necropsied.
 - * To the right of any statistical result, indicates significance at ($P \leq 0.05$).
 - ** To the right of any statistical result, indicates significance at ($P \leq 0.01$).
 - N Indicates a negative trend for all tests
- The Cochran-Armitage and Fishers exact tests compare directly the overall incidence rates.

*** END OF REPORT ***