

Experiment Number: 50052 - 01
Test Type: 14-WEEK
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Ionic Liquid: N-Butylpyridinium Chloride
CAS Number: 1124-64-7

Date Report Requested: 10/05/2020
Time Report Requested: 13:00:12
First Dose M/F: 09/19/13 / 09/20/13
Lab: BAT

NBUPY Rats - Final 2

NTP Study Number: C05052
Lock Date: 05/25/2018
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

Experiment Number: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

DAY ON TEST		0	0	0	0	0	0	0	0	0	0
HARLAN SPRAGUE DAWLEY RATS	0	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9	9
MALE	2	2	2	2	2	2	2	2	2	2	2
0 mg/mL male	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	7	7	7	7	7	7	7	7	7	7	7
	0	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	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
Extramedullary Hematopoiesis										1	1 1.0
Hepatodiaphragmatic Nodule							X				1
Infiltration Cellular, Mixed Cell			1								1 1.0
Inflammation, Chronic						1		1	1		3 1.0
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10
Mineral								1	1		2 1.0

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
HARLAN SPRAGUE DAWLEY RATS MALE	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
0 mg/mL male	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	7	7	7	7	7	7	7	7	7	7
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0
* TOTALS										

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10
Cardiomyopathy								1			1 1.0
Endothelium, Valve, Hyperplasia				2							1 2.0

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	M	+	M	+	M	+	M	+	+	M	5
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Epididymis	+	+	+	+	+	+	+	+	+	+	10
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID	
	9	9	9	9	9	9	9	9	9	9		
HARLAN SPRAGUE DAWLEY RATS	2	2	2	2	2	2	2	2	2	2		
MALE												
0 mg/mL male												
	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0		
	7	7	7	7	7	7	7	7	7	7		
	0	0	0	0	0	0	0	0	0	1		
	1	2	3	4	5	6	7	8	9	0		
* TOTALS												

Infiltration Cellular, Mononuclear Cell											1	1	1.0
Inflammation, Chronic											1	1	1.0
Inflammation, Chronic Active	1											1	1.0

Prostate	+	+	+	+	+	+	+	+	+	+		10	
Inflammation, Chronic			1									1	1.0

Seminal Vesicle	+	+	+	+	+	+	+	+	+	+		10	
-----------------	---	---	---	---	---	---	---	---	---	---	--	----	--

Testis	+	+	+	+	+	+	+	+	+	+		10	
--------	---	---	---	---	---	---	---	---	---	---	--	----	--

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+		10	
-------------	---	---	---	---	---	---	---	---	---	---	--	----	--

Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+		10	
------------------------	---	---	---	---	---	---	---	---	---	---	--	----	--

Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+		10	
------------------------	---	---	---	---	---	---	---	---	---	---	--	----	--

Spleen	+	+	+	+	+	+	+	+	+	+		10	
Pigment								1				1	1.0

Thymus	+	+	+	+	+	+	+	+	+	+		10	
--------	---	---	---	---	---	---	---	---	---	---	--	----	--

INTEGUMENTARY SYSTEM

Mammary Gland	+	+	+	+	+	+	+	+	+	+		10	
---------------	---	---	---	---	---	---	---	---	---	---	--	----	--

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

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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 0 mg/mL male	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	0				
	9	9	9	9	9	9	9	9	9	9	9				
	2	2	2	2	2	2	2	2	2	2	2				
	0	0	0	0	0	0	0	0	0	0	0				
	0	0	0	0	0	0	0	0	0	0	0				
	7	7	7	7	7	7	7	7	7	7	7				
	0	0	0	0	0	0	0	0	0	0	0				
	1	2	3	4	5	6	7	8	9	0	1				
															* TOTALS
Bone	+	+	+	+	+	+	+	+	+	+					10
NERVOUS SYSTEM															
Brain	+	+	+	+	+	+	+	+	+	+					10
RESPIRATORY SYSTEM															
Lung	+	+	+	+	+	+	+	+	+	+					10
Nose	+	+	+	+	+	+	+	+	+	+					10
Olfactory Epithelium, Accumulation, Hyaline Droplet	1				1		1	1	1	1					6 1.0
Trachea	+	+	+	+	+	+	+	+	+	+					10
SPECIAL SENSES SYSTEM															
Eye	+	+	+	+	+	+	+	+	+	+					10
Harderian Gland	+	+	+	+	+	+	+	+	+	+					10
Infiltration Cellular, Mononuclear Cell			2		1										2 1.5
Inflammation, Chronic						1									1 1.0
URINARY SYSTEM															
Kidney	+	+	+	+	+	+	+	+	+	+					10
Nephropathy, Chronic Progressive	1	1	1	1	1	1	1	1	1	1					10 1.0
Papilla, Mineral			1												1 1.0

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 0 mg/mL male	DAY ON TEST	0	0	0	0	0	0	0	0	0	* TOTALS
		0	0	0	0	0	0	0	0	0	
		9	9	9	9	9	9	9	9	9	
		2	2	2	2	2	2	2	2	2	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		7	7	7	7	7	7	7	7	7	
		0	0	0	0	0	0	0	0	1	
		1	2	3	4	5	6	7	8	9	
										0	

Urinary Bladder

+ + + + + + + + + +

10

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	HARLAN SPRAGUE DAWLEY RATS MALE
	0	0	0	0	0	0	0	0	0	0	
1 mg/mL male	9	9	9	9	9	9	9	9	9	9	ANIMAL ID
	2	2	2	2	2	2	2	2	2	2	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	7	7	7	7	7	7	7	7	7	7	
	2	2	2	2	2	2	2	2	2	3	
	1	2	3	4	5	6	7	8	9	0	
* TOTALS											

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Gut Associated Lymphoid Tissue	+	1
Hyperplasia	1	1 1.0

INTEGUMENTARY SYSTEM

NONE

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

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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 1 mg/mL male	DAY ON TEST	0	0	0	0	0	0	0	0	0	* TOTALS
		0	0	0	0	0	0	0	0	0	
		9	9	9	9	9	9	9	9	9	
		2	2	2	2	2	2	2	2	2	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		7	7	7	7	7	7	7	7	7	
		2	2	2	2	2	2	2	2	3	
		1	2	3	4	5	6	7	8	9	
										0	

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID		
	9	9	9	9	9	9	9	9	0	9			
HARLAN SPRAGUE DAWLEY RATS MALE	2	2	2	2	2	2	2	2	6	2			
3 mg/mL male	0	0	0	0	0	0	0	0	0	0			
	0	0	0	0	0	0	0	0	0	0			
	7	7	7	7	7	7	7	7	7	7			
	3	3	3	3	3	3	3	3	3	4			
	1	2	3	4	5	6	7	8	9	0			
	* TOTALS												

Muscularis, Degeneration

1

1 1.0

CARDIOVASCULAR SYSTEM

Blood Vessel

+ + + + + + + + + +

10

Heart

+ + + + + + + + + +

10

Cardiomyopathy

1

1 1.0

Inflammation, Suppurative

2

1 2.0

ENDOCRINE SYSTEM

Adrenal Cortex

+ + + + + + + + + +

10

Hypertrophy, Focal

2 1 1

3 1.3

Adrenal Medulla

+ + + + + + + + + +

10

Islets, Pancreatic

+ + + + + + + + + +

10

Parathyroid Gland

M + M M + + M + + +

6

Pituitary Gland

+ + + + + + + + + +

10

Thyroid Gland

+ + + + + + + + + +

10

GENERAL BODY SYSTEM

NONE

GENITAL 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 3 mg/mL male	DAY ON TEST										ANIMAL ID	
	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2		
	0 0 7 3 1	0 0 7 3 2	0 0 7 3 3	0 0 7 3 4	0 0 7 3 5	0 0 7 3 6	0 0 7 3 7	0 0 7 3 8	0 0 7 3 9	0 0 7 3 0		
* TOTALS												

Epididymis Duct, Exfoliated Germ Cell	+	+	+	+	+	+	+	+	+	+	2	10	1	2.0
Preputial Gland Infiltration Cellular, Mononuclear Cell	+	+	+	+	+	+	+	+	+	+	2	10	1	2.0
Inflammation, Suppurative											1	1	1.0	
Inflammation, Chronic					1							1	1.0	
Prostate Inflammation, Suppurative	+	+	+	+	+	+	+	+	+	+	2	10	1	2.0
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+		10		
Testis Germinal Epithelium, Degeneration	+	+	+	+	+	+	+	+	+	+	1 1	10	2	1.0

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+		10		
Lymph Node, Mandibular Necrosis, Lymphoid	+	+	+	+	+	+	+	+	+	+	1	10	1	1.0
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+		10		
Spleen	+	+	+	+	+	+	+	+	+	+		10		
Thymus	+	+	+	+	+	+	+	+	+	+		10		

INTEGUMENTARY 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID		
	9	9	9	9	9	9	9	9	0	9			
HARLAN SPRAGUE DAWLEY RATS MALE	2	2	2	2	2	2	2	2	6	2			
3 mg/mL male	0	0	0	0	0	0	0	0	0	0			
	0	0	0	0	0	0	0	0	0	0			
	7	7	7	7	7	7	7	7	7	7			
	3	3	3	3	3	3	3	3	3	4			
	1	2	3	4	5	6	7	8	9	0			
											* TOTALS		
Mammary Gland Hyperplasia	+	+	+	+	M	+	+	+	M	+		8	1 1.0
Skin	+	+	+	+	+	+	+	+	+	+		10	
MUSCULOSKELETAL SYSTEM													
Bone	+	+	+	+	+	+	+	+	+	+		10	
NERVOUS SYSTEM													
Brain	+	+	+	+	+	+	+	+	+	+		10	
RESPIRATORY SYSTEM													
Lung	+	+	+	+	+	+	+	+	+	+		10	
Infiltration Cellular, Histiocyte				1									1 1.0
Metaplasia, Osseous								1					1 1.0
Nose	+	+	+	+	+	+	+	+	+	+		10	
Glands, Respiratory Epithelium, Dilation										1			1 1.0
Olfactory Epithelium, Accumulation, Hyaline Droplet	1		1				1	1					4 1.0
Trachea	+	+	+	+	+	+	+	+	+	+		10	
SPECIAL SENSES SYSTEM													
Eye	+	+	+	+	+	+	+	+	+	+		10	
Harderian Gland	+	+	+	+	+	+	+	+	+	+		10	

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 3 mg/mL male	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	0	0	0	0	0	0	0	0	0	0	0	0
		9	9	9	9	9	9	9	9	9	0	9	0	9	0	9	0	9	0
		2	2	2	2	2	2	2	2	2	6	2	6	2	6	2	6	2	6
	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
		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
* TOTALS																			
Infiltration Cellular, Mononuclear Cell																			
1																			
1 1.0																			

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Infarct																			2
Inflammation, Suppurative																			1
Nephropathy, Chronic Progressive	1	1	1	1	1	1	1	1	1	2	1								10
Inflammation, Suppurative																			4
Urethra																			1
Inflammation, Suppurative																			4
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Suppurative																			1

*** 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 0 mg/mL female	DAY ON TEST	0	0	0	0	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
		9	9	9	9	9	9	9	9	9	9	9	9	9	9
		2	2	2	2	2	2	2	2	2	2	2	2	2	2
		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
		7	7	7	7	7	7	7	7	7	7	7	7	7	7
		4	4	4	4	4	4	4	4	4	4	4	4	5	5
		1	2	3	4	5	6	7	8	9	0				
* TOTALS															

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Infiltration Cellular, Mononuclear Cell															1 1.0
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
Extramedullary Hematopoiesis				1	1	1									3 1.0
Infiltration Cellular, Mixed Cell														1	1 1.0
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Mineral					1										1 1.0

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 0 mg/mL female	DAY ON TEST	0	0	0	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
		9	9	9	9	9	9	9	9	9	9	9	9	9
		2	2	2	2	2	2	2	2	2	2	2	2	2
		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
		7	7	7	7	7	7	7	7	7	7	7	7	7
		4	4	4	4	4	4	4	4	4	4	4	5	5
		1	2	3	4	5	6	7	8	9	0			
* TOTALS														

CARDIOVASCULAR SYSTEM

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

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Hypertrophy, Focal			1			1								2 1.0
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	10

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Clitoral Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Infiltration Cellular, Mononuclear Cell						2		2						2 2.0
Ovary	+	+	+	+	+	+	+	+	+	+	+	+	+	10

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
HARLAN SPRAGUE DAWLEY RATS FEMALE	2	2	2	2	2	2	2	2	2	2	
0 mg/mL female											
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	7	7	7	7	7	7	7	7	7	7	
	4	4	4	4	4	4	4	4	4	4	
	1	2	3	4	5	6	7	8	9	0	* TOTALS
Duct Remnant	X										1
Uterus	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Acute		1									1 1.0
HEMATOPOIETIC SYSTEM											
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	+	+	+	+	+	+	+	+	+	+	10
NERVOUS SYSTEM											
Brain	+	+	+	+	+	+	+	+	+	+	10

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 0 mg/mL female	DAY ON TEST	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	9	9	9	9
		2	2	2	2	2	2	2	2	2	2	2	2	2	2
		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
		7	7	7	7	7	7	7	7	7	7	7	7	7	7
		4	4	4	4	4	4	4	4	4	4	4	4	5	5
		1	2	3	4	5	6	7	8	9	0				
* TOTALS															

RESPIRATORY SYSTEM

Lung	+	+	+	+	+	+	+	+	+	+	10		
Inflammation, Chronic Active	1			1		1						3	1.0
Nose	+	+	+	+	+	+	+	+	+	+	10		
Epithelium, Inflammation, Chronic Active	2	2	1	2	2							5	1.8
Olfactory Epithelium, Accumulation, Hyaline Droplet	1				1				1	1		4	1.0
Trachea	+	+	+	+	+	+	+	+	+	+	10		

SPECIAL SENSES SYSTEM

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

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	10		
Nephropathy, Chronic Progressive	1			1			1		1			4	1.0
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10		

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE	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	0	0
		9	9	9	9	9	9	9	9	9	9	9	9	9
		2	2	2	2	2	2	2	2	2	2	2	2	2
	0.3 mg/mL female	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
		7	7	7	7	7	7	7	7	7	7	7	7	7
		5	5	5	5	5	5	5	5	5	5	5	6	6
		1	2	3	4	5	6	7	8	9	0			

* TOTALS

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Nose	+	+	+	+	+	+	+	+	+	9
Epithelium, Inflammation, Chronic Active	1	1	1	1	2	1	1	1	1	9 1.1

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 1 mg/mL female	DAY ON TEST	0	0	0	0	0	0	0	0	0	* TOTALS
		0	0	0	0	0	0	0	0	0	
		9	9	9	9	9	9	9	9	9	
		2	2	2	2	2	2	2	2	2	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		7	7	7	7	7	7	7	7	7	
		6	6	6	6	6	6	6	6	7	
		1	2	3	4	5	6	7	8	9	
		0	0	0	0	0	0	0	0	0	

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	HARLAN SPRAGUE DAWLEY RATS FEMALE	0	0	0	0	0	0	0	0	0
3 mg/mL female	9	9	9	9	9	9	9	9	9	9
ANIMAL ID	2	2	2	2	2	2	2	2	2	2
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	7	7	7
	7	7	7	7	7	7	7	7	7	8
	1	2	3	4	5	6	7	8	9	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
Extramedullary Hematopoiesis						1	1				2 1.0
Inflammation, Chronic		1						1			2 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
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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
HARLAN SPRAGUE DAWLEY RATS FEMALE	2	2	2	2	2	2	2	2	2	2	
3 mg/mL female											
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	7	7	7	7	7	7	7	7	7	7	
	7	7	7	7	7	7	7	7	7	8	
	1	2	3	4	5	6	7	8	9	0	* TOTALS
Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10
ENDOCRINE SYSTEM											
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	+	+	+	M	M	8
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10
GENERAL BODY SYSTEM											
NONE											
GENITAL SYSTEM											
Clitoral Gland	+	+	+	+	+	+	+	+	+	+	10
Infiltration Cellular, Mononuclear Cell							1		1	1	3 1.0
Ovary	+	+	+	+	+	+	+	+	+	+	10
Uterus	+	+	+	+	+	+	+	+	+	+	10

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
HARLAN SPRAGUE DAWLEY RATS FEMALE	2	2	2	2	2	2	2	2	2	2
3 mg/mL female										
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	7	7	7
	1	2	3	4	5	6	7	8	9	0

* TOTALS

Dilation	1										1	1.0
----------	---	--	--	--	--	--	--	--	--	--	---	-----

HEMATOPOIETIC SYSTEM

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	+	+	+	+	+	+	+	+	+	+	10
------	---	---	---	---	---	---	---	---	---	---	----

NERVOUS SYSTEM

Brain	+	+	+	+	+	+	+	+	+	+	10
-------	---	---	---	---	---	---	---	---	---	---	----

RESPIRATORY SYSTEM

Lung	+	+	+	+	+	+	+	+	+	+	10
------	---	---	---	---	---	---	---	---	---	---	----

* .. 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: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic Liquid: N-Butylpyridinium Chloride

CAS Number: 1124-64-7

Date Report Requested: 10/05/2020

Time Report Requested: 13:00:12

First Dose M/F: 09/19/13 / 09/20/13

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0						
	9	9	9	9	9	9	9	9	9	9						
ANIMAL ID	2	2	2	2	2	2	2	2	2	2						
	0	0	0	0	0	0	0	0	0	0						
	7	7	7	7	7	7	7	7	7	7						
	7	7	7	7	7	7	7	7	7	8						
	1	2	3	4	5	6	7	8	9	0						
											* TOTALS					
Infiltration Cellular, Histiocyte											1	1	1.0			
Nose	+	+	+	+	+	+	+	+	+	+			10			
Glands, Respiratory Epithelium, Dilation												1	1.0			
Olfactory Epithelium, Accumulation, Hyaline Droplet	1	1	1		1	1	1	1	1				8	1.0		
Trachea	+	+	+	+	+	+	+	+	+	+			10			
SPECIAL SENSES SYSTEM																
Eye	+	+	+	+	+	+	+	+	+	+			10			
Harderian Gland	+	+	+	+	+	+	+	+	+	+			10			
Infiltration Cellular, Mononuclear Cell											1	1	1.0			
URINARY SYSTEM																
Kidney	+	+	+	+	+	+	+	+	+	+			10			
Nephropathy, Chronic Progressive											1	1	1	1	6	1.0
Urinary Bladder	+	+	+	+	+	+	+	+	+	+			10			

*** END OF REPORT ***

* .. 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