

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

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

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

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

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

0.3 mg/mL male

1 mg/mL male

3 mg/mL male

Disposition Summary

Animals Initially In Study	10	10	10	10
Early Deaths				
Natural Death				1
Survivors				
Terminal Sacrifice	10	10	10	9
Animals Examined Microscopically	10		1	10

ALIMENTARY SYSTEM

Esophagus	(10)	(0)	(0)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(10)
Liver	(10)	(0)	(0)	(10)
Basophilic Focus				1 (10%)
Eosinophilic Focus				1 (10%)
Extramedullary Hematopoiesis	1 (10%)			1 (10%)
Hepatodiaphragmatic Nodule	1 (10%)			
Infiltration Cellular, Mixed Cell	1 (10%)			
Inflammation, Chronic	3 (30%)			
Pancreas	(10)	(0)	(0)	(10)
Acinus, Atrophy				1 (10%)
Salivary Glands	(10)	(0)	(0)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(10)
Stomach, Glandular	(10)	(0)	(0)	(10)
Mineral	2 (20%)			1 (10%)
Muscularis, Degeneration				1 (10%)

CARDIOVASCULAR SYSTEM

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

Experiment Number: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

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	0.3 mg/mL male	1 mg/mL male	3 mg/mL male
Blood Vessel	(10)	(0)	(0)	(10)
Heart	(10)	(0)	(0)	(10)
Cardiomyopathy	1 (10%)			1 (10%)
Inflammation, Suppurative				1 (10%)
Endothelium, Valve, Hyperplasia	1 (10%)			
<hr/>				
ENDOCRINE SYSTEM				
Adrenal Cortex	(10)	(0)	(0)	(10)
Hypertrophy, Focal				3 (30%)
Adrenal Medulla	(10)	(0)	(0)	(10)
Islets, Pancreatic	(10)	(0)	(0)	(10)
Parathyroid Gland	(5)	(0)	(0)	(6)
Pituitary Gland	(10)	(0)	(0)	(10)
Thyroid Gland	(10)	(0)	(0)	(10)
<hr/>				
GENERAL BODY SYSTEM				
None				
<hr/>				
GENITAL SYSTEM				
Epididymis	(10)	(0)	(0)	(10)
Duct, Exfoliated Germ Cell				1 (10%)
Preputial Gland	(10)	(0)	(0)	(10)
Infiltration Cellular, Mononuclear Cell	1 (10%)			1 (10%)
Inflammation, Suppurative				1 (10%)
Inflammation, Chronic	1 (10%)			1 (10%)
Inflammation, Chronic Active	1 (10%)			
Prostate	(10)	(0)	(0)	(10)
Inflammation, Suppurative				1 (10%)
Inflammation, Chronic	1 (10%)			
Seminal Vesicle	(10)	(0)	(0)	(10)
Testis	(10)	(0)	(0)	(10)

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

Experiment Number: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

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	0.3 mg/mL male	1 mg/mL male	3 mg/mL male
Germinal Epithelium, Degeneration				2 (20%)
<hr/>				
HEMATOPOIETIC SYSTEM				
Bone Marrow	(10)	(0)	(0)	(10)
Gut Associated Lymphoid Tissue	(0)	(0)	(1)	(0)
Hyperplasia			1 (100%)	
Lymph Node, Mandibular	(10)	(0)	(0)	(10)
Necrosis, Lymphoid				1 (10%)
Lymph Node, Mesenteric	(10)	(0)	(0)	(10)
Spleen	(10)	(0)	(0)	(10)
Pigment	1 (10%)			
Thymus	(10)	(0)	(0)	(10)
<hr/>				
INTEGUMENTARY SYSTEM				
Mammary Gland	(10)	(0)	(0)	(8)
Hyperplasia				1 (13%)
Skin	(10)	(0)	(0)	(10)
<hr/>				
MUSCULOSKELETAL SYSTEM				
Bone	(10)	(0)	(0)	(10)
<hr/>				
NERVOUS SYSTEM				
Brain	(10)	(0)	(0)	(10)
<hr/>				
RESPIRATORY SYSTEM				
Lung	(10)	(0)	(0)	(10)
Infiltration Cellular, Histiocyte				1 (10%)
Metaplasia, Osseous				1 (10%)

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

Experiment Number: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

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	0.3 mg/mL male	1 mg/mL male	3 mg/mL male
Nose	(10)	(0)	(0)	(10)
Glands, Respiratory Epithelium, Dilation				1 (10%)
Olfactory Epithelium, Accumulation, Hyaline Droplet	6 (60%)			4 (40%)
Trachea	(10)	(0)	(0)	(10)
<hr/>				
SPECIAL SENSES SYSTEM				
Eye	(10)	(0)	(0)	(10)
Harderian Gland	(10)	(0)	(0)	(10)
Infiltration Cellular, Mononuclear Cell	2 (20%)			1 (10%)
Inflammation, Chronic	1 (10%)			
<hr/>				
URINARY SYSTEM				
Kidney	(10)	(0)	(0)	(10)
Infarct				1 (10%)
Inflammation, Suppurative				1 (10%)
Nephropathy, Chronic Progressive	10 (100%)			10 (100%)
Papilla, Mineral	1 (10%)			
Urethra	(0)	(0)	(0)	(1)
Inflammation, Suppurative				1 (100%)
Urinary Bladder	(10)	(0)	(0)	(10)
Inflammation, Suppurative				1 (10%)

*** END OF MALE ***

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

Experiment Number: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

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

0.3 mg/mL female

1 mg/mL female

3 mg/mL female

Disposition Summary

Animals Initially In Study	10	10	10	10
Early Deaths				
Survivors				
Terminal Sacrifice	10	10	10	10
Animals Examined Microscopically	10	9	1	10

ALIMENTARY SYSTEM

Esophagus	(10)	(0)	(0)	(10)
Infiltration Cellular, Mononuclear Cell	1 (10%)			
Intestine Large, Cecum	(10)	(0)	(0)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(10)
Liver	(10)	(0)	(0)	(10)
Extramedullary Hematopoiesis	3 (30%)			2 (20%)
Infiltration Cellular, Mixed Cell	1 (10%)			
Inflammation, Chronic				2 (20%)
Pancreas	(10)	(0)	(0)	(10)
Salivary Glands	(10)	(0)	(0)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(10)
Stomach, Glandular	(10)	(0)	(0)	(10)
Mineral	1 (10%)			

CARDIOVASCULAR SYSTEM

Blood Vessel	(10)	(0)	(0)	(10)
Heart	(10)	(0)	(0)	(10)

ENDOCRINE SYSTEM

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

Experiment Number: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

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	0.3 mg/mL female	1 mg/mL female	3 mg/mL female
Adrenal Cortex	(10)	(0)	(0)	(10)
Hypertrophy, Focal	2 (20%)			
Adrenal Medulla	(10)	(0)	(0)	(10)
Islets, Pancreatic	(10)	(0)	(0)	(10)
Parathyroid Gland	(10)	(0)	(0)	(8)
Pituitary Gland	(10)	(0)	(0)	(10)
Thyroid Gland	(10)	(0)	(0)	(10)

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Clitoral Gland	(10)	(0)	(0)	(10)
Infiltration Cellular, Mononuclear Cell	2 (20%)			3 (30%)
Ovary	(10)	(0)	(0)	(10)
Duct Remnant	1 (10%)			
Uterus	(10)	(0)	(1)	(10)
Dilation			1 (100%)	1 (10%)
Inflammation, Acute	1 (10%)			

HEMATOPOIETIC SYSTEM

Bone Marrow	(10)	(0)	(0)	(10)
Lymph Node, Mandibular	(10)	(0)	(0)	(10)
Lymph Node, Mesenteric	(10)	(0)	(0)	(10)
Spleen	(10)	(1)	(0)	(10)
Atrophy		1 (100%)		
Fibrosis		1 (100%)		
Pigment		1 (100%)		
Thymus	(10)	(0)	(0)	(10)

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

Experiment Number: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

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	0.3 mg/mL female	1 mg/mL female	3 mg/mL female
INTEGUMENTARY SYSTEM				
Mammary Gland	(10)	(0)	(0)	(10)
Skin	(10)	(0)	(0)	(10)
<hr/>				
MUSCULOSKELETAL SYSTEM				
Bone	(10)	(0)	(0)	(10)
<hr/>				
NERVOUS SYSTEM				
Brain	(10)	(0)	(0)	(10)
<hr/>				
RESPIRATORY SYSTEM				
Lung	(10)	(0)	(0)	(10)
Infiltration Cellular, Histiocyte				1 (10%)
Inflammation, Chronic Active	3 (30%)			
Nose	(10)	(9)	(0)	(10)
Epithelium, Inflammation, Chronic Active	5 (50%)	9 (100%)		
Glands, Respiratory Epithelium, Dilation				1 (10%)
Olfactory Epithelium, Accumulation, Hyaline Droplet	4 (40%)			8 (80%)
Trachea	(10)	(0)	(0)	(10)
<hr/>				
SPECIAL SENSES SYSTEM				
Eye	(10)	(0)	(0)	(10)
Harderian Gland	(10)	(0)	(0)	(10)
Infiltration Cellular, Mononuclear Cell				1 (10%)

URINARY SYSTEM

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

Experiment Number: 50052 - 01

Test Type: 14-WEEK

Route: DOSED WATER

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

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	0.3 mg/mL female	1 mg/mL female	3 mg/mL female
Kidney	(10)	(0)	(0)	(10)
Nephropathy, Chronic Progressive	4 (40%)			6 (60%)
Urinary Bladder	(10)	(0)	(0)	(10)

*** END OF REPORT ***

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