Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

NTP Study Number: C05049

Lock Date: 12/04/2009

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include 001 Control Male

Include 007 30.0 mg/ml Emim

Include 019 3.0 mg/ml Emim

Include 022 100.0 mg/ml Emim

Study Gender: Both

TDMSE Version: 3.0.2.3_002

PWG Approval Date: NONE

Include 005 3.0 mg/ml Emim

Include 008 100.0 mg/ml Emim

Include 020 10.0 mg/ml Emim

Include 006 10.0 mg/ml Emim

Include 015 Control Female

Include 021 30.0 mg/ml Emim

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

					ı	1					
DAY ON TEST HARLAN SPRAGUE DAWLEY RATS	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5							
MALE Control Male	0	0	0	0	0	0	0	0	0	0	_
ANIMAL ID	0 0 0 1	0 0 0 0 2	0 0 0 3	0 0 0 4	0 0 0 5	0 0 0 6	0 0 0 0 7	0 0 0 8	0 0 0 9	0 0 0 1 0	* TOTALS
ALIMENTARY SYSTEM											
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10
CARDIOVASCULAR SYSTEM											
Heart Cardiomyopathy	+ 1	+	+ 1	+ 1	+ 1	+	+ 1	+ 1		+ 1	10 8 1.
ENDOCRINE SYSTEM										•	
NONE											
GENERAL BODY SYSTEM											
NONE											
GENITAL SYSTEM											
Testes	+	+	+	+	+	+	+	+	+	+	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

Test Type: 14-DAY Route: DOSED WATER Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity **CAS Number: IONICLIQUIDS** Date Report Requested: 04/24/2020 Time Report Requested: 12:07:24 First Dose M/F: 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	
Control Male ANIMAL ID	0 0 0 0 1	0 0 0 0 2	0 0 0 0 0 3	0 0 0 0 0 4	0 0 0 0 5	0 0 0 0 6	0 0 0 0 7	0 0 0 0 8	0 0 0 0 9	0 0 0 1 0	* T(
HEMATOPOIETIC SYSTEM		-		-	-	-	-				
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
INTEGUMENTARY SYSTEM				•					•		
NONE											
MUSCULOSKELETAL SYSTEM											
NONE											
NERVOUS SYSTEM											
Brain	+	+	+	+	+	+	+	+	+	+	10
RESPIRATORY SYSTEM											
Lung Metaplasia, Osseous	+	+	+	+	+	+	+	+	+	+	10
SPECIAL SENSES SYSTEM											
NONE											
URINARY SYSTEM											

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

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	
10.0 mg/ml Emim ANIMAL ID	0 0 0 3 1	0 0 0 3 2	0 0 0 3 3	0 0 0 3 4	0 0 0 3 5	* TOTALS
ALIMENTARY SYSTEM	1	•				
Liver	+	+	+	+	+	5
CARDIOVASCULAR SYSTEM						
NONE						
ENDOCRINE SYSTEM						
NONE						
GENERAL BODY SYSTEM						
NONE						
GENITAL SYSTEM						
NONE			_			
HEMATOPOIETIC SYSTEM						
Thymus	+	+	+	+	+	5
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

M .. Missing tissue

I .. Insufficient tissue

NONE

A .. Autolysis precludes evaluation BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

Test Type: 14-DAY **Route:** DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	
10.0 mg/ml Emim ANIMAL ID	0 0 0 3 1	0 0 0 3 2	0 0 0 3 3	0 0 0 3 4	0 0 0 3 5	* TOTALS

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

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS	0 0 1 5	0 0 1	0 0 1	0 0 1	0 0 1	
MALE	5	5	5	5	5	
30.0 mg/ml Emim ANIMAL ID	0 0 0 3 6	0 0 0 3 7	0 0 0 3 8	0 0 0 3 9	0 0 0 4 0	* TOTALS
ALIMENTARY SYSTEM						
Liver Depletion Glycogen	+ 1	+ 1	+ 1	+	+	5 5 1.
CARDIOVASCULAR SYSTEM						
NONE						
ENDOCRINE SYSTEM						
NONE						
GENERAL BODY SYSTEM						
NONE						
GENITAL SYSTEM						
Testes	+	+	+	+	+	5
HEMATOPOIETIC SYSTEM						
Spleen	+	+	+	+	+	5
Thymus Necrosis	+	+	+	+	+	5 4 1.

INTEGUMENTARY SYSTEM

NONE

M .. Missing tissue

A .. Autolysis precludes evaluation BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4)

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

Test Type: 14-DAY **Route:** DOSED WATER

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	
30.0 mg/ml Emim ANIMAL ID	0 0 0 3 6	0 0 0 3 7	0 0 0 3 8	0 0 0 3 9	0 0 0 4 0	* TOTALS

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5		
100.0 mg/ml Emim ANIMAL ID	0 0 0 4 1	0 0 0 4 2	0 0 0 4 3	0 0 0 4 4	0 0 0 4 5	 * T	OTALS
ALIMENTARY SYSTEM							
Intestine Small, Duodenum	+	+	+	+	+	5	
Intestine Small, Ileum	+	+	+	+	+	5	
Intestine Small, Jejunum	+	+	+	+	+	5	
Liver Depletion Glycogen Necrosis, Multifocal Hepatocyte, Necrosis	+ 2	+ 2 1 1	+ 2	+ 2	+ 2	5	5 2.0 1 1.0 1 1.0
Stomach, Forestomach	+	+	+	+	+	5	
Stomach, Glandular	+	+	+	+	+	5	
CARDIOVASCULAR SYSTEM							
Heart Cardiomyopathy	+	+	+	+ 1	+	5	1 1.0

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5		
100.0 mg/ml Emim ANIMAL ID	0 0 0 4 1	0 0 0 4 2	0 0 0 4 3	0 0 0 4 4	0 0 0 4 5	* 7	OTALS
GENITAL SYSTEM			-	-	-		
Testes Degeneration	+ 1	+ 1	+ 2	+ 2	+ 2	5	5 1.6
HEMATOPOIETIC SYSTEM							
Spleen Depletion Cellular Infiltration Cellular	+ 1	+ 1	M	+ 1	+ 1	4	3 1.0 1 1.0
Thymus Atrophy Necrosis	М	+ 3 3	M	+ 3 3	M	2	2 3.0 2 3.0
INTEGUMENTARY SYSTEM							
NONE							
MUSCULOSKELETAL SYSTEM							
NONE							
NERVOUS SYSTEM							
Brain	+	+	+	+	+	5	
RESPIRATORY SYSTEM							
Lung	+	+	+	+	+	5	

^{* ..} 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

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

5

Lab: MBA

HARLAN SPRAGUE DA MALE	DAY ON TEST	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	_
100.0 mg/ml Emim	ANIMAL ID	0 0 0 4 1	0 0 0 4 2	0 0 0 4 3	0 0 0 4 4	0 0 0 4 5	* TOTALS
SPECIAL SENSES SYS	TEM	,					
NONE							
URINARY SYSTEM							

*** END OF MALE DATA ***

Kidney

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

A .. Autolysis precludes evaluation

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

	_		ı			1				_	
DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
HARLAN SPRAGUE DAWLEY RATS FEMALE	1 5	1 5	1 5	1 5	1 5	1 5	1 5	1 5	1 5	5	
Control Female ANIMAL ID	0 0 0 7 6	0 0 0 7 7	0 0 0 7 8	0 0 0 7 9	0 0 0 8 0	0 0 0 8 1	0 0 0 8 2	0 0 0 8 3	0 0 0 8 4	0 0 0 8 5	* TOTALS
ALIMENTARY SYSTEM											
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10
CARDIOVASCULAR SYSTEM											
Heart Cardiomyopathy	+ 1	+ 1	+ 1	+ 1	10 10 1.0						
ENDOCRINE SYSTEM											
NONE			•	•	_						
GENERAL BODY SYSTEM											
NONE				-	-	-	-				
GENITAL SYSTEM											
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⁾ Minimal 3) Moderate

²⁾ Mild 4) Marked

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 1 5											
Control Female ANIMAL ID	0 0 0 7 6	0 0 0 7 7	0 0 0 7 8	0 0 0 7 9	0 0 0 8 0	0 0 0 8 1	0 0 0 8 2	0 0 0 8 3	0 0 0 8 4	0 0 0 8 5	* TO	TALS
HEMATOPOIETIC SYSTEM							-					
Spleen	+	+	+	+	+	+	+	+	+	+	10	
Thymus	+	+	+	+	+	+	+	+	+	+	10	
INTEGUMENTARY SYSTEM					•							
NONE												
MUSCULOSKELETAL SYSTEM				-	-							
NONE												
NERVOUS SYSTEM				-			-					
Brain	+	+	+	+	+	+	+	+	+	+	10	
RESPIRATORY SYSTEM												
Lung	+	+	+	+	+	+	+	+	+	+	10	
SPECIAL SENSES SYSTEM												
NONE												
URINARY SYSTEM												
										+	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

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	
3.0 mg/ml Emim ANIMAL ID	0 0 1 0	0 0 1 0 2	0 0 1 0 3	0 0 1 0 4	0 0 1 0 5	* 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

I .. Insufficient tissue

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

M .. Missing tissue

X .. Lesion present

A .. Autolysis precludes evaluation BLANK .. Not examined microscopically

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	
3.0 mg/ml Emim ANIMAL ID	0 0 1 0 1	0 0 1 0 2	0 0 1 0 3	0 0 1 0 4	0 0 1 0 5	* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Lung - - - + Hemorrhage 1 1 1.0

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	
10.0 mg/ml Emim ANIMAL ID	0 0 1 0 6	0 0 1 0 7	0 0 1 0 8	0 0 1 0 9	0 0 1 1 0	* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Thymus + + + + + + 5

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

NONE

M .. Missing tissue

X .. Lesion present

A .. Autolysis precludes evaluation

I .. Insufficient tissue

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) I

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

^{+ ..} Tissue examined microscopically

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	
10.0 mg/ml Emim ANIMAL ID	0 0 1 0 6	0 0 1 0 7	0 0 1 0 8	0 0 1 0 9	0 0 1 1 0	* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 1 5	0 0 1 5	0 0 1 5	1	0 0 1 5	
30.0 mg/ml Emim ANIMAL ID	0 0 1 1 1	0 0 1 1 2	0 0 1 1 3	0 1 1	0 0 1 1 5	* TOTALS
ALIMENTARY SYSTEM	·	1	'	'	•	
Liver	+	+	+	+	+	5
CARDIOVASCULAR SYSTEM						
NONE						
ENDOCRINE SYSTEM						
NONE						
GENERAL BODY SYSTEM						
NONE						
GENITAL SYSTEM	•			•		
NONE						
HEMATOPOIETIC SYSTEM						
Spleen	+	+	+	+	+	5
Thymus Necrosis	+	+	+ 2		+	5 1 2.0

INTEGUMENTARY SYSTEM

NONE

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4)

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	
30.0 mg/ml Emim ANIMAL ID	0 0 1 1 1	0 0 1 1 2	0 0 1 1 3	0 0 1 1 4	0 0 1 1 5	* TOTALS

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5		
100.0 mg/ml Emim ANIMAL ID	0 0 1 1 6	0 0 1 1 7	0 0 1 1 8	0 0 1 1 9	0 0 1 2 0	* 7	OTALS
ALIMENTARY SYSTEM							
Intestine Small, Duodenum	+	+	+	+	+	5	
Intestine Small, Ileum	+	+	+	+	+	5	
Intestine Small, Jejunum	+	+	+	+	+	5	
Liver Congestion Depletion Glycogen	+	+	+	+ 2 1	+	5	1 2.0 5 1.0
Stomach, Forestomach	+	+	+	+	+	5	
Stomach, Glandular	+	+	+	+	+	5	
CARDIOVASCULAR SYSTEM							
Heart Cardiomyopathy	+	+	+ 1	+ 1	+	5	2 1.0
ENDOCRINE SYSTEM							
NONE							

X .. Lesion present

NONE

I .. Insufficient tissue

GENITAL SYSTEM

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

	1	1			1		
DAY ON TEST	0	0	0	0	0		
HARLAN SPRAGUE DAWLEY RATS	1 5	1 5	1 5	1 5	1 5		
FEMALE	5	3	3	3	5		
100.0 mg/ml Emim	0	0	0	0	0		
ANIMAL ID	0	1	1	1	1		
	1 6	1 7	1 8	9	2 0	* TOTA	LS
Ovary	+	+	+	+	+	5	
Uterus	+					1	
HEMATOPOIETIC SYSTEM							
Spleen	+	+	+	+	+	5	
Depletion Cellular	2	1	1	1	1	5	1.2
Thymus	+	+	+	+	+	5	
Atrophy Necrosis	3	2	2	2	2		2.2 2.0
						.	2.0
INTEGUMENTARY SYSTEM							
NONE							
MUSCULOSKELETAL SYSTEM							
NONE							
NERVOUS SYSTEM							
Brain	+	+	+	+	+	5	
RESPIRATORY SYSTEM							
Lung	+	+	+	+	+	5	
	-		-	-			

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

+ .. Tissue examined microscopically

SPECIAL SENSES SYSTEM

IVI .. IVIISSITI V

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)

Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Ionic liquid Toxicity

CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020 **Time Report Requested:** 12:07:24 **First Dose M/F:** 03/09/09 / 03/10/09

Lab: MBA

HARLAN SPRAGUE DAWLEY FEMALE	ON TEST	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	0 0 1 5	
100.0 mg/ml Emim	IIMAL ID	0 0 1 1 6	0 0 1 1 7	0 0 1 1 8	0 0 1 1 9	0 0 1 2 0	* TOTALS
NONE						-	
URINARY SYSTEM	_						
Kidney		+	+	+	+	+	5

*** 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

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically