

Experiment Number: 05049 - 03
Test Type: 14-DAY
Route: DOSED WATER
Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
Ionic liquid Toxicity
CAS Number: IONICLIQUIDS

Date Report Requested: 04/24/2020
Time Report Requested: 11:25:09
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 002 0.3mg/ml Bmim	Include 003 1.0 mg/ml Bmim
	Include 004 3.0 mg/ml Bmim	Include 015 Control Female	Include 016 0.3 mg/ml Bmim
	Include 017 1.0 mg/ml Bmim	Include 018 3.0 mg/ml Bmim	

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 IONIC LIQUID TOXICITY

FEMALE RATS

Organ

Heart

Lung

Morphology

Cardiomyopathy

Hemorrhage

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 3 WEEKS**

DOSE	Males			
	Control Male	0.3mg/ml Bmim	1.0 mg/ml Bmim	3.0 mg/ml Bmim
<hr/>				
Heart Cardiomyopathy				
<hr/>				
LESION RATES				
OVERALL (a)	8/10 (80%)	0/0 (0%)	0/0 (0%)	3/5 (60%)
POLY-3 RATE (b)	8/10.00	0/0.00	0/0.00	3/5.00
POLY-3 PERCENT (g)	80%	0%	0%	60%
TERMINAL (d)	8/10 (80%)	0/0 (0%)	0/0 (0%)	3/5 (60%)
FIRST INCIDENCE	15 (T)	---	---	15 (T)
<hr/>				
STATISTICAL TESTS				
POLY 3	(e)	(e)	(e)	P=0.422N
POLY 1.5	(e)	(e)	(e)	P=0.422N
POLY 6	(e)	(e)	(e)	P=0.422N
COCH-ARM / FISHERS	P=0.340N	(e)	(e)	P=0.407N
MAX-ISO-POLY-3	(e)	(e)	(e)	P=0.247N

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TERMINAL SACRIFICE AT 3 WEEKS**

DOSE	Males			
	Control Male	0.3mg/ml Bmim	1.0 mg/ml Bmim	3.0 mg/ml Bmim
Kidney Hyperplasia				
LESION RATES				
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/5.00
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)
FIRST INCIDENCE	---	---	---	---
STATISTICAL TESTS				
POLY 3	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)

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DOSE	Males			
	Control Male	0.3mg/ml Bmim	1.0 mg/ml Bmim	3.0 mg/ml Bmim
<hr/>				
Lung Hemorrhage				
<hr/>				
LESION RATES				
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/5.00
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)
FIRST INCIDENCE	---	---	---	---
<hr/>				
STATISTICAL TESTS				
POLY 3	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)

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TERMINAL SACRIFICE AT 3 WEEKS**

DOSE	Males			
	Control Male	0.3mg/ml Bmim	1.0 mg/ml Bmim	3.0 mg/ml Bmim
<hr/>				
Lung				
Metaplasia Osseous				
<hr/>				
LESION RATES				
OVERALL (a)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/5 (0%)
POLY-3 RATE (b)	1/10.00	0/0.00	0/0.00	0/5.00
POLY-3 PERCENT (g)	10%	0%	0%	0%
TERMINAL (d)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/5 (0%)
FIRST INCIDENCE	15 (T)	---	---	---
<hr/>				
STATISTICAL TESTS				
POLY 3	(e)	(e)	(e)	P=0.636N
POLY 1.5	(e)	(e)	(e)	P=0.636N
POLY 6	(e)	(e)	(e)	P=0.636N
COCH-ARM / FISHERS	P=0.500N	(e)	(e)	P=0.667N
MAX-ISO-POLY-3	(e)	(e)	(e)	P=0.274N

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 3 WEEKS**

DOSE	Females			
	Control Female	0.3 mg/ml Bmim	1.0 mg/ml Bmim	3.0 mg/ml Bmim
<hr/>				
Heart Cardiomyopathy				
<hr/>				
LESION RATES				
OVERALL (a)	10/10 (100%)	0/0 (0%)	0/0 (0%)	2/5 (40%)
POLY-3 RATE (b)	10/10.00	0/0.00	0/0.00	2/5.00
POLY-3 PERCENT (g)	100%	0%	0%	40%
TERMINAL (d)	10/10 (100%)	0/0 (0%)	0/0 (0%)	2/5 (40%)
FIRST INCIDENCE	15 (T)	---	---	15 (T)
<hr/>				
STATISTICAL TESTS				
POLY 3	(e)	(e)	(e)	P=0.003N**
POLY 1.5	(e)	(e)	(e)	P=0.003N**
POLY 6	(e)	(e)	(e)	P=0.003N**
COCH-ARM / FISHERS	P=0.011N*	(e)	(e)	P=0.022N*
MAX-ISO-POLY-3	(e)	(e)	(e)	P<0.001N**

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TERMINAL SACRIFICE AT 3 WEEKS**

DOSE	Females			
	Control Female	0.3 mg/ml Bmim	1.0 mg/ml Bmim	3.0 mg/ml Bmim
Kidney Hyperplasia				
LESION RATES				
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	1/5 (20%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	1/5.00
POLY-3 PERCENT (g)	0%	0%	0%	20%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	1/5 (20%)
FIRST INCIDENCE	---	---	---	15 (T)
STATISTICAL TESTS				
POLY 3	(e)	(e)	(e)	P=0.356
POLY 1.5	(e)	(e)	(e)	P=0.356
POLY 6	(e)	(e)	(e)	P=0.356
COCH-ARM / FISHERS	P=0.232	(e)	(e)	P=0.333
MAX-ISO-POLY-3	(e)	(e)	(e)	P=0.100

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DOSE	Females			
	Control Female	0.3 mg/ml Bmim	1.0 mg/ml Bmim	3.0 mg/ml Bmim
<hr/>				
Lung Hemorrhage				
<hr/>				
LESION RATES				
OVERALL (a)	0/10 (0%)	1/1 (100%)	0/0 (0%)	0/5 (0%)
POLY-3 RATE (b)	0/10.00	1/1.00	0/0.00	0/5.00
POLY-3 PERCENT (g)	0%	100%	0%	0%
TERMINAL (d)	0/10 (0%)	1/1 (100%)	0/0 (0%)	0/5 (0%)
FIRST INCIDENCE	---	15 (T)	---	---
<hr/>				
STATISTICAL TESTS				
POLY 3	(e)	P=0.091	(e)	(e)
POLY 1.5	(e)	P=0.091	(e)	(e)
POLY 6	(e)	P=0.091	(e)	(e)
COCH-ARM / FISHERS	P=0.602N	P=0.091	(e)	(e)
MAX-ISO-POLY-3	(e)	P<0.001**	(e)	(e)

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DOSE	Females			
	Control Female	0.3 mg/ml Bmim	1.0 mg/ml Bmim	3.0 mg/ml Bmim
Lung				
Metaplasia Osseous				
LESION RATES				
OVERALL (a)	0/10 (0%)	0/1 (0%)	0/0 (0%)	0/5 (0%)
POLY-3 RATE (b)	0/10.00	0/1.00	0/0.00	0/5.00
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/1 (0%)	0/0 (0%)	0/5 (0%)
FIRST INCIDENCE	---	---	---	---
STATISTICAL TESTS				
POLY 3	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)

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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 ***