

**Experiment Number:** 05049 - 04  
**Test Type:** 14-DAY  
**Route:** DOSED WATER  
**Species/Strain:** MICE/B6C3F1

**P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS**

Ionic liquid Toxicity  
**CAS Number:** IONICLIQUIDS

**Date Report Requested:** 04/28/2020  
**Time Report Requested:** 12:14:12  
**First Dose M/F:** 03/12/09 / 03/13/09  
**Lab:** MBA

**NTP Study Number:** C05049  
**Lock Date:** 12/03/2009  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include 001 Control Male      Include 005 3.0 mg/ml Emim      Include 006 10.0 mg/ml Emim  
Include 007 30.0 mg/ml Emim      Include 008 100.0 mg/ml Emim      Include 015 Control Female  
Include 019 3.0 mg/ml Emim      Include 020 10.0 mg/ml Emim      Include 021 30.0 mg/ml Emim  
Include 022 100.0 mg/ml Emim  
**Study Gender:** Both  
**TDMSE Version:** 3.0.2.3\_002  
**PWG Approval Date:** NONE

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**SUMMARY OF STATISTICALLY SIGNIFICANT ( $P \leq .05$ ) RESULTS IN THE ANALYSIS OF IONIC LIQUID TOXICITY**

**MALE MICE**

**Organ**

Liver  
Spleen  
Testes  
Thymus

**FEMALE MICE**

**Organ**

Liver  
Spleen  
Thymus

**Morphology**

Depletion Glycogen  
Depletion Cellular  
Degeneration  
Atrophy

**Morphology**

Depletion Glycogen  
Depletion Cellular  
Atrophy

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN MICE(B6C3F1)**  
**TERMINAL SACRIFICE AT 3 WEEKS**

DOSE	Males				
	Control Male	3.0 mg/ml Emim	10.0 mg/ml Emim	30.0 mg/ml Emim	100.0 mg/ml Emim
<b>Liver</b>					
<b>Depletion Glycogen</b>					
<b>LESION RATES</b>					
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)	5/5 (100%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/5.00	5/5.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	100%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)	5/5 (100%)
FIRST INCIDENCE	---	---	---	---	15 (T)
<b>STATISTICAL TESTS</b>					
POLY 3	(e)	(e)	(e)	(e)	P<0.001**
POLY 1.5	(e)	(e)	(e)	(e)	P<0.001**
POLY 6	(e)	(e)	(e)	(e)	P<0.001**
COCH-ARM / FISHERS	P<0.001**	(e)	(e)	(e)	P<0.001**
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	P<0.001**

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 3 WEEKS**

DOSE	Males				
	Control Male	3.0 mg/ml Emim	10.0 mg/ml Emim	30.0 mg/ml Emim	100.0 mg/ml Emim
<b>Spleen</b>					
Depletion Cellular					
<b>LESION RATES</b>					
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)	5/5 (100%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/5.00	5/5.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	100%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)	5/5 (100%)
FIRST INCIDENCE	---	---	---	---	15 (T)
<b>STATISTICAL TESTS</b>					
POLY 3	(e)	(e)	(e)	(e)	P<0.001**
POLY 1.5	(e)	(e)	(e)	(e)	P<0.001**
POLY 6	(e)	(e)	(e)	(e)	P<0.001**
COCH-ARM / FISHERS	P<0.001**	(e)	(e)	(e)	P<0.001**
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	P<0.001**

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN MICE(B6C3F1)**  
**TERMINAL SACRIFICE AT 3 WEEKS**

DOSE	Males				
	Control Male	3.0 mg/ml Emim	10.0 mg/ml Emim	30.0 mg/ml Emim	100.0 mg/ml Emim
<b>Testes</b>					
<b>Degeneration</b>					
<b>LESION RATES</b>					
OVERALL (a)	0/10 (0%)	0/5 (0%)	0/0 (0%)	0/5 (0%)	5/5 (100%)
POLY-3 RATE (b)	0/10.00	0/5.00	0/0.00	0/5.00	5/5.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	100%
TERMINAL (d)	0/10 (0%)	0/5 (0%)	0/0 (0%)	0/5 (0%)	5/5 (100%)
FIRST INCIDENCE	---	---	---	---	15 (T)
<b>STATISTICAL TESTS</b>					
POLY 3	(e)	(e)	(e)	(e)	P<0.001**
POLY 1.5	(e)	(e)	(e)	(e)	P<0.001**
POLY 6	(e)	(e)	(e)	(e)	P<0.001**
COCH-ARM / FISHERS	P<0.001**	(e)	(e)	(e)	P<0.001**
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	P<0.001**

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN MICE(B6C3F1)**  
**TERMINAL SACRIFICE AT 3 WEEKS**

DOSE	Males				
	Control Male	3.0 mg/ml Emim	10.0 mg/ml Emim	30.0 mg/ml Emim	100.0 mg/ml Emim
Thymus Atrophy					
<b>LESION RATES</b>					
OVERALL (a)	0/9 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)	3/3 (100%)
POLY-3 RATE (b)	0/9.00	0/0.00	0/0.00	0/5.00	3/3.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	100%
TERMINAL (d)	0/9 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)	3/3 (100%)
FIRST INCIDENCE	---	---	---	---	15 (T)
<b>STATISTICAL TESTS</b>					
POLY 3	(e)	(e)	(e)	(e)	P=0.005**
POLY 1.5	(e)	(e)	(e)	(e)	P=0.005**
POLY 6	(e)	(e)	(e)	(e)	P=0.005**
COCH-ARM / FISHERS	P<0.001**	(e)	(e)	(e)	P=0.005**
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 3 WEEKS**

DOSE	Females				
	Control Female	3.0 mg/ml Emim	10.0 mg/ml Emim	30.0 mg/ml Emim	100.0 mg/ml Emim
<b>Liver</b>					
<b>Depletion Glycogen</b>					
<b>LESION RATES</b>					
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)	5/5 (100%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/5.00	5/5.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	100%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)	5/5 (100%)
FIRST INCIDENCE	---	---	---	---	15 (T)
<b>STATISTICAL TESTS</b>					
POLY 3	(e)	(e)	(e)	(e)	P<0.001**
POLY 1.5	(e)	(e)	(e)	(e)	P<0.001**
POLY 6	(e)	(e)	(e)	(e)	P<0.001**
COCH-ARM / FISHERS	P<0.001**	(e)	(e)	(e)	P<0.001**
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	P<0.001**

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 3 WEEKS**

DOSE	Females				
	Control Female	3.0 mg/ml Emim	10.0 mg/ml Emim	30.0 mg/ml Emim	100.0 mg/ml Emim
<b>Spleen</b>					
Depletion Cellular					
<b>LESION RATES</b>					
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)	5/5 (100%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/5.00	5/5.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	100%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)	5/5 (100%)
FIRST INCIDENCE	---	---	---	---	15 (T)
<b>STATISTICAL TESTS</b>					
POLY 3	(e)	(e)	(e)	(e)	P<0.001**
POLY 1.5	(e)	(e)	(e)	(e)	P<0.001**
POLY 6	(e)	(e)	(e)	(e)	P<0.001**
COCH-ARM / FISHERS	P<0.001**	(e)	(e)	(e)	P<0.001**
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	P<0.001**

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**TERMINAL SACRIFICE AT 3 WEEKS**

DOSE	Females				
	Control Female	3.0 mg/ml Emim	10.0 mg/ml Emim	30.0 mg/ml Emim	100.0 mg/ml Emim
<b>Thymus Atrophy</b>					
<b>LESION RATES</b>					
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)	5/5 (100%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/5.00	5/5.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	100%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/5 (0%)	5/5 (100%)
FIRST INCIDENCE	---	---	---	---	15 (T)
<b>STATISTICAL TESTS</b>					
POLY 3	(e)	(e)	(e)	(e)	P<0.001**
POLY 1.5	(e)	(e)	(e)	(e)	P<0.001**
POLY 6	(e)	(e)	(e)	(e)	P<0.001**
COCH-ARM / FISHERS	P<0.001**	(e)	(e)	(e)	P<0.001**
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	P<0.001**

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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 \*\*\*