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 012 1.0 mg/ml NBuPy	Include 013 3.0 mg/ml NBuPy
	Include 014 6.0 mg/ml NBuPy	Include 015 Control Female	Include 026 1.0 mg/ml NBuPy
	Include 027 3.0 mg/ml NBuPy	Include 028 6.0 mg/ml NBuPy	
Study Gender:	Both		
TDMSE Version:	3.0.2.3_002		
PWG Approval Date:	NONE		

SUMMARY OF STATISTICALLY SIGNIFICANT (P<=.05) RESULTS IN THE ANALYSIS OF IONIC LIQUID TOXICITY

MALE RATS

Organ	Morphology
Liver	Depletion Glycogen

FEMALE RATS

Organ	Morphology
Thymus	Necrosis

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

Males

DOSE	Control Male	1.0 mg/ml NBuPy	3.0 mg/ml NBuPy	6.0 mg/ml NBuPy
Heart **Cardiomyopathy**				
LESION RATES				
OVERALL (a)	8/10 (80%)	0/0 (0%)	0/0 (0%)	4/5 (80%)
POLY-3 RATE (b)	8/10.00	0/0.00	0/0.00	4/5.00
POLY-3 PERCENT (g)	80%	0%	0%	80%
TERMINAL (d)	8/10 (80%)	0/0 (0%)	0/0 (0%)	4/5 (80%)
FIRST INCIDENCE	15 (T)	---	---	15 (T)
STATISTICAL TESTS				
POLY 3	(e)	(e)	(e)	P=0.738
POLY 1.5	(e)	(e)	(e)	P=0.738
POLY 6	(e)	(e)	(e)	P=0.738
COCH-ARM / FISHERS	P=0.634	(e)	(e)	P=0.736N
MAX-ISO-POLY-3	(e)	(e)	(e)	P=1.000

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

Males

DOSE	Control Male	1.0 mg/ml NBuPy	3.0 mg/ml NBuPy	6.0 mg/ml NBuPy
Liver **Depletion Glycogen**				
LESION RATES				
OVERALL (a)	0/10 (0%)	0/5 (0%)	1/5 (20%)	4/5 (80%)
POLY-3 RATE (b)	0/10.00	0/5.00	1/5.00	4/5.00
POLY-3 PERCENT (g)	0%	0%	20%	80%
TERMINAL (d)	0/10 (0%)	0/5 (0%)	1/5 (20%)	4/5 (80%)
FIRST INCIDENCE	---	---	15 (T)	15 (T)
STATISTICAL TESTS				
POLY 3	P<0.001**	(e)	P=0.356	P<0.001**
POLY 1.5	P<0.001**	(e)	P=0.356	P<0.001**
POLY 6	P<0.001**	(e)	P=0.356	P<0.001**
COCH-ARM / FISHERS	P<0.001**	(e)	P=0.333	P=0.004**
MAX-ISO-POLY-3	P<0.001**	(e)	P=0.101	P<0.001**

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

Males

DOSE	Control Male	1.0 mg/ml NBuPy	3.0 mg/ml NBuPy	6.0 mg/ml NBuPy
Lung				
Metaplasia Osseous				
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)	---	---	---
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=0.427N	(e)	(e)	P=0.667N
MAX-ISO-POLY-3	(e)	(e)	(e)	P=0.274N

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

Males

DOSE	Control Male	1.0 mg/ml NBuPy	3.0 mg/ml NBuPy	6.0 mg/ml NBuPy
Spleen				
Depletion Cellular				
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)

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

Males

DOSE	Control Male	1.0 mg/ml NBuPy	3.0 mg/ml NBuPy	6.0 mg/ml NBuPy
Thymus **Atrophy**				
LESION RATES				
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/5 (0%)	0/5 (0%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/5.00	0/5.00
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/5 (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)

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

Males

DOSE	Control Male	1.0 mg/ml NBuPy	3.0 mg/ml NBuPy	6.0 mg/ml NBuPy
Thymus				
Necrosis				
LESION RATES				
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/5 (0%)	1/5 (20%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/5.00	1/5.00
POLY-3 PERCENT (g)	0%	0%	0%	20%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/5 (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=0.177	(e)	(e)	P=0.333
MAX-ISO-POLY-3	(e)	(e)	(e)	P=0.101

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

Females

DOSE	Control Female	1.0 mg/ml NBuPy	3.0 mg/ml NBuPy	6.0 mg/ml NBuPy
Heart **Cardiomyopathy**				
LESION RATES				
OVERALL (a)	10/10 (100%)	0/0 (0%)	0/0 (0%)	5/5 (100%)
POLY-3 RATE (b)	10/10.00	0/0.00	0/0.00	5/5.00
POLY-3 PERCENT (g)	100%	0%	0%	100%
TERMINAL (d)	10/10 (100%)	0/0 (0%)	0/0 (0%)	5/5 (100%)
FIRST INCIDENCE	15 (T)	---	---	15 (T)
STATISTICAL TESTS				
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)

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

	Females			
DOSE	**Control Female**	**1.0 mg/ml NBuPy**	**3.0 mg/ml NBuPy**	**6.0 mg/ml NBuPy**
Liver **Depletion Glycogen**				
LESION RATES				
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/5 (0%)	1/5 (20%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/5.00	1/5.00
POLY-3 PERCENT (g)	0%	0%	0%	20%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/5 (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=0.177	(e)	(e)	P=0.333
MAX-ISO-POLY-3	(e)	(e)	(e)	P=0.100

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

	Females			
DOSE	**Control Female**	**1.0 mg/ml NBuPy**	**3.0 mg/ml NBuPy**	**6.0 mg/ml NBuPy**
Lung				
Metaplasia Osseous				
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)

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

	Females			
DOSE	**Control Female**	**1.0 mg/ml NBuPy**	**3.0 mg/ml NBuPy**	**6.0 mg/ml NBuPy**
Spleen				
Depletion Cellular				
LESION RATES				
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/5 (0%)	1/5 (20%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/5.00	1/5.00
POLY-3 PERCENT (g)	0%	0%	0%	20%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/5 (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=0.177	(e)	(e)	P=0.333
MAX-ISO-POLY-3	(e)	(e)	(e)	P=0.100

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

Females

DOSE	Control Female	1.0 mg/ml NBuPy	3.0 mg/ml NBuPy	6.0 mg/ml NBuPy
Thymus **Atrophy**				
LESION RATES				
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/5 (0%)	1/5 (20%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/5.00	1/5.00
POLY-3 PERCENT (g)	0%	0%	0%	20%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/5 (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=0.177	(e)	(e)	P=0.333
MAX-ISO-POLY-3	(e)	(e)	(e)	P=0.100

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

Females

DOSE	Control Female	1.0 mg/ml NBuPy	3.0 mg/ml NBuPy	6.0 mg/ml NBuPy
Thymus				
Necrosis				
LESION RATES				
OVERALL (a)	0/10 (0%)	0/0 (0%)	0/5 (0%)	3/5 (60%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/5.00	3/5.00
POLY-3 PERCENT (g)	0%	0%	0%	60%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/5 (0%)	3/5 (60%)
FIRST INCIDENCE	---	---	---	15 (T)
STATISTICAL TESTS				
POLY 3	(e)	(e)	(e)	P=0.003**
POLY 1.5	(e)	(e)	(e)	P=0.003**
POLY 6	(e)	(e)	(e)	P=0.003**
COCH-ARM / FISHERS	P=0.007**	(e)	(e)	P=0.022*
MAX-ISO-POLY-3	(e)	(e)	(e)	P<0.001**

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<=0.05).
**	To the right of any statistical result, indicates significance at (P<=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 ***