

**Experiment Number:** 02200-03  
**Test Type:** 90-DAY  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** Rat/F 344/N

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

**Test Compound:** Styrene  
**CAS Number:** 100-42-5

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 02:11:34  
**First Dose M/F:** NA / NA  
**Lab:** BNW

<b>C Number:</b>	C02200B
<b>Lock Date:</b>	05/20/1992
<b>Cage Range:</b>	All
<b>Date Range:</b>	All
<b>Reasons For Removal:</b>	All
<b>Removal Date Range:</b>	All
<b>Treatment Groups:</b>	All
<b>Study Gender:</b>	Both
<b>PWG Approval Date</b>	NONE

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**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**Species/Strain:** Rat/F 344/N

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

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

**MALE RAT**

**Organ**

Liver

Nose: Goblet Cell, Nasopharyn Dct

Nose: Olfactory Epi

Nose: Respirat Epith

Preputial Gland

Spleen: Capsule

Thymus

**FEMALE RAT**

**Organ**

Liver

Nose: Goblet Cell, Nasopharyn Dct

Nose: Olfactory Epi

Nose: Respirat Epith

Stomach, Glandular

**Morphology**

Hepatodiaphragmatic Nodule

Hypertrophy

Degeneration

Hyperplasia

Inflammation Chronic

Hyperplasia

Hemorrhage

**Morphology**

Hepatodiaphragmatic Nodule

Hypertrophy

Degeneration

Necrosis

Hyperplasia

Mineralization

Experiment Number: 02200-03

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First Dose M/F: NA / NA

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STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Epididymis</b>						
<b>Granuloma Sperm</b>						
<b>LESION RATES</b>						
OVERALL(a)	2/10 (20%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	2/10.00	0/0.00	0/0.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	20%	0%	0%	0%	0%	0%
TERMINAL (d)	2/10 (20%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	94(T)	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.227N
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.227N
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.227N
COCH-ARM / FISHERS	P=0.107N	(e)	(e)	(e)	(e)	P=0.237N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.067N
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

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

Test Compound: Styrene

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First Dose M/F: NA / NA

Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS**

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
Eye						
Cataract						
<b>LESION RATES</b>						
OVERALL(a)	2/2 (100%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)
POLY-3 RATE (b)	2/2.00	0/0.00	0/0.00	0/0.00	0/0.00	0/0.00
POLY-3 PERCENT (g)	100%	0%	0%	0%	0%	0%
TERMINAL (d)	2/2 (100%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	94(T)	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

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Test Compound: Styrene

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First Dose M/F: NA / NA

Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS**

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Eye: Retina</b>						
<b>Atrophy</b>						
<b>LESION RATES</b>						
OVERALL(a)	2/2 (100%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)
POLY-3 RATE (b)	2/2.00	0/0.00	0/0.00	0/0.00	0/0.00	0/0.00
POLY-3 PERCENT (g)	100%	0%	0%	0%	0%	0%
TERMINAL (d)	2/2 (100%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	94(T)	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

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First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Heart</b>						
<b>Cardiomyopathy</b>						
<b>LESION RATES</b>						
OVERALL(a)	9/10 (90%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	8/10 (80%)
POLY-3 RATE (b)	9/10.00	0/0.00	0/0.00	0/0.00	0/0.00	8/10.00
POLY-3 PERCENT (g)	90%	0%	0%	0%	0%	80%
TERMINAL (d)	9/10 (90%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	8/10 (80%)
FIRST INCIDENCE	94(T)	---	---	---	---	94(T)
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500N
COCH-ARM / FISHERS	P=0.338N	(e)	(e)	(e)	(e)	P=0.500N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.274N
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

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Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

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Date Report Requested: 10/23/2014

Time Report Requested: 02:11:34

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Kidney</b>						
<b>Nephropathy</b>						
<b>LESION RATES</b>						
OVERALL(a)	10/10 (100%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	10/10 (100%)
POLY-3 RATE (b)	10/10.00	0/0.00	0/0.00	0/0.00	0/0.00	10/10.00
POLY-3 PERCENT (g)	100%	0%	0%	0%	0%	100%
TERMINAL (d)	10/10 (100%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	10/10 (100%)
FIRST INCIDENCE	94(T)	---	---	---	---	94(T)
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

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

Test Compound: Styrene

CAS Number: 100-42-5

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First Dose M/F: NA / NA

Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS**

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Larynx</b>						
<b>Inflammation Chronic</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						



Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

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First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
Liver						
Hematopoietic Cell Proliferation						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/2 (0%)	0/2 (0%)	0/2 (0%)	0/1 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/2.00	0/2.00	0/2.00	0/1.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/2 (0%)	0/2 (0%)	0/2 (0%)	0/1 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)
HISTCONT SAME RTE						
HISTCONT ALL RTEs						
CURR VS HC SAME RTE						
CURR VS HC ALL RTEs						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

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Date Report Requested: 10/23/2014

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First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Liver</b>						
<b>Hepatodiaphragmatic Nodule</b>						
<b>LESION RATES</b>						
OVERALL(a)	3/10 (30%)	1/2 (50%)	2/2 (100%)	2/2 (100%)	1/1 (100%)	0/10 (0%)
POLY-3 RATE (b)	3/10.00	1/2.00	2/2.00	2/2.00	1/1.00	0/10.00
POLY-3 PERCENT (g)	30%	50%	100%	100%	100%	0%
TERMINAL (d)	3/10 (30%)	1/2 (50%)	2/2 (100%)	2/2 (100%)	1/1 (100%)	0/10 (0%)
FIRST INCIDENCE	94(T)	94(T)	94(T)	94(T)	94(T)	---
<b>STATISTICAL TESTS</b>						
POLY 3	P=0.007N**	P=0.600	P=0.130	P=0.130	P=0.384	P=0.095N
POLY 1.5	P=0.007N**	P=0.600	P=0.130	P=0.130	P=0.384	P=0.095N
POLY 6	P=0.007N**	P=0.600	P=0.130	P=0.130	P=0.384	P=0.095N
COCH-ARM / FISHERS	P=0.034N*	P=0.576	P=0.152	P=0.152	P=0.364	P=0.105N
MAX-ISO-POLY-3	P=0.001N**	P=0.347	P=0.063	P=0.063	P=0.153	P=0.025N*
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

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

Test Compound: Styrene

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First Dose M/F: NA / NA

Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS**

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Lung</b>						
<b>Hemorrhage</b>						
<b>LESION RATES</b>						
OVERALL(a)	10/10 (100%)	10/10 (100%)	10/10 (100%)	10/10 (100%)	10/10 (100%)	10/10 (100%)
POLY-3 RATE (b)	10/10.00	10/10.00	10/10.00	10/10.00	10/10.00	10/10.00
POLY-3 PERCENT (g)	100%	100%	100%	100%	100%	100%
TERMINAL (d)	10/10 (100%)	10/10 (100%)	10/10 (100%)	10/10 (100%)	10/10 (100%)	10/10 (100%)
FIRST INCIDENCE	94(T)	94(T)	94(T)	94(T)	94(T)	94(T)
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

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

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First Dose M/F: NA / NA

Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS**

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Lung</b>						
<b>Metaplasia Osseous</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/10.00	0/10.00	0/10.00	0/10.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)
HISTCONT SAME RTE						
HISTCONT ALL RTEs						
CURR VS HC SAME RTE						
CURR VS HC ALL RTEs						

Experiment Number: 02200-03

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Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

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First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Lymph Node, Mesenteric Inflammation Granulomatous</b>						
<b>LESION RATES</b>						
OVERALL(a)	2/10 (20%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	2/10.00	0/0.00	0/0.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	20%	0%	0%	0%	0%	0%
TERMINAL (d)	2/10 (20%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	94(T)	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.227N
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.227N
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.227N
COCH-ARM / FISHERS	P=0.107N	(e)	(e)	(e)	(e)	P=0.237N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.067N
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

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First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Mesentery: Fat</b>						
<b>Necrosis</b>						
<b>LESION RATES</b>						
OVERALL(a)	1/1 (100%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/1 (100%)
POLY-3 RATE (b)	1/1.00	0/0.00	0/0.00	0/0.00	0/0.00	1/1.00
POLY-3 PERCENT (g)	100%	0%	0%	0%	0%	100%
TERMINAL (d)	1/1 (100%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/1 (100%)
FIRST INCIDENCE	94(T)	---	---	---	---	94(T)
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTEs						
CURR VS HC SAME RTE						
CURR VS HC ALL RTEs						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:34

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Nose: Goblet Cell, Nasopharyn Dct Hypertrophy</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	1/10 (10%)	3/10 (30%)	7/10 (70%)	8/10 (80%)	10/10 (100%)
POLY-3 RATE (b)	0/10.00	1/10.00	3/10.00	7/10.00	8/10.00	10/10.00
POLY-3 PERCENT (g)	0%	10%	30%	70%	80%	100%
TERMINAL (d)	0/10 (0%)	1/10 (10%)	3/10 (30%)	7/10 (70%)	8/10 (80%)	10/10 (100%)
FIRST INCIDENCE	---	94(T)	94(T)	94(T)	94(T)	94(T)
<b>STATISTICAL TESTS</b>						
POLY 3	P=0.000**	P=0.500	P=0.095	P=0.000**	P=0.000**	P=NA
POLY 1.5	P=0.000**	P=0.500	P=0.095	P=0.000**	P=0.000**	P=NA
POLY 6	P=0.000**	P=0.500	P=0.095	P=0.000**	P=0.000**	P=NA
COCH-ARM / FISHERS	P=0.000**	P=0.500	P=0.105	P=0.002**	P=0.000**	P=0.000**
MAX-ISO-POLY-3	P=0.000**	P=0.159	P=0.025*	P=0.000**	P=0.000**	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:34

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Nose: Olfactory Epi Degeneration</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	5/10 (50%)	10/10 (100%)
POLY-3 RATE (b)	0/10.00	0/10.00	0/10.00	0/10.00	5/10.00	10/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	50%	100%
TERMINAL (d)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	5/10 (50%)	10/10 (100%)
FIRST INCIDENCE	---	---	---	---	94(T)	94(T)
<b>STATISTICAL TESTS</b>						
POLY 3	P=0.000**	(e)	(e)	(e)	P=0.008**	P=NA
POLY 1.5	P=0.000**	(e)	(e)	(e)	P=0.008**	P=NA
POLY 6	P=0.000**	(e)	(e)	(e)	P=0.008**	P=NA
COCH-ARM / FISHERS	P=0.000**	(e)	(e)	(e)	P=0.016*	P=0.000**
MAX-ISO-POLY-3	P=0.000**	(e)	(e)	(e)	P<0.001**	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						



Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

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

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:34

First Dose M/F: NA / NA

Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS**

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Nose: Olfactory Epi Necrosis</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/10.00	0/10.00	0/10.00	0/10.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	10%
TERMINAL (d)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	1/10 (10%)
FIRST INCIDENCE	---	---	---	---	---	94(T)
<b>STATISTICAL TESTS</b>						
POLY 3	P=0.097	(e)	(e)	(e)	(e)	P=0.500
POLY 1.5	P=0.097	(e)	(e)	(e)	(e)	P=0.500
POLY 6	P=0.097	(e)	(e)	(e)	(e)	P=0.500
COCH-ARM / FISHERS	P=0.095	(e)	(e)	(e)	(e)	P=0.500
MAX-ISO-POLY-3	P=0.076	(e)	(e)	(e)	(e)	P=0.159
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:34

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Nose: Respirat Epith Hyperplasia</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	8/10 (80%)	10/10 (100%)	10/10 (100%)	10/10 (100%)	10/10 (100%)
POLY-3 RATE (b)	0/10.00	8/10.00	10/10.00	10/10.00	10/10.00	10/10.00
POLY-3 PERCENT (g)	0%	80%	100%	100%	100%	100%
TERMINAL (d)	0/10 (0%)	8/10 (80%)	10/10 (100%)	10/10 (100%)	10/10 (100%)	10/10 (100%)
FIRST INCIDENCE	---	94(T)	94(T)	94(T)	94(T)	94(T)
<b>STATISTICAL TESTS</b>						
POLY 3	P=0.000**	P=0.000**	P=NA	P=NA	P=NA	P=NA
POLY 1.5	P=0.000**	P=0.000**	P=NA	P=NA	P=NA	P=NA
POLY 6	P=0.000**	P=0.000**	P=NA	P=NA	P=NA	P=NA
COCH-ARM / FISHERS	P=0.000**	P=0.000**	P=0.000**	P=0.000**	P=0.000**	P=0.000**
MAX-ISO-POLY-3	P=0.000**	P=0.000**	(e)	(e)	(e)	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:34

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Preputial Gland</b>						
<b>Inflammation Chronic</b>						
<b>LESION RATES</b>						
OVERALL(a)	3/10 (30%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	3/10.00	0/0.00	0/0.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	30%	0%	0%	0%	0%	0%
TERMINAL (d)	3/10 (30%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	94(T)	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.095N
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.095N
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.095N
COCH-ARM / FISHERS	P=0.047N*	(e)	(e)	(e)	(e)	P=0.105N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.025N*
HISTCONT SAME RTE						
HISTCONT ALL RTEs						
CURR VS HC SAME RTE						
CURR VS HC ALL RTEs						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

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

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:34

First Dose M/F: NA / NA

Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS**

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Spleen: Capsule</b>						
<b>Hyperplasia</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/0 (0%)	1/1 (100%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/0.00	1/1.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	100%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	1/1 (100%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---	94(T)	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	P=0.091	(e)	(e)	(e)
POLY 1.5	(e)	(e)	P=0.091	(e)	(e)	(e)
POLY 6	(e)	(e)	P=0.091	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.377N	(e)	P=0.091	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	P=0.000**	(e)	(e)	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTEs						
CURR VS HC SAME RTE						
CURR VS HC ALL RTEs						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:34

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Stomach, Glandular Mineralization</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	10%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
FIRST INCIDENCE	---	---	---	---	---	94(T)
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500
COCH-ARM / FISHERS	P=0.247	(e)	(e)	(e)	(e)	P=0.500
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.159
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:34

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Testes</b>						
<b>Atrophy</b>						
<b>LESION RATES</b>						
OVERALL(a)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	1/10.00	0/0.00	0/0.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	10%	0%	0%	0%	0%	0%
TERMINAL (d)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	94(T)	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500N
COCH-ARM / FISHERS	P=0.247N	(e)	(e)	(e)	(e)	P=0.500N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.159N
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

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

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:34

First Dose M/F: NA / NA

Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS**

DOSE	MALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Thymus Hemorrhage</b>						
<b>LESION RATES</b>						
OVERALL(a)	1/10 (10%)	0/0 (0%)	1/1 (100%)	1/1 (100%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	1/10.00	0/0.00	1/1.00	1/1.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	10%	0%	100%	100%	0%	0%
TERMINAL (d)	1/10 (10%)	0/0 (0%)	1/1 (100%)	1/1 (100%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	94(T)	---	94(T)	94(T)	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	P=0.146	P=0.146	(e)	P=0.500N
POLY 1.5	(e)	(e)	P=0.146	P=0.146	(e)	P=0.500N
POLY 6	(e)	(e)	P=0.146	P=0.146	(e)	P=0.500N
COCH-ARM / FISHERS	P=0.162N	(e)	P=0.182	P=0.182	(e)	P=0.500N
MAX-ISO-POLY-3	(e)	(e)	P=0.022*	P=0.022*	(e)	P=0.159N
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:34

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Clitoral Gland</b>						
<b>Inflammation Chronic</b>						
<b>LESION RATES</b>						
OVERALL(a)	2/10 (20%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	4/10 (40%)
POLY-3 RATE (b)	2/10.00	0/0.00	0/0.00	0/0.00	0/0.00	4/10.00
POLY-3 PERCENT (g)	20%	0%	0%	0%	0%	40%
TERMINAL (d)	2/10 (20%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	4/10 (40%)
FIRST INCIDENCE	93(T)	---	---	---	---	93(T)
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.318
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.318
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.318
COCH-ARM / FISHERS	P=0.208	(e)	(e)	(e)	(e)	P=0.314
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.172
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						



Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

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

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS**

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
Eye						
Cataract						
<b>LESION RATES</b>						
OVERALL(a)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)
POLY-3 RATE (b)	0/0.00	0/0.00	0/0.00	0/0.00	0/0.00	0/0.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)
HISTCONT SAME RTE						
HISTCONT ALL RTEs						
CURR VS HC SAME RTE						
CURR VS HC ALL RTEs						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

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

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS**

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Eye: Retina</b>						
<b>Atrophy</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)
POLY-3 RATE (b)	0/0.00	0/0.00	0/0.00	0/0.00	0/0.00	0/0.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Heart</b>						
<b>Cardiomyopathy</b>						
<b>LESION RATES</b>						
OVERALL(a)	8/10 (80%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	7/10 (70%)
POLY-3 RATE (b)	8/10.00	0/0.00	0/0.00	0/0.00	0/0.00	7/10.00
POLY-3 PERCENT (g)	80%	0%	0%	0%	0%	70%
TERMINAL (d)	8/10 (80%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	7/10 (70%)
FIRST INCIDENCE	93(T)	---	---	---	---	93(T)
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500N
COCH-ARM / FISHERS	P=0.365N	(e)	(e)	(e)	(e)	P=0.500N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.311N
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Kidney</b>						
<b>Nephropathy</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	10%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
FIRST INCIDENCE	---	---	---	---	---	93(T)
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500
COCH-ARM / FISHERS	P=0.247	(e)	(e)	(e)	(e)	P=0.500
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.159
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Larynx</b>						
<b>Inflammation Chronic</b>						
<b>LESION RATES</b>						
OVERALL(a)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
POLY-3 RATE (b)	1/10.00	0/0.00	0/0.00	0/0.00	0/0.00	1/10.00
POLY-3 PERCENT (g)	10%	0%	0%	0%	0%	10%
TERMINAL (d)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
FIRST INCIDENCE	93(T)	---	---	---	---	93(T)
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.760
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.760
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.760
COCH-ARM / FISHERS	P=0.598	(e)	(e)	(e)	(e)	P=0.763N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=1.000
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
Liver						
Hematopoietic Cell Proliferation						
<b>LESION RATES</b>						
OVERALL(a)	2/10 (20%)	0/2 (0%)	0/1 (0%)	0/3 (0%)	0/1 (0%)	3/10 (30%)
POLY-3 RATE (b)	2/10.00	0/2.00	0/1.00	0/3.00	0/1.00	3/10.00
POLY-3 PERCENT (g)	20%	0%	0%	0%	0%	30%
TERMINAL (d)	2/10 (20%)	0/2 (0%)	0/1 (0%)	0/3 (0%)	0/1 (0%)	3/10 (30%)
FIRST INCIDENCE	93(T)	---	---	---	---	93(T)
<b>STATISTICAL TESTS</b>						
POLY 3	P=0.267	P=0.627N	P=0.786N	P=0.526N	P=0.786N	P=0.500
POLY 1.5	P=0.267	P=0.627N	P=0.786N	P=0.526N	P=0.786N	P=0.500
POLY 6	P=0.267	P=0.627N	P=0.786N	P=0.526N	P=0.786N	P=0.500
COCH-ARM / FISHERS	P=0.251	P=0.682N	P=0.818N	P=0.577N	P=0.818N	P=0.500
MAX-ISO-POLY-3	P=0.306	P=0.308N	P=0.369N	P=0.260N	P=0.369N	P=0.311
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Liver</b>						
<b>Hepatodiaphragmatic Nodule</b>						
<b>LESION RATES</b>						
OVERALL(a)	1/10 (10%)	2/2 (100%)	1/1 (100%)	3/3 (100%)	1/1 (100%)	0/10 (0%)
POLY-3 RATE (b)	1/10.00	2/2.00	1/1.00	3/3.00	1/1.00	0/10.00
POLY-3 PERCENT (g)	10%	100%	100%	100%	100%	0%
TERMINAL (d)	1/10 (10%)	2/2 (100%)	1/1 (100%)	3/3 (100%)	1/1 (100%)	0/10 (0%)
FIRST INCIDENCE	93(T)	93(T)	93(T)	93(T)	93(T)	---
<b>STATISTICAL TESTS</b>						
POLY 3	P=0.002N**	P=0.005**	P=0.146	P=0.000**	P=0.146	P=0.500N
POLY 1.5	P=0.002N**	P=0.005**	P=0.146	P=0.000**	P=0.146	P=0.500N
POLY 6	P=0.002N**	P=0.005**	P=0.146	P=0.000**	P=0.146	P=0.500N
COCH-ARM / FISHERS	P=0.097N	P=0.045*	P=0.182	P=0.014*	P=0.182	P=0.500N
MAX-ISO-POLY-3	P=0.000N**	P<0.001**	P=0.022*	P=0.000**	P=0.022*	P=0.159N
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
Lung						
Hemorrhage						
<b>LESION RATES</b>						
OVERALL(a)	10/10 (100%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	10/10 (100%)
POLY-3 RATE (b)	10/10.00	0/0.00	0/0.00	0/0.00	0/0.00	10/10.00
POLY-3 PERCENT (g)	100%	0%	0%	0%	0%	100%
TERMINAL (d)	10/10 (100%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	10/10 (100%)
FIRST INCIDENCE	93(T)	---	---	---	---	93(T)
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						



Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Lung</b>						
<b>Metaplasia Osseous</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	1/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	10%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	1/10 (10%)
FIRST INCIDENCE	---	---	---	---	---	93(T)
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500
COCH-ARM / FISHERS	P=0.247	(e)	(e)	(e)	(e)	P=0.500
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.159
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Lymph Node, Mesenteric</b>						
<b>Inflammation Granulomatous</b>						
<b>LESION RATES</b>						
OVERALL(a)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	1/10.00	0/0.00	0/0.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	10%	0%	0%	0%	0%	0%
TERMINAL (d)	1/10 (10%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	93(T)	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 1.5	(e)	(e)	(e)	(e)	(e)	P=0.500N
POLY 6	(e)	(e)	(e)	(e)	(e)	P=0.500N
COCH-ARM / FISHERS	P=0.247N	(e)	(e)	(e)	(e)	P=0.500N
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)	(e)	P=0.159N
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

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

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS**

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Mesentery: Fat</b>						
<b>Necrosis</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)
POLY-3 RATE (b)	0/0.00	0/0.00	0/0.00	0/0.00	0/0.00	0/0.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Nose: Goblet Cell, Nasopharyn Dct Hypertrophy</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/10 (0%)	2/10 (20%)	4/10 (40%)	10/10 (100%)	10/10 (100%)
POLY-3 RATE (b)	0/10.00	0/10.00	2/10.00	4/10.00	10/10.00	10/10.00
POLY-3 PERCENT (g)	0%	0%	20%	40%	100%	100%
TERMINAL (d)	0/10 (0%)	0/10 (0%)	2/10 (20%)	4/10 (40%)	10/10 (100%)	10/10 (100%)
FIRST INCIDENCE	---	---	93(T)	93(T)	93(T)	93(T)
<b>STATISTICAL TESTS</b>						
POLY 3	P=0.000**	(e)	P=0.227	P=0.033*	P=NA	P=NA
POLY 1.5	P=0.000**	(e)	P=0.227	P=0.033*	P=NA	P=NA
POLY 6	P=0.000**	(e)	P=0.227	P=0.033*	P=NA	P=NA
COCH-ARM / FISHERS	P=0.000**	(e)	P=0.237	P=0.043*	P=0.000**	P=0.000**
MAX-ISO-POLY-3	P=0.000**	(e)	P=0.067	P=0.007**	(e)	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

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

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS**

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Nose: Olfactory Epi Degeneration</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	10/10 (100%)	10/10 (100%)
POLY-3 RATE (b)	0/10.00	0/10.00	0/10.00	0/10.00	10/10.00	10/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	100%	100%
TERMINAL (d)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	10/10 (100%)	10/10 (100%)
FIRST INCIDENCE	---	---	---	---	93(T)	93(T)
<b>STATISTICAL TESTS</b>						
POLY 3	P=0.000**	(e)	(e)	(e)	P=NA	P=NA
POLY 1.5	P=0.000**	(e)	(e)	(e)	P=NA	P=NA
POLY 6	P=0.000**	(e)	(e)	(e)	P=NA	P=NA
COCH-ARM / FISHERS	P=0.000**	(e)	(e)	(e)	P=0.000**	P=0.000**
MAX-ISO-POLY-3	P=0.000**	(e)	(e)	(e)	(e)	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Nose: Olfactory Epi Necrosis</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	1/10 (10%)	3/10 (30%)
POLY-3 RATE (b)	0/10.00	0/10.00	0/10.00	0/10.00	1/10.00	3/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	10%	30%
TERMINAL (d)	0/10 (0%)	0/10 (0%)	0/10 (0%)	0/10 (0%)	1/10 (10%)	3/10 (30%)
FIRST INCIDENCE	---	---	---	---	93(T)	93(T)
<b>STATISTICAL TESTS</b>						
POLY 3	P<0.001**	(e)	(e)	(e)	P=0.500	P=0.095
POLY 1.5	P<0.001**	(e)	(e)	(e)	P=0.500	P=0.095
POLY 6	P<0.001**	(e)	(e)	(e)	P=0.500	P=0.095
COCH-ARM / FISHERS	P=0.002**	(e)	(e)	(e)	P=0.500	P=0.105
MAX-ISO-POLY-3	P=0.002**	(e)	(e)	(e)	P=0.159	P=0.025*
HISTCONT SAME RTE						
HISTCONT ALL RTEs						
CURR VS HC SAME RTE						
CURR VS HC ALL RTEs						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Nose: Respirat Epith Hyperplasia</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	8/10 (80%)	7/10 (70%)	8/10 (80%)	8/10 (80%)	10/10 (100%)
POLY-3 RATE (b)	0/10.00	8/10.00	7/10.00	8/10.00	8/10.00	10/10.00
POLY-3 PERCENT (g)	0%	80%	70%	80%	80%	100%
TERMINAL (d)	0/10 (0%)	8/10 (80%)	7/10 (70%)	8/10 (80%)	8/10 (80%)	10/10 (100%)
FIRST INCIDENCE	---	93(T)	93(T)	93(T)	93(T)	93(T)
<b>STATISTICAL TESTS</b>						
POLY 3	P=0.000**	P=0.000**	P=0.000**	P=0.000**	P=0.000**	P=NA
POLY 1.5	P=0.000**	P=0.000**	P=0.000**	P=0.000**	P=0.000**	P=NA
POLY 6	P=0.000**	P=0.000**	P=0.000**	P=0.000**	P=0.000**	P=NA
COCH-ARM / FISHERS	P=0.000**	P=0.000**	P=0.002**	P=0.000**	P=0.000**	P=0.000**
MAX-ISO-POLY-3	P=0.000**	P=0.000**	P=0.000**	P=0.000**	P=0.000**	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

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

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS**

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Spleen: Capsule</b>						
<b>Hyperplasia</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						



Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
<b>Stomach, Glandular Mineralization</b>						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	1/1 (100%)	1/1 (100%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	1/1.00	1/1.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	0%	100%	100%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	1/1 (100%)	1/1 (100%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	---	93(T)	93(T)	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(e)	P=0.091	P=0.091	(e)	(e)	(e)
POLY 1.5	(e)	P=0.091	P=0.091	(e)	(e)	(e)
POLY 6	(e)	P=0.091	P=0.091	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.217N	P=0.091	P=0.091	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	P=0.000**	P=0.000**	(e)	(e)	(e)
HISTCONT SAME RTE						
HISTCONT ALL RTEs						
CURR VS HC SAME RTE						
CURR VS HC ALL RTEs						

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:11:35

First Dose M/F: NA / NA

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RAT(F 344/N)  
LAST REMOVAL AT 14286 WEEKS

DOSE	FEMALE					
	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
Thymus						
Hemorrhage						
<b>LESION RATES</b>						
OVERALL(a)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
POLY-3 RATE (b)	0/10.00	0/0.00	0/0.00	0/0.00	0/0.00	0/10.00
POLY-3 PERCENT (g)	0%	0%	0%	0%	0%	0%
TERMINAL (d)	0/10 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/0 (0%)	0/10 (0%)
FIRST INCIDENCE	---	---	---	---	---	---
<b>STATISTICAL TESTS</b>						
POLY 3	(n)	(n)	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)	(n)	(n)	(n)
HISTCONT SAME RTE						
HISTCONT ALL RTES						
CURR VS HC SAME RTE						
CURR VS HC ALL RTES						

**Experiment Number:** 02200-03

**Test Type:** 90-DAY

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**Species/Strain:** Rat/F 344/N

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

**Test Compound:** Styrene

**CAS Number:** 100-42-5

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 02:11:35

**First Dose M/F:** NA / NA

**Lab:** BNW

**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 \*\***