

Experiment Number: 02200-03

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: Rat/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

Test Compound: Styrene

CAS Number: 100-42-5

Date Report Requested: 10/23/2014

Time Report Requested: 02:08:57

First Dose M/F: NA / NA

Lab: BNW

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

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First Dose M/F: NA / NA

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F 344/N Rat MALE	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
Disposition Summary						
Animals Initially In Study	10	10	10	10	10	10
Early Deaths						
Survivors						
Terminal Sacrifice	10	10	10	10	10	10
Animals Examined Microscopically	10	10	10	10	10	10
ALIMENTARY SYSTEM						
Esophagus	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(0)	(10)
Liver	(10)	(2)	(2)	(2)	(1)	(10)
Hepatodiaphragmatic Nodule	3	1	2	2	1	
Mesentery	(1)	(0)	(0)	(0)	(0)	(1)
Fat, Necrosis	1 [2.0]					1 [1.0]
Pancreas	(10)	(0)	(0)	(0)	(0)	(10)
Salivary Glands	(10)	(0)	(0)	(0)	(0)	(10)
Stomach, Forestomach	(10)	(0)	(0)	(0)	(0)	(10)
Stomach, Glandular	(10)	(0)	(0)	(0)	(0)	(10)
Mineralization						1 [1.0]
CARDIOVASCULAR SYSTEM						
Heart	(10)	(0)	(0)	(0)	(0)	(10)
Cardiomyopathy	9 [1.0]					8 [1.0]
ENDOCRINE SYSTEM						

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

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F 344/N Rat MALE	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
Adrenal Cortex	(10)	(0)	(0)	(0)	(0)	(10)
Adrenal Medulla	(10)	(0)	(0)	(0)	(0)	(10)
Islets, Pancreatic	(10)	(0)	(0)	(0)	(0)	(10)
Parathyroid Gland	(10)	(0)	(0)	(0)	(0)	(10)
Pituitary Gland	(10)	(0)	(0)	(0)	(0)	(10)
Thyroid Gland	(10)	(0)	(0)	(0)	(0)	(10)
GENERAL BODY SYSTEM						
None						
GENITAL SYSTEM						
Epididymis	(10)	(0)	(0)	(0)	(0)	(10)
Granuloma Sperm	2 [3.0]					
Preputial Gland	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active	3 [1.3]					
Prostate	(10)	(0)	(0)	(0)	(0)	(10)
Seminal Vesicle	(10)	(0)	(0)	(0)	(0)	(10)
Testes	(10)	(0)	(0)	(0)	(0)	(10)
Atrophy	1 [3.0]					
HEMATOPOIETIC SYSTEM						
Bone Marrow	(10)	(0)	(0)	(0)	(0)	(10)
Lymph Node, Bronchial	(10)	(0)	(0)	(0)	(0)	(10)
Lymph Node, Mandibular	(10)	(0)	(0)	(0)	(0)	(10)
Lymph Node, Mediastinal	(10)	(0)	(0)	(0)	(0)	(9)
Lymph Node, Mesenteric	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Granulomatous	2 [1.0]					
Spleen	(10)	(0)	(1)	(0)	(0)	(10)
Capsule, Hyperplasia			1 [4.0]			
Thymus	(10)	(0)	(1)	(1)	(0)	(10)
Hemorrhage	1 [1.0]		1 [1.0]	1 [1.0]		

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First Dose M/F: NA / NA

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F 344/N Rat MALE	CONTROL	125 PPM	250 PPM	500 PPM	1000 PPM	1500 PPM
INTEGUMENTARY SYSTEM						
Mammary Gland	(7)	(0)	(0)	(0)	(0)	(5)
Skin	(10)	(0)	(0)	(0)	(0)	(10)
MUSCULOSKELETAL SYSTEM						
Bone	(10)	(0)	(0)	(0)	(0)	(10)
NERVOUS SYSTEM						
Brain	(10)	(0)	(0)	(0)	(0)	(10)
RESPIRATORY SYSTEM						
Larynx	(10)	(0)	(0)	(0)	(0)	(10)
Lung	(10)	(10)	(10)	(10)	(10)	(10)
Hemorrhage	10 [1.0]	10 [1.0]	10 [1.0]	10 [1.0]	10 [1.0]	10 [1.0]
Nose	(10)	(10)	(10)	(10)	(10)	(10)
Goblet Cell, Nasopharyn Dct, Hypertrophy		1 [1.0]	3 [1.0]	7 [1.0]	8 [1.0]	10 [1.0]
Olfactory Epi, Degeneration					5 [1.6]	10 [1.9]
Olfactory Epi, Necrosis						1 [2.0]
Respirat Epith, Hyperplasia		8 [1.4]	10 [1.5]	10 [1.1]	10 [1.2]	10 [1.0]
Trachea	(10)	(0)	(0)	(0)	(0)	(10)
SPECIAL SENSES SYSTEM						
Eye	(2)	(0)	(0)	(0)	(0)	(0)
Cataract	2 [2.5]					
Retina, Atrophy	2 [3.0]					
URINARY SYSTEM						
Kidney	(10)	(0)	(0)	(0)	(0)	(10)
Nephropathy	10 [1.0]					10 [1.0]
Urinary Bladder	(10)	(0)	(0)	(0)	(1)	(10)

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Lab: BNW

END OF MALE DATA

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

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Disposition Summary						
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Early Deaths						
Survivors						
Terminal Sacrifice	10	10	10	10	10	10
Animals Examined Microscopically	10	10	10	10	10	10
ALIMENTARY SYSTEM						
Esophagus	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(0)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(0)	(10)
Liver	(10)	(2)	(1)	(3)	(1)	(10)
Hematopoietic Cell Proliferation	2 [1.0]					3 [1.0]
Hepatodiaphragmatic Nodule	1	2	1	3	1	
Pancreas	(10)	(0)	(0)	(0)	(0)	(10)
Salivary Glands	(10)	(0)	(0)	(0)	(0)	(10)
Stomach, Forestomach	(10)	(1)	(1)	(0)	(0)	(10)
Stomach, Glandular	(10)	(1)	(1)	(0)	(0)	(10)
Mineralization		1 [2.0]	1 [2.0]			
CARDIOVASCULAR SYSTEM						
Heart	(10)	(0)	(0)	(0)	(0)	(10)
Cardiomyopathy	8 [1.0]					7 [1.0]
ENDOCRINE SYSTEM						
Adrenal Cortex	(10)	(0)	(0)	(0)	(0)	(10)

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Adrenal Medulla	(10)	(0)	(0)	(0)	(0)	(10)
Islets, Pancreatic	(10)	(0)	(0)	(0)	(0)	(10)
Parathyroid Gland	(10)	(0)	(0)	(0)	(0)	(10)
Pituitary Gland	(10)	(0)	(0)	(0)	(0)	(10)
Thyroid Gland	(10)	(0)	(0)	(0)	(0)	(10)
GENERAL BODY SYSTEM						
None						
GENITAL SYSTEM						
Clitoral Gland	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active	2 [1.5]					4 [1.3]
Ovary	(10)	(0)	(0)	(0)	(0)	(10)
Uterus	(10)	(0)	(0)	(0)	(0)	(10)
HEMATOPOIETIC SYSTEM						
Bone Marrow	(10)	(0)	(0)	(0)	(0)	(10)
Lymph Node, Bronchial	(9)	(0)	(0)	(0)	(0)	(9)
Lymph Node, Mandibular	(10)	(0)	(0)	(0)	(0)	(10)
Lymph Node, Mediastinal	(9)	(0)	(0)	(0)	(0)	(9)
Lymph Node, Mesenteric	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Granulomatous	1 [1.0]					
Spleen	(10)	(0)	(0)	(0)	(0)	(10)
Thymus	(10)	(0)	(0)	(0)	(0)	(10)
INTEGUMENTARY SYSTEM						
Mammary Gland	(10)	(0)	(0)	(0)	(0)	(10)
Skin	(10)	(0)	(0)	(0)	(0)	(10)
MUSCULOSKELETAL SYSTEM						
Bone	(10)	(0)	(0)	(0)	(0)	(10)
NERVOUS SYSTEM						

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NERVOUS SYSTEM						
Brain	(10)	(0)	(0)	(0)	(0)	(10)
RESPIRATORY SYSTEM						
Larynx	(10)	(0)	(0)	(0)	(0)	(10)
Inflammation, Chronic Active	1 [1.0]					1 [1.0]
Lung	(10)	(0)	(0)	(0)	(0)	(10)
Hemorrhage	10 [1.0]					10 [1.0]
Metaplasia, Osseous						1 [1.0]
Nose	(10)	(10)	(10)	(10)	(10)	(10)
Goblet Cell, Nasopharyn Dct, Hypertrophy			2 [1.0]	4 [1.0]	10 [1.0]	10 [1.0]
Olfactory Epi, Degeneration					10 [1.3]	10 [1.7]
Olfactory Epi, Necrosis					1 [2.0]	3 [2.0]
Respirat Epith, Hyperplasia		8 [1.1]	7 [1.0]	8 [1.4]	8 [1.0]	10 [1.0]
Trachea	(10)	(0)	(0)	(0)	(0)	(10)
SPECIAL SENSES SYSTEM						
None						
URINARY SYSTEM						
Kidney	(10)	(0)	(0)	(0)	(0)	(10)
Nephropathy						1 [1.0]
Urinary Bladder	(10)	(0)	(0)	(0)	(0)	(10)

**** END OF REPORT ****

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)