

**Experiment Number:** 61427-03

**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:** Vanadium pentoxide

**CAS Number:** 1314-62-1

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

**Time Report Requested:** 02:29:29

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

**Lab:** IIT

<b>C Number:</b>	C61427
<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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F 344/N Rat MALE	CONTROL	1.00 MG/M3	2.00 MG/M3	4.00 MG/M3	8.00 MG/M3	16.00 MG/M3
<b>Disposition Summary</b>						
Animals Initially In Study	10	10	10	10	10	10
Early Deaths						
Natural Death						7
Survivors						
Terminal Sacrifice	10	10	10	10	10	3
Animals Examined Microscopically	10	10	10	10	10	10
<b>ALIMENTARY SYSTEM</b>						
Esophagus	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(9)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(10)	(10)
Liver	(10)	(0)	(2)	(1)	(10)	(10)
Hepatocyte, Necrosis	2 [1.0]					
Hepatodiaphragmatic Nodule				1 [1.0]		2 [1.0]
Pancreas	(10)	(0)	(0)	(0)	(10)	(10)
Salivary Glands	(10)	(0)	(0)	(0)	(10)	(9)
<b>CARDIOVASCULAR SYSTEM</b>						
Heart	(10)	(0)	(0)	(0)	(10)	(10)
Cardiomyopathy	8 [1.1]				5 [1.2]	
<b>ENDOCRINE SYSTEM</b>						
Adrenal Cortex	(10)	(0)	(0)	(0)	(10)	(10)
Hemorrhage	1 [4.0]					
Adrenal Medulla	(10)	(0)	(0)	(0)	(10)	(10)

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	1.00 MG/M3	2.00 MG/M3	4.00 MG/M3	8.00 MG/M3	16.00 MG/M3
Parathyroid Gland	(10)	(0)	(0)	(0)	(7)	(6)
Pituitary Gland	(10)	(0)	(0)	(0)	(10)	(7)
Thyroid Gland	(10)	(0)	(0)	(0)	(10)	(10)
GENERAL BODY SYSTEM						
None						
GENITAL SYSTEM						
Epididymis	(10)	(0)	(0)	(0)	(10)	(10)
Atypia Cellular						10 [2.4]
Preputial Gland	(10)	(0)	(0)	(0)	(10)	(10)
Atrophy						5 [2.4]
Inflammation, Chronic	1 [2.0]					
Prostate	(10)	(0)	(0)	(0)	(10)	(10)
Atrophy						9 [2.7]
Seminal Vesicle	(10)	(0)	(0)	(0)	(10)	(10)
Atrophy						10 [3.0]
Testes	(10)	(0)	(0)	(0)	(10)	(10)
Degeneration					1 [2.0]	6 [2.2]
HEMATOPOIETIC SYSTEM						
Bone Marrow	(10)	(0)	(0)	(0)	(10)	(10)
Hypocellularity						2 [3.0]
Lymph Node, Bronchial	(8)	(0)	(0)	(0)	(9)	(5)
Congestion	1 [2.0]					
Depletion Lymphoid						1 [3.0]
Hyperplasia						1 [2.0]
Lymph Node, Mandibular	(10)	(0)	(0)	(0)	(10)	(8)
Depletion Lymphoid						3 [2.3]
Lymph Node, Mediastinal	(10)	(0)	(4)	(1)	(9)	(7)
Congestion	7 [1.4]		1 [1.0]	1 [1.0]		

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Depletion Lymphoid Lymph Node, Mesenteric	(10)	(0)	(0)	(0)	(10)	4 [2.8] (10)
Depletion Lymphoid Spleen	(10)	(0)	(0)	(0)	(10)	3 [2.0] (10)
Depletion Lymphoid Thymus	(10)	(0)	(0)	(0)	(10)	10 [3.2] (9)
Depletion Lymphoid						9 [3.3]
<b>INTEGUMENTARY SYSTEM</b>						
Mammary Gland	(10)	(0)	(0)	(0)	(7)	(8)
Skin	(10)	(0)	(0)	(0)	(10)	(10)
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone Metaphysis, Atrophy	(10)	(0)	(0)	(0)	(10) 1 [2.0]	(10) 10 [2.3]
<b>NERVOUS SYSTEM</b>						
Brain	(10)	(0)	(0)	(1)	(10)	(10)
<b>RESPIRATORY SYSTEM</b>						
Larynx	(10)	(10)	(10)	(10)	(10)	(10)
Lung	(10)	(10)	(10)	(10)	(10)	(10)
Bronchiole, Exudate Epithelium, Hyperplasia			10 [2.0]	10 [3.0]	7 [1.0] 10 [3.6]	8 [1.4] 10 [3.3]
Fibrosis			2 [1.0]	10 [1.9]	10 [3.2]	10 [3.1]
Hemorrhage	5 [1.2]		1 [1.0]		8 [2.0]	
Inflammation			9 [1.0]	10 [1.0]	10 [1.6]	10 [2.1]
Perivascular, Inflammation	9 [1.1]	7 [1.4]	9 [1.3]			
Nose	(10)	(10)	(10)	(10)	(10)	(10)
Inflammation						7 [1.6]
Respirat Epith, Hyperplasia				1 [1.0]	10 [1.2]	10 [2.0]

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F 344/N Rat MALE	CONTROL	1.00 MG/M3	2.00 MG/M3	4.00 MG/M3	8.00 MG/M3	16.00 MG/M3
Respirat Epith, Metaplasia				1 [1.0]	10 [1.2]	10 [1.8]
Trachea	(10)	(0)	(0)	(0)	(10)	(10)
SPECIAL SENSES SYSTEM						
None						
URINARY SYSTEM						
Kidney	(10)	(0)	(0)	(0)	(10)	(10)
Papilla, Degeneration						1 [2.0]
Urinary Bladder	(10)	(0)	(0)	(0)	(10)	(10)

\*\*\*END OF MALE DATA\*\*\*

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

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F 344/N Rat FEMALE	CONTROL	1.00 MG/M3	2.00 MG/M3	4.00 MG/M3	8.00 MG/M3	16.00 MG/M3
<b>Disposition Summary</b>						
Animals Initially In Study	10	10	10	10	10	10
Early Deaths						
Moribund Sacrifice						1
Natural Death						2
Survivors						
Terminal Sacrifice	10	10	10	10	10	7
Animals Examined Microscopically	10	10	10	10	10	10
<b>ALIMENTARY SYSTEM</b>						
Esophagus	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Large, Cecum	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Large, Colon	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Large, Rectum	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Small, Duodenum	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Small, Ileum	(10)	(0)	(0)	(0)	(10)	(10)
Intestine Small, Jejunum	(10)	(0)	(0)	(0)	(10)	(10)
Liver	(10)	(1)	(2)	(1)	(10)	(10)
Hepatodiaphragmatic Nodule	1 [1.0]		2 [1.0]	1 [1.0]	3 [1.3]	
Inflammation					1 [1.0]	
Pancreas	(10)	(0)	(1)	(0)	(10)	(10)
Ectopic Tissue			1 [1.0]			
Salivary Glands	(10)	(0)	(0)	(0)	(10)	(10)
<b>CARDIOVASCULAR SYSTEM</b>						
Heart	(10)	(0)	(0)	(0)	(10)	(10)
Cardiomyopathy	2 [1.0]					
<b>ENDOCRINE SYSTEM</b>						
Adrenal Cortex	(10)	(0)	(0)	(0)	(10)	(10)

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F 344/N Rat FEMALE	CONTROL	1.00 MG/M3	2.00 MG/M3	4.00 MG/M3	8.00 MG/M3	16.00 MG/M3
Adrenal Medulla	(10)	(0)	(0)	(0)	(10)	(10)
Parathyroid Gland	(7)	(0)	(0)	(0)	(2)	(9)
Pituitary Gland	(10)	(0)	(0)	(0)	(10)	(9)
Thyroid Gland	(10)	(0)	(0)	(0)	(10)	(10)

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Clitoral Gland	(10)	(0)	(0)	(0)	(10)	(10)
Ovary	(10)	(1)	(0)	(0)	(10)	(10)
Cyst	1 [1.0]	1 [1.0]				
Uterus	(10)	(0)	(0)	(0)	(10)	(10)
Atrophy						7 [1.9]

HEMATOPOIETIC SYSTEM

Bone Marrow	(10)	(0)	(0)	(0)	(10)	(10)
Lymph Node, Bronchial	(10)	(0)	(0)	(0)	(10)	(9)
Depletion Lymphoid						5 [1.8]
Lymph Node, Mandibular	(10)	(1)	(1)	(1)	(10)	(8)
Depletion Lymphoid						3 [1.7]
Lymph Node, Mediastinal	(8)	(1)	(2)	(0)	(10)	(7)
Congestion	1 [2.0]					
Depletion Lymphoid						3 [2.0]
Lymph Node, Mesenteric	(10)	(0)	(0)	(0)	(10)	(10)
Depletion Lymphoid						2 [2.5]
Spleen	(10)	(0)	(0)	(0)	(10)	(10)
Depletion Lymphoid						9 [2.1]
Thymus	(10)	(0)	(0)	(0)	(10)	(9)
Depletion Lymphoid						8 [3.1]

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F 344/N Rat FEMALE	CONTROL	1.00 MG/M3	2.00 MG/M3	4.00 MG/M3	8.00 MG/M3	16.00 MG/M3
<b>INTEGUMENTARY SYSTEM</b>						
Mammary Gland	(10)	(0)	(0)	(0)	(10)	(9)
Skin	(10)	(0)	(0)	(0)	(10)	(10)
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone	(10)	(0)	(0)	(0)	(10)	(10)
Metaphysis, Atrophy					1 [1.0]	10 [1.9]
<b>NERVOUS SYSTEM</b>						
Brain	(10)	(0)	(0)	(0)	(10)	(10)
<b>RESPIRATORY SYSTEM</b>						
Larynx	(10)	(10)	(10)	(10)	(9)	(10)
Lung	(10)	(10)	(10)	(10)	(10)	(10)
Bronchiole, Exudate					10 [1.0]	8 [1.1]
Epithelium, Hyperplasia			10 [1.3]	10 [2.9]	10 [3.5]	10 [3.2]
Epithelium, Metaplasia, Squamous						1 [1.0]
Fibrosis				10 [1.1]	10 [2.9]	10 [3.2]
Hemorrhage						1 [2.0]
Inflammation				10 [1.0]	10 [1.9]	10 [1.2]
Perivascular, Inflammation	10 [1.1]	10 [1.3]	8 [1.1]			
Nose	(10)	(10)	(10)	(10)	(10)	(10)
Inflammation					1 [1.0]	9 [1.6]
Respirat Epith, Hyperplasia				10 [1.0]	10 [1.8]	10 [2.7]
Respirat Epith, Metaplasia				8 [1.0]	10 [1.8]	10 [2.8]
Trachea	(10)	(0)	(0)	(0)	(10)	(10)
<b>SPECIAL SENSES SYSTEM</b>						
None						
<b>URINARY SYSTEM</b>						
Kidney	(10)	(0)	(0)	(0)	(10)	(10)

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

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<b>F 344/N Rat FEMALE</b>	<b>CONTROL</b>	<b>1.00 MG/M3</b>	<b>2.00 MG/M3</b>	<b>4.00 MG/M3</b>	<b>8.00 MG/M3</b>	<b>16.00 MG/M3</b>
Inflammation					1 [1.0]	
Mineralization	7 [1.0]				6 [1.0]	4 [1.0]
Urinary Bladder	(10)	(0)	(0)	(0)	(7)	(10)

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**\*\* END OF REPORT \*\***

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

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