

**Study Number:** C08004-03

**Test Type:** TOX

**Route:** Dosing in Water

**Species/Strain:** Rat/Harlan Sprague Dawley

**Study Number:**

**Study Gender:**

**PWG Approval Date:**

**Version:**

**PA18R: Non-Neoplastic Lesions with Mean Severity Grade and Litter Incidence**

**Test Compound:** Vanadyl sulfate

**CAS Number:** 27774-13-6

C08004-03

Both

See web page for date of PWG Approval

v1.3.5

**Date Report Requested:** 01/18/2022

**Time Report Requested:** 07:44:13

**Lab:** Battelle with EPL

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**F1 Male: F1 Core Animals**

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**Treatment Groups (mg/L)**

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**0                      21.0                      41.9                      83.8                      168                      335**

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**Disposition Summary**

**Animals Initially In Study**

**10                      10                      10                      10                      10                      10**

**Censored**

**Early Deaths**

**Survivors**

**Scheduled Sacrifice, Terminal**

**10                      10                      10                      10                      10                      10**

**Number Animals Examined Microscopically**

**10                                                                3                      10                      10**

**Total number litters**

**10                                                                3                      10                      10**

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F1 Male: F1 Core Animals

	Treatment Groups (mg/L)					
	0	21.0	41.9	83.8	168	335
<b>ALIMENTARY SYSTEM</b>						
ESOPHAGUS	(10)	(0)	(0)	(0)	(0)	(10)
INTESTINE, LARGE, CECUM	(10)	(0)	(0)	(0)	(10)	(10)
EPITHELIUM; HYPERPLASIA						4 [1.0] (4)
INTESTINE, LARGE, COLON	(10)	(0)	(0)	(0)	(0)	(10)
INTESTINE, LARGE, RECTUM	(10)	(0)	(0)	(3)	(0)	(10)
HYPERPLASIA; LYMPHOCYTE				1 [4.0] (1)		
INTESTINE, SMALL, DUODENUM	(10)	(0)	(0)	(0)	(0)	(10)
INTESTINE, SMALL, ILEUM	(10)	(0)	(0)	(0)	(10)	(10)
EPITHELIUM; HYPERPLASIA					3 [1.0] (3)	9 [1.2] (9)
INTESTINE, SMALL, JEJUNUM	(10)	(0)	(0)	(0)	(0)	(10)
MINERAL						1 [1.0] (1)
LIVER	(10)	(0)	(0)	(0)	(1)	(10)
HEPATODIAPHRAGMATIC NODULE	1 (1)				1 (1)	
INFILTRATION, CELLULAR; MONONUCLEAR CELL						1 [1.0] (1)
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)
MINERAL	7 [1.4] (7)					6 [1.7] (6)
<b>CARDIOVASCULAR SYSTEM</b>						
AORTA	(10)	(0)	(0)	(0)	(0)	(10)
HEART	(10)	(0)	(0)	(0)	(0)	(10)
CARDIOMYOPATHY	1 [2.0] (1)					

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F1 Male: F1 Core Animals

	Treatment Groups (mg/L)					
	0	21.0	41.9	83.8	168	335
ENDOCRINE SYSTEM						
ADRENAL GLAND	(10)	(0)	(0)	(0)	(0)	(10)
CORTEX; CYTOPLASMIC VACUOLATION						1 [2.0] (1)
CORTEX; HYPERTROPHY; FOCAL						1 [1.0] (1)
PARATHYROID GLAND	(8)	(0)	(0)	(0)	(0)	(9)
PITUITARY GLAND	(10)	(0)	(0)	(0)	(0)	(10)
THYROID GLAND	(10)	(0)	(0)	(0)	(0)	(10)
THYMUS; ECTOPIC TISSUE	1 (1)					1 (1)
GENERAL BODY SYSTEM						
No Tissues/Organs Examined						
GENITAL SYSTEM						
EPIDIDYMIS	(10)	(0)	(0)	(0)	(0)	(10)
PREPUTIAL GLAND	(10)	(0)	(0)	(0)	(0)	(10)
INFLAMMATION; CHRONIC-ACTIVE	3 [2.0] (3)					2 [1.5] (2)
PROSTATE	(10)	(0)	(0)	(0)	(0)	(10)
SEMINAL VESICLE	(10)	(0)	(0)	(0)	(0)	(10)
SECRETORY DEPLETION						1 [2.0] (1)
TESTES	(0)	(0)	(0)	(0)	(0)	(5)
TESTIS	(10)	(0)	(0)	(0)	(0)	(5)
HEMATOLYMPHOID SYSTEM						
BONE MARROW	(10)	(0)	(0)	(0)	(0)	(10)
LYMPH NODE, MANDIBULAR	(10)	(0)	(0)	(0)	(0)	(10)
FOLLICLES; LYMPHOCYTE; HYPERPLASIA						1 [2.0] (1)
LYMPH NODE, MESENTERIC	(10)	(0)	(0)	(0)	(0)	(10)
SPLEEN	(10)	(0)	(0)	(0)	(0)	(10)
THYMUS	(10)	(0)	(0)	(0)	(0)	(10)

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F1 Male: F1 Core Animals

	Treatment Groups (mg/L)					
	0	21.0	41.9	83.8	168	335
INTEGUMENTARY SYSTEM						
MAMMARY GLAND	(10)	(0)	(0)	(0)	(0)	(9)
SKIN	(10)	(0)	(0)	(0)	(0)	(10)
MUSCULOSKELETAL SYSTEM						
BONE, FEMUR	(10)	(0)	(0)	(0)	(0)	(10)
MUSCLE, THIGH	(10)	(0)	(0)	(0)	(0)	(10)
NERVOUS SYSTEM						
BRAIN	(10)	(0)	(0)	(0)	(0)	(10)
NERVE, SCIATIC	(10)	(0)	(0)	(0)	(0)	(10)
NERVE, TIBIAL	(10)	(0)	(0)	(0)	(0)	(10)
SPINAL CORD	(10)	(0)	(0)	(0)	(0)	(10)
TRIGEMINAL GANGLION	(10)	(0)	(0)	(0)	(0)	(10)
RESPIRATORY SYSTEM						
CAVITY, NASAL	(10)	(0)	(0)	(0)	(0)	(10)
LUNG	(10)	(0)	(0)	(0)	(0)	(9)
EOSINOPHILIC CRYSTAL(S)						1 [1.0] (1)
EPITHELIUM; ALVEOLUS; HYPERPLASIA						2 [1.0] (2)
ALVEOLUS; INFILTRATION, CELLULAR; HISTIOCYTE						1 [1.0] (1)
INFLAMMATION; CHRONIC-ACTIVE						1 [1.0] (1)
TRACHEA	(10)	(0)	(0)	(0)	(0)	(10)
SPECIAL SENSES SYSTEM						
EYE	(10)	(0)	(0)	(0)	(0)	(10)
HARDERIAN GLAND	(10)	(0)	(0)	(0)	(0)	(10)
INFILTRATION, CELLULAR; MONONUCLEAR CELL	1 [1.0] (1)					1 [1.0] (1)

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F1 Male: F1 Core Animals

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Treatment Groups (mg/L)

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	0	21.0	41.9	83.8	168	335
URINARY SYSTEM						
KIDNEY	(10)	(0)	(0)	(0)	(0)	(10)
CHRONIC PROGRESSIVE NEPHROPATHY	10 [1.1] (10)					10 [1.1] (10)
URINARY BLADDER	(10)	(0)	(0)	(0)	(0)	(10)

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Lab: Battelle with EPL

Species/Strain: Rat/Harlan Sprague Dawley

F1 Female: F1 Core Animals

	Treatment Groups (mg/L)					
	0	21.0	41.9	83.8	168	335
<b>Disposition Summary</b>						
Animals Initially In Study	10	10	10	10	10	10
Censored						
Early Deaths						
Survivors						
Scheduled Sacrifice, Terminal	10	10	10	10	10	10
Number Animals Examined Microscopically	10		10	10	10	10
Total number litters	10		10	10	10	10
<b>ALIMENTARY SYSTEM</b>						
ESOPHAGUS	(10)	(0)	(0)	(0)	(0)	(10)
INTESTINE, LARGE, CECUM	(10)	(0)	(0)	(0)	(10)	(10)
EPITHELIUM; HYPERPLASIA						4 [1.0] (4)
INTESTINE, LARGE, COLON	(10)	(0)	(0)	(0)	(0)	(10)
INTESTINE, LARGE, RECTUM	(10)	(0)	(0)	(0)	(1)	(10)
HYPERPLASIA; LYMPHOCYTE					1 [4.0] (1)	
INTESTINE, SMALL, DUODENUM	(10)	(0)	(0)	(0)	(0)	(10)
INTESTINE, SMALL, ILEUM	(10)	(0)	(10)	(10)	(10)	(10)
EPITHELIUM; HYPERPLASIA					4 [1.3] (4)	9 [1.4] (9)
INTESTINE, SMALL, JEJUNUM	(10)	(0)	(0)	(0)	(0)	(10)
LIVER	(10)	(0)	(1)	(1)	(0)	(10)
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)
MINERAL	4 [1.3] (4)					1 [1.0] (1)

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F1 Female: F1 Core Animals

	Treatment Groups (mg/L)					
	0	21.0	41.9	83.8	168	335
CARDIOVASCULAR SYSTEM						
AORTA	(10)	(0)	(0)	(0)	(0)	(10)
HEART	(10)	(0)	(0)	(0)	(0)	(10)
ENDOCRINE SYSTEM						
ADRENAL GLAND	(10)	(0)	(0)	(0)	(0)	(10)
PARATHYROID GLAND	(9)	(0)	(0)	(0)	(0)	(10)
PITUITARY GLAND	(10)	(0)	(0)	(0)	(0)	(10)
THYROID GLAND	(9)	(0)	(0)	(0)	(0)	(10)
THYMUS; ECTOPIC TISSUE						1 (1)
GENERAL BODY SYSTEM						
No Tissues/Organs Examined						
GENITAL SYSTEM						
CERVIX	(10)	(0)	(0)	(0)	(0)	(10)
CLITORAL GLAND	(10)	(0)	(0)	(0)	(0)	(9)
DUCT; DILATION	1 [2.0] (1)					1 [1.0] (1)
INFILTRATION, CELLULAR; MONONUCLEAR CELL	3 [1.0] (3)					2 [1.0] (2)
OVARY	(10)	(0)	(0)	(0)	(0)	(10)
UTERUS	(10)	(0)	(0)	(0)	(0)	(10)
VAGINA	(10)	(0)	(0)	(0)	(0)	(10)
HEMATOLYMPHOID SYSTEM						
BONE MARROW	(10)	(0)	(0)	(0)	(0)	(10)
LYMPH NODE, MANDIBULAR	(10)	(0)	(0)	(0)	(0)	(10)
LYMPH NODE, MESENTERIC	(10)	(0)	(0)	(0)	(0)	(10)
SPLEEN	(10)	(0)	(0)	(0)	(0)	(10)
THYMUS	(10)	(0)	(0)	(0)	(0)	(10)



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F1 Female: F1 Core Animals

	Treatment Groups (mg/L)					
	0	21.0	41.9	83.8	168	335
<b>INTEGUMENTARY SYSTEM</b>						
MAMMARY GLAND	(10)	(0)	(0)	(0)	(0)	(10)
SKIN	(10)	(0)	(0)	(0)	(0)	(10)
<b>MUSCULOSKELETAL SYSTEM</b>						
BONE, FEMUR	(10)	(0)	(0)	(0)	(0)	(10)
MUSCLE, THIGH	(10)	(0)	(0)	(0)	(0)	(10)
<b>NERVOUS SYSTEM</b>						
BRAIN	(10)	(0)	(0)	(0)	(0)	(10)
NERVE, SCIATIC	(10)	(0)	(0)	(0)	(0)	(10)
NERVE, TIBIAL	(9)	(0)	(0)	(0)	(0)	(10)
SPINAL CORD	(10)	(0)	(0)	(0)	(0)	(10)
TRIGEMINAL GANGLION	(10)	(0)	(0)	(0)	(0)	(10)
<b>RESPIRATORY SYSTEM</b>						
CAVITY, NASAL	(10)	(0)	(0)	(0)	(0)	(10)
LUNG	(10)	(0)	(0)	(0)	(0)	(10)
ALVEOLUS; INFILTRATION, CELLULAR; HISTIOCYTE	1 [1.0] (1)					2 [1.0] (2)
TRACHEA	(10)	(0)	(0)	(0)	(0)	(10)
<b>SPECIAL SENSES SYSTEM</b>						
EYE	(10)	(0)	(0)	(0)	(0)	(10)
HARDERIAN GLAND	(10)	(0)	(0)	(0)	(0)	(10)
INFILTRATION, CELLULAR; MONONUCLEAR CELL						2 [1.5] (2)
<b>URINARY SYSTEM</b>						
KIDNEY	(10)	(0)	(0)	(0)	(0)	(10)
CHRONIC PROGRESSIVE NEPHROPATHY	5 [1.0] (5)					7 [1.0] (7)
CORTEX; CYST	1 (1)					
INFLAMMATION; CHRONIC	1 [1.0] (1)					
URINARY BLADDER	(10)	(0)	(0)	(0)	(0)	(10)

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**Lab:** Battelle with EPL

## LEGEND

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Censored animals are animals not in one of the other disposition categories that are removed prior to the end of the study. The censored animals are included in the pathology data.

Number of animals examined given for each tissue. If none of the animals examined have the specific lesion then there is a blank for that dose group for that specific lesion. Mean severity grade denoted by 1 - minimal, 2 - mild, 3 - moderate, 4 - marked.

Number of animals with observation reported with mean severity grade in square brackets. The number of litters is shown in parentheses to the right of the severity grade for the F1 and F2 animals. F1 litter incidence based on the number of F0 dams; F2 litter incidence based on number of F1 dams.

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