

**Study Number:** C08004-04  
**Test Type:** TOX  
**Route:** Dosing in Water  
**Species/Strain:** Mouse/B6C3F1/N

**PA18: Incidence Rates of Non-Neoplastic Lesions by Anatomic Site with Average Severity Grades**  
**Test Compound:** Vanadyl sulfate  
**CAS Number:** 27774-13-6

**Date Report Requested:** 01/10/2022  
**Time Report Requested:** 10:57:04  
**Lab:** Battelle

**Study Number:** C08004-04  
**Study Gender:** Both  
**PWG Approval Date:** See web page for date of PWG Approval  
**Version:** v1.3.5

Study Number: C08004-04  
 Test Type: TOX  
 Route: Dosing in Water  
 Species/Strain: Mouse/B6C3F1/N

PA18: Incidence Rates of Non-Neoplastic Lesions by Anatomic Site with Average Severity Grades  
 Test Compound: Vanadyl sulfate  
 CAS Number: 27774-13-6

Date Report Requested: 01/10/2022  
 Time Report Requested: 10:57:04  
 Lab: Battelle

Male: Core Males

	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		9	9	10	10
<b>ALIMENTARY SYSTEM</b>						
ESOPHAGUS	(10)	(0)	(0)	(0)	(0)	(10)
GALLBLADDER	(10)	(0)	(0)	(0)	(0)	(9)
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)	(9)	(9)	(9)	(10)
EPITHELIUM; HYPERPLASIA				2 [1.0]	3 [1.3]	9 [1.9]
INTESTINE, SMALL, JEJUNUM	(10)	(0)	(0)	(0)	(10)	(10)
EPITHELIUM; HYPERPLASIA						1 [2.0]
LIVER	(10)	(0)	(0)	(0)	(0)	(10)
INFILTRATION, CELLULAR; MIXED CELL						3 [1.0]
PANCREAS	(10)	(0)	(0)	(0)	(0)	(10)
SALIVARY GLANDS	(10)	(0)	(0)	(0)	(0)	(10)
INFILTRATION, CELLULAR; MONONUCLEAR CELL	1 [1.0]					
STOMACH, FORESTOMACH	(10)	(0)	(0)	(0)	(0)	(10)
STOMACH, GLANDULAR	(10)	(0)	(0)	(0)	(0)	(10)
<b>CARDIOVASCULAR SYSTEM</b>						
AORTA	(10)	(0)	(0)	(0)	(0)	(9)
HEART	(10)	(0)	(0)	(0)	(0)	(10)

Study Number: C08004-04

Test Type: TOX

Route: Dosing in Water

Species/Strain: Mouse/B6C3F1/N

PA18: Incidence Rates of Non-Neoplastic Lesions by Anatomic Site with Average Severity Grades

Test Compound: Vanadyl sulfate

CAS Number: 27774-13-6

Date Report Requested: 01/10/2022

Time Report Requested: 10:57:04

Lab: Battelle

Male: Core Males

	Treatment Groups (mg/L)					
	0	21.0	41.9	83.8	168	335
ENDOCRINE SYSTEM						
ADRENAL GLAND	(10)	(0)	(0)	(0)	(0)	(10)
ISLETS, PANCREATIC	(10)	(0)	(0)	(0)	(0)	(10)
PARATHYROID GLAND	(9)	(0)	(0)	(0)	(0)	(8)
PITUITARY GLAND	(10)	(0)	(0)	(0)	(0)	(10)
THYROID GLAND	(10)	(0)	(0)	(0)	(0)	(9)
GENERAL BODY SYSTEM						
No Tissues/Organs Examined						
GENITAL SYSTEM						
EPIDIDYMIS	(10)	(0)	(0)	(0)	(0)	(10)
PREPUTIAL GLAND	(10)	(0)	(0)	(0)	(0)	(10)
PROSTATE	(10)	(0)	(0)	(0)	(0)	(10)
INFILTRATION, CELLULAR; MONONUCLEAR CELL	1 [1.0]					
SEMINAL VESICLE	(10)	(0)	(0)	(0)	(0)	(10)
TESTIS	(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)
EXTRAMEDULLARY HEMATOPOEISIS; INCREASED	1 [1.0]					1 [1.0]
THYMUS	(10)	(0)	(0)	(0)	(0)	(10)
INTEGUMENTARY SYSTEM						
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)

Study Number: C08004-04  
 Test Type: TOX  
 Route: Dosing in Water  
 Species/Strain: Mouse/B6C3F1/N

PA18: Incidence Rates of Non-Neoplastic Lesions by Anatomic Site with Average Severity Grades  
 Test Compound: Vanadyl sulfate  
 CAS Number: 27774-13-6

Date Report Requested: 01/10/2022  
 Time Report Requested: 10:57:04  
 Lab: Battelle

Male: Core Males

	Treatment Groups (mg/L)					
	0	21.0	41.9	83.8	168	335
NERVOUS SYSTEM						
BRAIN	(10)	(0)	(0)	(0)	(0)	(10)
NERVE, SCIATIC	(10)	(0)	(0)	(0)	(0)	(10)
NERVE, TRIGEMINAL	(10)	(0)	(0)	(0)	(0)	(10)
SPINAL CORD	(10)	(0)	(0)	(0)	(0)	(10)
RESPIRATORY SYSTEM						
LUNG	(10)	(0)	(0)	(0)	(0)	(10)
NOSE	(10)	(0)	(0)	(0)	(0)	(10)
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)
URINARY SYSTEM						
KIDNEY	(10)	(0)	(0)	(0)	(0)	(10)
CHRONIC PROGRESSIVE NEPHROPATHY	3 [1.0]					1 [1.0]
INFARCT	1 [1.0]					
INFILTRATION, CELLULAR; MONONUCLEAR CELL	5 [1.0]					2 [1.0]
PELVIS; INFLAMMATION; ACUTE						1 [1.0]
URINARY BLADDER	(10)	(0)	(0)	(0)	(0)	(10)

Study Number: C08004-04  
 Test Type: TOX  
 Route: Dosing in Water  
 Species/Strain: Mouse/B6C3F1/N

PA18: Incidence Rates of Non-Neoplastic Lesions by Anatomic Site with Average Severity Grades  
 Test Compound: Vanadyl sulfate  
 CAS Number: 27774-13-6

Date Report Requested: 01/10/2022  
 Time Report Requested: 10:57:04  
 Lab: Battelle

Female: Core Females

	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
<b>ALIMENTARY SYSTEM</b>						
ESOPHAGUS	(10)	(0)	(0)	(0)	(0)	(10)
GALLBLADDER	(10)	(0)	(0)	(0)	(0)	(9)
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)	(10)	(9)	(10)	(10)
EPITHELIUM; HYPERPLASIA				1 [1.0]	5 [1.4]	10 [1.9]
INTESTINE, SMALL, JEJUNUM	(10)	(0)	(10)	(10)	(10)	(10)
EPITHELIUM; HYPERPLASIA					1 [1.0]	2 [2.0]
LIVER	(10)	(0)	(0)	(0)	(0)	(10)
INFILTRATION, CELLULAR; MIXED CELL	3 [1.0]					1 [1.0]
NECROSIS; FOCAL	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)
<b>CARDIOVASCULAR SYSTEM</b>						
AORTA	(10)	(0)	(0)	(0)	(0)	(10)
HEART	(10)	(0)	(0)	(0)	(0)	(10)

Study Number: C08004-04  
 Test Type: TOX  
 Route: Dosing in Water  
 Species/Strain: Mouse/B6C3F1/N

PA18: Incidence Rates of Non-Neoplastic Lesions by Anatomic Site with Average Severity Grades  
 Test Compound: Vanadyl sulfate  
 CAS Number: 27774-13-6

Date Report Requested: 01/10/2022  
 Time Report Requested: 10:57:04  
 Lab: Battelle

Female: Core Females

	Treatment Groups (mg/L)					
	0	21.0	41.9	83.8	168	335
<b>ENDOCRINE SYSTEM</b>						
ADRENAL GLAND	(10)	(0)	(0)	(0)	(0)	(10)
ISLETS, PANCREATIC	(10)	(0)	(0)	(0)	(0)	(10)
PARATHYROID GLAND	(7)	(0)	(0)	(0)	(0)	(6)
PITUITARY GLAND	(9)	(0)	(0)	(0)	(0)	(10)
THYROID GLAND	(10)	(0)	(0)	(0)	(0)	(10)
THYMUS; ECTOPIC TISSUE						1
<b>GENERAL BODY SYSTEM</b>						
No Tissues/Organs Examined						
<b>GENITAL SYSTEM</b>						
CERVIX	(10)	(0)	(0)	(0)	(0)	(10)
CLITORAL GLAND	(10)	(0)	(0)	(0)	(0)	(10)
OVARY	(10)	(0)	(0)	(0)	(0)	(10)
THROMBUS	1					
UTERUS	(10)	(0)	(0)	(0)	(0)	(10)
VAGINA	(10)	(0)	(0)	(0)	(0)	(10)
<b>HEMATOLYMPHOID SYSTEM</b>						
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)
EXTRAMEDULLARY HEMATOPOEISIS; INCREASED	2 [1.5]					4 [1.3]
THYMUS	(10)	(0)	(0)	(0)	(0)	(10)
<b>INTEGUMENTARY SYSTEM</b>						
MAMMARY GLAND	(10)	(0)	(0)	(0)	(0)	(10)
SKIN	(10)	(0)	(0)	(0)	(0)	(10)

Study Number: C08004-04  
 Test Type: TOX  
 Route: Dosing in Water  
 Species/Strain: Mouse/B6C3F1/N

PA18: Incidence Rates of Non-Neoplastic Lesions by Anatomic Site with Average Severity Grades  
 Test Compound: Vanadyl sulfate  
 CAS Number: 27774-13-6

Date Report Requested: 01/10/2022  
 Time Report Requested: 10:57:04  
 Lab: Battelle

Female: Core Females

	Treatment Groups (mg/L)					
	0	21.0	41.9	83.8	168	335
<b>MUSCULOSKELETAL SYSTEM</b>						
BONE, FEMUR	(10)	(0)	(0)	(0)	(0)	(10)
MUSCLE, THIGH	(10)	(0)	(0)	(0)	(0)	(10)
DEGENERATION	1 [1.0]					
<b>NERVOUS SYSTEM</b>						
BRAIN	(10)	(0)	(0)	(0)	(0)	(10)
NERVE, SCIATIC	(10)	(0)	(0)	(0)	(0)	(10)
NERVE, TRIGEMINAL	(10)	(0)	(0)	(0)	(0)	(10)
SPINAL CORD	(10)	(0)	(0)	(0)	(0)	(10)
<b>RESPIRATORY SYSTEM</b>						
LUNG	(10)	(0)	(0)	(0)	(0)	(10)
NOSE	(10)	(0)	(0)	(0)	(0)	(10)
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)
<b>URINARY SYSTEM</b>						
KIDNEY	(10)	(0)	(0)	(0)	(0)	(10)
CHRONIC PROGRESSIVE NEPHROPATHY	1 [1.0]					2 [1.0]
INFILTRATION, CELLULAR; MONONUCLEAR CELL	5 [1.0]					1 [1.0]
URINARY BLADDER	(10)	(0)	(0)	(0)	(0)	(10)

**Study Number:** C08004-04  
**Test Type:** TOX  
**Route:** Dosing in Water  
**Species/Strain:** Mouse/B6C3F1/N

**PA18: Incidence Rates of Non-Neoplastic Lesions by Anatomic Site with Average Severity Grades**  
**Test Compound:** Vanadyl sulfate  
**CAS Number:** 27774-13-6

**Date Report Requested:** 01/10/2022  
**Time Report Requested:** 10:57:04  
**Lab:** Battelle

#### LEGEND

---

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

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