

Experiment Number: C08004-01

Test Type: TOX

Route: Dosing in Water

Species/Strain: Rat/Harlan Sprague Dawley

PA46: Summary of Gross Pathology

Test Compound: Vanadyl sulfate

CAS Number: 27774-13-6

Date Report Requested: 03/17/2016

Time Report Requested: 12:28:18

Lab: Battelle

C Number: C08004-01

Cage Range: All

Date Range: All

Reasons For Removal: All

Removal Date Range: All

Treatment Groups: All

Study Gender: Both

Experiment Number: C08004-01

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Route: Dosing in Water

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Lab: Battelle

| | Male | | | | | |
|---------------------------------------|-------------------------|-----|-----|-----|------|------|
| | Treatment Groups (mg/L) | | | | | |
| | 0 | 125 | 250 | 500 | 1000 | 2000 |
| Disposition Summary | | | | | | |
| Animals Initially In Study | 5 | 5 | 5 | 5 | 5 | 5 |
| Early Deaths | | | | | | |
| Survivors | | | | | | |
| Scheduled sacrifice, terminal (SD 15) | 5 | 5 | 5 | 5 | 5 | 5 |
| Number of Animals Examined | 5 | 5 | 5 | 5 | 5 | 5 |
| ALIMENTARY SYSTEM | | | | | | |
| ESOPHAGUS | (5) | (5) | (5) | (5) | (5) | (5) |
| INTESTINE, LARGE, CECUM | (5) | (5) | (5) | (5) | (5) | (5) |
| INTESTINE, LARGE, COLON | (5) | (5) | (5) | (5) | (5) | (5) |
| INTESTINE, LARGE, RECTUM | (5) | (5) | (5) | (5) | (5) | (5) |
| INTESTINE, SMALL, DUODENUM | (5) | (5) | (5) | (5) | (5) | (5) |
| INTESTINE, SMALL, ILEUM | (5) | (5) | (5) | (5) | (5) | (5) |
| INTESTINE, SMALL, JEJUNUM | (5) | (5) | (5) | (5) | (5) | (5) |
| LIVER | (5) | (5) | (5) | (5) | (5) | (5) |
| MESENTARY | (5) | (5) | (5) | (5) | (5) | (5) |
| PANCREAS | (5) | (5) | (5) | (5) | (5) | (5) |
| PHARYNX | (5) | (5) | (5) | (5) | (5) | (5) |
| SALIVARY GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| STOMACH | (5) | (5) | (5) | (5) | (5) | (5) |
| TONGUE | (5) | (5) | (5) | (5) | (5) | (5) |
| TOOTH | (5) | (5) | (5) | (5) | (5) | (5) |
| CARDIOVASCULAR SYSTEM | | | | | | |
| BLOOD VESSEL | (5) | (5) | (5) | (5) | (5) | (5) |
| HEART | (5) | (5) | (5) | (5) | (5) | (5) |

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Lab: Battelle

| | Male | | | | | |
|---------------------|-------------------------|-----|-----|-----|------|------|
| | Treatment Groups (mg/L) | | | | | |
| | 0 | 125 | 250 | 500 | 1000 | 2000 |
| ENDOCRINE SYSTEM | | | | | | |
| ADRENAL GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| PARATHYROID GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| PITUITARY GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| THYROID GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| GENERAL BODY SYSTEM | | | | | | |
| CAVITY, ABDOMINAL | (5) | (5) | (5) | (5) | (5) | (5) |
| CAVITY, NASAL | (5) | (5) | (5) | (5) | (5) | (5) |
| CAVITY, THORACIC | (5) | (5) | (5) | (5) | (5) | (5) |
| WHOLE BODY | (5) | (5) | (5) | (5) | (5) | (5) |
| GENITAL SYSTEM | | | | | | |
| COAGULATING GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| EPIDIDYMIS, LEFT | (5) | (5) | (5) | (5) | (5) | (5) |
| EPIDIDYMIS, RIGHT | (5) | (5) | (5) | (5) | (5) | (5) |
| PENIS | (5) | (5) | (5) | (5) | (5) | (5) |
| PREPUTIAL GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| PROSTATE GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| SEMINAL VESICLE | (5) | (5) | (5) | (5) | (5) | (5) |
| TESTIS, LEFT | (5) | (5) | (5) | (5) | (5) | (5) |
| TESTIS, RIGHT | (5) | (5) | (5) | (5) | (5) | (5) |

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Lab: Battelle

Male

Treatment Groups (mg/L)

| | 0 | 125 | 250 | 500 | 1000 | 2000 |
|-------------------------|-----|-----|-----|-----|------|------|
| HEMATOPOIETIC SYSTEM | | | | | | |
| BLOOD | (5) | (5) | (5) | (5) | (5) | (5) |
| BONE MARROW | (5) | (5) | (5) | (5) | (5) | (5) |
| LYMPH NODE | (5) | (5) | (5) | (5) | (5) | (5) |
| LYMPH NODE, BRONCHIAL | (5) | (5) | (5) | (5) | (5) | (5) |
| LYMPH NODE, MANDIBULAR | (5) | (5) | (5) | (5) | (5) | (5) |
| LYMPH NODE, MEDIASTINAL | (5) | (5) | (5) | (5) | (5) | (5) |
| LYMPH NODE, MESENTERIC | (5) | (5) | (5) | (5) | (5) | (5) |
| SPLEEN | (5) | (5) | (5) | (5) | (5) | (5) |
| THYMUS | (5) | (5) | (5) | (5) | (5) | (5) |
| INTEGUMENTARY SYSTEM | | | | | | |
| MAMMARY GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| SKIN | (5) | (5) | (5) | (5) | (5) | (5) |
| MUSCULOSKELETAL SYSTEM | | | | | | |
| BONE | (5) | (5) | (5) | (5) | (5) | (5) |
| SKELETAL MUSCLE | (5) | (5) | (5) | (5) | (5) | (5) |
| NERVOUS SYSTEM | | | | | | |
| BRAIN | (5) | (5) | (5) | (5) | (5) | (5) |
| NERVE, SCIATIC | (5) | (5) | (5) | (5) | (5) | (5) |
| NERVE, TIBIAL | (5) | (5) | (5) | (5) | (5) | (5) |
| NERVE, TRIGEMINAL | (5) | (5) | (5) | (5) | (5) | (5) |
| SPINAL CORD | (5) | (5) | (5) | (5) | (5) | (5) |
| RESPIRATORY SYSTEM | | | | | | |
| LARYNX | (5) | (5) | (5) | (5) | (5) | (5) |
| LUNG | (5) | (5) | (5) | (5) | (5) | (5) |
| TRACHEA | (5) | (5) | (5) | (5) | (5) | (5) |

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Time Report Requested: 12:28:18

Lab: Battelle

Male

Treatment Groups (mg/L)

| | 0 | 125 | 250 | 500 | 1000 | 2000 |
|-----------------------|-----|-----|-----|-----|------|------|
| SPECIAL SENSES SYSTEM | | | | | | |
| EYE | (5) | (5) | (5) | (5) | (5) | (5) |
| HARDERIAN GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| LACRIMAL GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| ZYMBALS GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| URINARY SYSTEM | | | | | | |
| KIDNEY, LEFT | (5) | (5) | (5) | (5) | (5) | (5) |
| KIDNEY, RIGHT | (5) | (5) | (5) | (5) | (5) | (5) |
| URETER | (5) | (5) | (5) | (5) | (5) | (5) |
| URINARY BLADDER | (5) | (5) | (5) | (5) | (5) | (5) |

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Time Report Requested: 12:28:18

Lab: Battelle

| | Female | | | | | |
|---------------------------------------|-------------------------|-----|-----|-----|------|------|
| | Treatment Groups (mg/L) | | | | | |
| | 0 | 125 | 250 | 500 | 1000 | 2000 |
| Disposition Summary | | | | | | |
| Animals Initially In Study | 5 | 5 | 5 | 5 | 5 | 5 |
| Early Deaths | | | | | | |
| Survivors | | | | | | |
| Scheduled sacrifice, terminal (SD 15) | 5 | 5 | 5 | 5 | 5 | 5 |
| Number of Animals Examined | 5 | 5 | 5 | 5 | 5 | 5 |
| ALIMENTARY SYSTEM | | | | | | |
| ESOPHAGUS | (5) | (5) | (5) | (5) | (5) | (5) |
| INTESTINE, LARGE, CECUM | (5) | (5) | (5) | (5) | (5) | (5) |
| INTESTINE, LARGE, COLON | (5) | (5) | (5) | (5) | (5) | (5) |
| INTESTINE, LARGE, RECTUM | (5) | (5) | (5) | (5) | (5) | (5) |
| INTESTINE, SMALL, DUODENUM | (5) | (5) | (5) | (5) | (5) | (5) |
| INTESTINE, SMALL, ILEUM | (5) | (5) | (5) | (5) | (5) | (5) |
| INTESTINE, SMALL, JEJUNUM | (5) | (5) | (5) | (5) | (5) | (5) |
| LIVER | (5) | (5) | (5) | (5) | (5) | (5) |
| MESENTARY | (5) | (5) | (5) | (5) | (5) | (5) |
| PANCREAS | (5) | (5) | (5) | (5) | (5) | (5) |
| PHARYNX | (5) | (5) | (5) | (5) | (5) | (5) |
| SALIVARY GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| STOMACH | (5) | (5) | (5) | (5) | (5) | (5) |
| TONGUE | (5) | (5) | (5) | (5) | (5) | (5) |
| TOOTH | (5) | (5) | (5) | (5) | (5) | (5) |
| CARDIOVASCULAR SYSTEM | | | | | | |
| BLOOD VESSEL | (5) | (5) | (5) | (5) | (5) | (5) |
| HEART | (5) | (5) | (5) | (5) | (5) | (5) |

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Lab: Battelle

| | Female | | | | | |
|-------------------------|-------------------------|-----|-----|-----|------|------|
| | Treatment Groups (mg/L) | | | | | |
| | 0 | 125 | 250 | 500 | 1000 | 2000 |
| ENDOCRINE SYSTEM | | | | | | |
| ADRENAL GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| PARATHYROID GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| PITUITARY GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| THYROID GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| GENERAL BODY SYSTEM | | | | | | |
| CAVITY, ABDOMINAL | (5) | (5) | (5) | (5) | (5) | (5) |
| CAVITY, NASAL | (5) | (5) | (5) | (5) | (5) | (5) |
| CAVITY, THORACIC | (5) | (5) | (5) | (5) | (5) | (5) |
| WHOLE BODY | (5) | (5) | (5) | (5) | (5) | (5) |
| GENITAL SYSTEM | | | | | | |
| CLITORAL GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| OVARY, LEFT | (5) | (5) | (5) | (5) | (5) | (5) |
| OVARY, RIGHT | (5) | (5) | (5) | (5) | (5) | (5) |
| OVIDUCT | (5) | (5) | (5) | (5) | (5) | (5) |
| UTERUS | (5) | (5) | (5) | (5) | (5) | (5) |
| VAGINA | (5) | (5) | (5) | (5) | (5) | (5) |
| HEMATOPOIETIC SYSTEM | | | | | | |
| BLOOD | (5) | (5) | (5) | (5) | (5) | (5) |
| BONE MARROW | (5) | (5) | (5) | (5) | (5) | (5) |
| LYMPH NODE | (5) | (5) | (5) | (5) | (5) | (5) |
| LYMPH NODE, BRONCHIAL | (5) | (5) | (5) | (5) | (5) | (5) |
| LYMPH NODE, MANDIBULAR | (5) | (5) | (5) | (5) | (5) | (5) |
| LYMPH NODE, MEDIASTINAL | (5) | (5) | (5) | (5) | (5) | (5) |
| LYMPH NODE, MESENTERIC | (5) | (5) | (5) | (5) | (5) | (5) |
| SPLEEN | (5) | (5) | (5) | (5) | (5) | (5) |
| THYMUS | (5) | (5) | (5) | (5) | (5) | (5) |

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| | Female | | | | | |
|------------------------|-------------------------|-----|-----|-----|------|------|
| | Treatment Groups (mg/L) | | | | | |
| | 0 | 125 | 250 | 500 | 1000 | 2000 |
| INTEGUMENTARY SYSTEM | | | | | | |
| MAMMARY GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| SKIN | (5) | (5) | (5) | (5) | (5) | (5) |
| MUSCULOSKELETAL SYSTEM | | | | | | |
| BONE | (5) | (5) | (5) | (5) | (5) | (5) |
| SKELETAL MUSCLE | (5) | (5) | (5) | (5) | (5) | (5) |
| NERVOUS SYSTEM | | | | | | |
| BRAIN | (5) | (5) | (5) | (5) | (5) | (5) |
| NERVE, SCIATIC | (5) | (5) | (5) | (5) | (5) | (5) |
| NERVE, TIBIAL | (5) | (5) | (5) | (5) | (5) | (5) |
| NERVE, TRIGEMINAL | (5) | (5) | (5) | (5) | (5) | (5) |
| SPINAL CORD | (5) | (5) | (5) | (5) | (5) | (5) |
| RESPIRATORY SYSTEM | | | | | | |
| LARYNX | (5) | (5) | (5) | (5) | (5) | (5) |
| LUNG | (5) | (5) | (5) | (5) | (5) | (5) |
| TRACHEA | (5) | (5) | (5) | (5) | (5) | (5) |
| SPECIAL SENSES SYSTEM | | | | | | |
| EYE | (5) | (5) | (5) | (5) | (5) | (5) |
| HARDERIAN GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| LACRIMAL GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| ZYMBALS GLAND | (5) | (5) | (5) | (5) | (5) | (5) |
| URINARY SYSTEM | | | | | | |
| KIDNEY, LEFT | (5) | (5) | (5) | (5) | (5) | (5) |
| KIDNEY, RIGHT | (5) | (5) | (5) | (5) | (5) | (5) |
| URETER | (5) | (5) | (5) | (5) | (5) | (5) |
| URINARY BLADDER | (5) | (5) | (5) | (5) | (5) | (5) |

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LEGEND

Upper row denotes number of tissues examined displayed in parentheses

Lower row denotes number of tissues with observation

**** END OF REPORT ****