

Study Number: C08004-03

Test Type: TOX

Route: Dosing in Water

Species/Strain: Rat/Harlan Sprague Dawley

I04G: Mean Body Weight Gain

Test Compound: Vanadyl sulfate

CAS Number: 27774-13-6

Date Report Requested: 08/04/2021

Time Report Requested: 05:58:00

Lab: Battelle

Study Number:

C08004-03

Study Gender:

Both

PWG Approval Date:

See web page for date of PWG Approval

Version:

v1.2.9

Stat Version:

S

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F0 Females

Treatment Groups (mg/L)

| Phase | Days | 0 | | 21 | | 41.9 | | 83.8 | | 168 | | 335 | |
|-----------|--------------|----------------|------------|-------------|-----------|-------------|-----------|-------------|--------------|-------------|---------------|----------------|----|
| | | Wt Gain (g) | N | Wt Gain (g) | N | Wt Gain (g) | N | Wt Gain (g) | N | Wt Gain (g) | N | Wt Gain (g) | N |
| Gestation | 6 - 9 | 13.1 ± 0.8 | 15 | 14.4 ± 0.6 | 16 | 14.4 ± 1.0 | 16 | 14.8 ± 0.7 | 16 | 14.1 ± 0.8 | 15 | 10.9 ± 1.5 | 16 |
| | 9 - 12 | 15.0 ± 0.8 ** | 15 | 14.0 ± 0.9 | 16 | 14.1 ± 0.9 | 16 | 13.4 ± 0.7 | 16 | 12.3 ± 1.3 | 15 | 11.1 ± 0.7 ** | 16 |
| | 12 - 15 | 19.3 ± 0.7 | 15 | 21.2 ± 1.0 | 16 | 19.9 ± 1.7 | 16 | 18.3 ± 1.1 | 16 | 18.9 ± 0.9 | 15 | 18.6 ± 0.8 | 16 |
| | 15 - 18 | 41.3 ± 1.5 ** | 15 | 42.7 ± 1.6 | 16 | 41.3 ± 2.2 | 16 | 38.4 ± 2.3 | 16 | 36.6 ± 2.0 | 15 | 35.4 ± 1.7 * | 16 |
| | 18 - 21 | 51.8 ± 1.3 * | 15 | 51.3 ± 1.5 | 16 | 53.1 ± 2.9 | 16 | 44.4 ± 2.4 | 16 | 47.7 ± 2.8 | 15 | 43.0 ± 3.8 | 16 |
| | 6 - 21 | 140.6 ± 2.3 ** | 15 | 143.5 ± 4.0 | 16 | 142.7 ± 6.8 | 16 | 129.2 ± 4.3 | 16 | 129.6 ± 5.9 | 15 | 119.0 ± 5.7 ** | 16 |
| Lactation | 1 - 4 | 7.2 ± 1.6 | 15 | 5.0 ± 3.5 | 16 | 9.9 ± 2.0 | 16 | 10.3 ± 2.0 | 16 | 10.3 ± 1.9 | 15 | 10.1 ± 1.8 | 15 |
| | 4 - 7 | 9.2 ± 1.5 | 15 | 9.9 ± 1.4 | 16 | 7.5 ± 1.7 | 15 | 9.9 ± 2.4 | 15 | 10.1 ± 2.2 | 15 | 10.3 ± 2.2 | 15 |
| | 7 - 10 | 6.5 ± 2.3 * | 15 | 5.7 ± 2.5 | 16 | 7.6 ± 2.2 | 15 | 12.6 ± 2.8 | 15 | 9.0 ± 2.3 | 15 | 12.2 ± 2.3 | 15 |
| | 10 - 13 | 6.8 ± 2.2 | 15 | 0.4 ± 2.8 | 16 | 3.9 ± 2.2 | 15 | 3.5 ± 2.1 | 15 | 0.7 ± 2.4 | 15 | 4.1 ± 3.1 | 15 |
| | 13 - 16 | 3.8 ± 1.7 | 15 | 7.8 ± 2.3 | 16 | 10.6 ± 2.1 | 15 | 2.3 ± 2.4 | 15 | 10.4 ± 2.7 | 15 | 0.7 ± 3.6 | 15 |
| | 16 - 19 | -10.8 ± 1.9 | 15 | -7.0 ± 1.5 | 16 | -13.9 ± 2.2 | 15 | -4.5 ± 2.6 | 15 | -7.3 ± 2.7 | 15 | -3.5 ± 3.4 | 15 |
| | 19 - 21 | -5.5 ± 2.0 | 15 | -2.7 ± 2.2 | 16 | -0.6 ± 3.1 | 15 | -4.5 ± 2.1 | 14 | -5.8 ± 2.3 | 15 | -4.9 ± 3.0 | 15 |
| | 21 - 25 | -17.6 ± 2.9 | 15 | -24.8 ± 2.2 | 16 | -24.0 ± 2.8 | 15 | -14.5 ± 2.8 | 14 | -15.2 ± 2.8 | 15 | -15.0 ± 3.3 | 15 |
| | 25 - 28 | 2.4 ± 1.9 | 15 | -1.8 ± 1.1 | 16 | 0.0 ± 2.8 | 15 | -3.1 ± 2.2 | 14 | -0.6 ± 2.1 | 15 | -0.3 ± 2.4 | 15 |
| 1 - 28 | 2.1 ± 2.7 ** | 15 | -7.5 ± 3.9 | 16 | 0.5 ± 2.3 | 15 | 8.4 ± 3.1 | 14 | 11.8 ± 3.1 * | 15 | 13.6 ± 2.3 ** | 15 | |

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Lab: Battelle

F1 Males: All F1 Animals

| Phase | Days | Treatment Groups (mg/L) | | | | | | | | | | | |
|----------|-----------------|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------|
| | | 0 | | 21 | | 41.9 | | 83.8 | | 168 | | 335 | |
| | | Wt Gain (g) | N | Wt Gain (g) | N | Wt Gain (g) | N | Wt Gain (g) | N | Wt Gain (g) | N | Wt Gain (g) | N |
| PND | 28 - 35 | 39.4 ± 1.7 | 15 (12) | 35.2 ± 2.1 | 15 (14) | 40.0 ± 1.9 | 15 (11) | 37.7 ± 2.7 | 14 (11) | 39.4 ± 1.0 | 15 (12) | 33.0 ± 0.9 | 15 (13) |
| | 35 - 42 | 45.9 ± 1.6 | 15 (12) | 45.5 ± 1.8 | 15 (14) | 47.2 ± 2.0 | 15 (11) | 45.7 ± 1.6 | 14 (11) | 45.7 ± 0.9 | 15 (12) | 42.8 ± 1.5 | 15 (13) |
| | 42 - 49 | 47.5 ± 1.5 ** | 15 (12) | 51.4 ± 1.5 | 15 (14) | 49.5 ± 1.5 | 15 (11) | 49.2 ± 1.9 | 14 (11) | 46.4 ± 1.1 | 15 (12) | 43.7 ± 1.3 | 15 (13) |
| | 49 - 56 | 43.2 ± 1.9 | 15 (12) | 45.8 ± 1.2 | 15 (14) | 46.5 ± 0.9 | 15 (11) | 45.7 ± 1.6 | 14 (11) | 43.5 ± 1.5 | 15 (12) | 43.0 ± 1.1 | 15 (13) |
| | 56 - 63 | 42.6 ± 2.3 | 15 (12) | 42.0 ± 1.0 | 15 (14) | 40.9 ± 1.6 | 15 (11) | 40.2 ± 1.3 | 14 (11) | 40.1 ± 1.4 | 15 (12) | 42.4 ± 1.3 | 15 (13) |
| | 63 - 70 | 32.0 ± 2.6 * | 15 (12) | 32.8 ± 1.3 | 15 (14) | 30.2 ± 1.3 | 15 (11) | 31.9 ± 1.6 | 14 (11) | 26.1 ± 1.6 | 15 (12) | 26.9 ± 2.3 | 15 (13) |
| | 70 - 77 | 23.4 ± 2.1 | 15 (12) | 24.5 ± 2.2 | 15 (14) | 24.4 ± 1.3 | 15 (11) | 24.4 ± 1.5 | 14 (11) | 24.2 ± 2.4 | 15 (12) | 25.2 ± 2.5 | 15 (13) |
| | 77 - 84 | 21.2 ± 1.8 | 15 (12) | 21.3 ± 2.9 | 15 (14) | 19.0 ± 1.4 | 15 (11) | 17.8 ± 1.2 | 14 (11) | 18.1 ± 0.7 | 15 (12) | 17.1 ± 2.6 | 15 (13) |
| | 84 - 91 | 13.9 ± 2.1 | 15 (12) | 18.2 ± 1.4 | 15 (14) | 17.0 ± 1.7 | 15 (11) | 16.6 ± 1.2 | 14 (11) | 15.3 ± 1.0 | 15 (12) | 13.1 ± 3.7 | 15 (13) |
| | 91 - 98 | 15.5 ± 1.7 | 15 (12) | 8.5 ± 8.4 | 15 (14) | 15.2 ± 3.0 | 15 (11) | 16.2 ± 1.0 | 14 (11) | 15.4 ± 0.8 | 15 (12) | 20.0 ± 2.9 | 15 (13) |
| | 98 - 105 | 9.9 ± 1.6 | 15 (12) | 22.9 ± 8.6 | 15 (14) | 10.2 ± 1.1 | 15 (11) | 12.0 ± 1.5 | 13 (10) | 11.3 ± 1.1 | 15 (12) | 8.8 ± 0.8 | 15 (13) |
| | 105 - 112 | 12.3 ± 1.5 | 15 (12) | 12.3 ± 1.9 | 15 (14) | 10.3 ± 1.0 | 15 (11) | 10.3 ± 2.7 | 13 (10) | 0.1 ± 6.8 | 15 (12) | 9.8 ± 2.0 | 15 (13) |
| 28 - 112 | 346.8 ± 10.3 ** | 15 (12) | 360.3 ± 7.3 | 15 (14) | 350.5 ± 7.5 | 15 (11) | 346.9 ± 9.4 | 14 (11) | 325.6 ± 9.6 | 15 (12) | 326.0 ± 5.5 | 15 (13) | |

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F1 Females: All F1 Animals

| Phase | Days | Treatment Groups (mg/L) | | | | | | | | | | | |
|----------|-------------|-------------------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|---------|
| | | 0 | | 21 | | 41.9 | | 83.8 | | 168 | | 335 | |
| | | Wt Gain (g) | N | Wt Gain (g) | N | Wt Gain (g) | N | Wt Gain (g) | N | Wt Gain (g) | N | Wt Gain (g) | N |
| PND | 28 - 35 | 29.2 ± 1.3 ** | 15 (12) | 29.3 ± 1.0 | 15 (14) | 31.5 ± 1.2 | 15 (11) | 27.3 ± 1.1 | 14 (11) | 29.0 ± 0.9 | 15 (12) | 23.8 ± 1.0 ** | 15 (13) |
| | 35 - 42 | 29.3 ± 2.1 | 15 (12) | 31.1 ± 1.1 | 15 (14) | 33.4 ± 1.1 | 15 (11) | 32.8 ± 1.6 | 14 (11) | 33.6 ± 0.6 | 15 (12) | 30.1 ± 0.9 | 15 (13) |
| | 42 - 49 | 30.1 ± 2.4 | 15 (12) | 26.0 ± 1.2 | 15 (14) | 25.2 ± 1.4 | 15 (11) | 25.6 ± 1.1 | 14 (11) | 27.2 ± 1.6 | 15 (12) | 27.5 ± 0.9 | 15 (13) |
| | 49 - 56 | 19.6 ± 0.9 | 15 (12) | 24.0 ± 1.0 * | 15 (14) | 20.5 ± 1.3 | 15 (11) | 20.6 ± 1.4 | 14 (11) | 22.8 ± 1.6 | 15 (12) | 20.5 ± 0.8 | 15 (13) |
| | 56 - 63 | 20.5 ± 1.3 | 15 (12) | 15.0 ± 1.0 * | 15 (14) | 19.3 ± 1.4 | 15 (11) | 20.3 ± 1.7 | 14 (11) | 19.6 ± 1.3 | 15 (12) | 21.7 ± 1.6 | 15 (13) |
| | 63 - 70 | 11.4 ± 0.9 | 15 (12) | 15.4 ± 1.3 | 15 (14) | 14.3 ± 1.0 | 15 (11) | 11.1 ± 2.1 | 14 (11) | 13.9 ± 1.6 | 15 (12) | 11.6 ± 2.2 | 15 (13) |
| | 70 - 77 | 15.4 ± 2.5 | 15 (12) | 11.6 ± 1.1 | 15 (14) | 13.5 ± 2.0 | 15 (11) | 13.1 ± 1.4 | 14 (11) | 12.5 ± 2.3 | 15 (12) | 15.0 ± 2.1 | 15 (13) |
| | 77 - 84 | 8.8 ± 1.9 | 15 (12) | 10.3 ± 1.9 | 15 (14) | 10.5 ± 1.7 | 15 (11) | 14.1 ± 2.8 | 14 (11) | 12.0 ± 2.8 | 15 (12) | 6.8 ± 2.4 | 15 (13) |
| | 84 - 91 | 3.0 ± 1.9 | 15 (12) | 10.9 ± 2.9 | 15 (14) | 7.8 ± 1.6 | 15 (11) | 3.1 ± 2.5 | 14 (11) | 6.1 ± 3.0 | 15 (12) | 11.7 ± 2.6 | 15 (13) |
| | 91 - 98 | 12.2 ± 2.0 | 15 (12) | 4.3 ± 2.3 | 15 (14) | 6.9 ± 1.0 | 15 (11) | 4.9 ± 1.7 | 14 (11) | 6.1 ± 1.8 | 15 (12) | 6.1 ± 3.4 | 15 (13) |
| | 98 - 105 | 3.8 ± 1.9 | 15 (12) | 2.4 ± 1.6 | 15 (14) | 3.9 ± 1.9 | 15 (11) | 6.2 ± 1.8 | 14 (11) | 6.9 ± 2.5 | 15 (12) | 5.8 ± 3.1 | 15 (13) |
| | 105 - 112 | 0.2 ± 2.3 | 15 (12) | 7.4 ± 1.9 * | 15 (14) | 7.1 ± 1.5 | 15 (11) | 5.7 ± 3.0 | 14 (11) | 5.1 ± 2.0 | 15 (12) | 4.2 ± 1.6 | 15 (13) |
| 28 - 112 | 183.4 ± 4.9 | 15 (12) | 187.5 ± 4.2 | 15 (14) | 193.8 ± 6.6 | 15 (11) | 184.8 ± 5.1 | 14 (11) | 194.7 ± 6.1 | 15 (12) | 184.8 ± 3.5 | 15 (13) | |

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LEGEND

Data are displayed as mean \pm SEM

N is the number of animals (number of litters represented) for the F1 generation.

GD – Gestation Day; LD – Lactation Day; PND – Postnatal Day

In multigenerational studies, body weights reported for all animals until mating; pregnant animals only during gestation and lactation; all animals post-weaning.

For post-weaning F1 animals, All F1 Animals includes F1 Core and F1 Biosampling animals.

Statistical analysis for F0 animals performed by Jonckheere (trend) and Williams or Dunnett (pairwise) tests.

Statistical analysis for the F1 generation was performed using mixed models, with litter as a random effect for both trend and pairwise tests, and using Dunnett-Hsu adjustment for multiple comparisons.

Statistical significance for the control group indicates a significant trend test

Statistical significance for a treatment group indicates a significant pairwise test compared to the vehicle control group

* Statistically significant at $P \leq 0.05$

** Statistically significant at $P \leq 0.01$

**** END OF REPORT ****