

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

PA43: Hematology Summary
Test Compound: Vanadyl sulfate
CAS Number: 27774-13-6

Date Report Requested: 05/10/2022
Time Report Requested: 06:34:41
Lab: Battelle

Study Number: C08004-04
Study Gender: Both
PWG Approval Date: See web page for date of PWG Approval
Version: v1.4.1
Stat Version: v2.8.9A

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Male: Core Males

	Phase Day	Treatment Groups (mg/L)			
		0	21	41.9	83.8
Hematocrit (%)	SD 91 - 92	52.6 ± 0.5 (10)	52.4 ± 1.0 (9)	52.9 ± 0.3 (9)	52.0 ± 0.6 (9)
Percent of Control			99.7	100.6	99.0
Manual Hematocrit (%)	SD 91 - 92	47.8 ± 0.6 (10)	48.9 ± 0.4 (10)	48.7 ± 0.4 (10)	48.5 ± 0.5 (10)
Percent of Control			102.3	101.9	101.5
Hemoglobin (g/dL)	SD 91 - 92	15.4 ± 0.2 (10) **	15.4 ± 0.1 (9)	15.4 ± 0.1 (9)	15.1 ± 0.1 (9)
Percent of Control			100.4	99.8	98.1
Erythrocytes (10 ⁶ /uL)	SD 91 - 92	10.60 ± 0.12 (10) *	10.44 ± 0.19 (9)	10.68 ± 0.08 (9)	10.58 ± 0.12 (9)
Percent of Control			98.4	100.7	99.8
Reticulocytes (10 ³ /uL)	SD 91 - 92	265.8 ± 5.1 (10) **	264.2 ± 8.7 (9)	274.6 ± 9.4 (9)	276.8 ± 9.4 (9)
Percent of Control			99.4	103.3	104.2
Mean Cell Volume (fL)	SD 91 - 92	49.6 ± 0.2 (10) **	50.2 ± 0.3 (9)	49.5 ± 0.2 (9)	49.1 ± 0.2 (9)
Percent of Control			101.2	99.8	99.1
Mean Cell Hemoglobin (pg)	SD 91 - 92	14.5 ± 0.1 (10) **	14.8 ± 0.2 (9)	14.4 ± 0.1 (9)	14.3 ± 0.1 (9) *
Percent of Control			102.2	99.3	98.4
Mean Cell Hemoglobin Concentration (g/dL)	SD 91 - 92	29.3 ± 0.2 (10) **	29.5 ± 0.5 (9)	29.1 ± 0.1 (9)	29.0 ± 0.2 (9)
Percent of Control			100.9	99.3	99.2
Platelets (10 ³ /uL)	SD 91 - 92	1016 ± 19 (10)	973 ± 30 (9)	989 ± 19 (9)	1000 ± 33 (9)
Percent of Control			95.8	97.3	98.5
White Blood Cells (10 ³ /uL)	SD 91 - 92	4.22 ± 0.49 (10)	3.91 ± 0.44 (9)	4.41 ± 0.25 (9)	3.86 ± 0.49 (9)
Percent of Control			92.6	104.5	91.6
Neutrophils (10 ³ /uL)	SD 91 - 92	0.60 ± 0.07 (10)	0.65 ± 0.11 (9)	0.63 ± 0.07 (9)	0.53 ± 0.07 (9)
Percent of Control			107.8	104.7	88.4

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	Phase Day	Treatment Groups (mg/L)			
		0	21	41.9	83.8
Lymphocytes (10 ³ /uL)	SD 91 - 92	3.35 ± 0.39 (10)	3.01 ± 0.34 (9)	3.48 ± 0.20 (9)	3.08 ± 0.40 (9)
Percent of Control			90.0	104.0	91.9
Monocytes (10 ³ /uL)	SD 91 - 92	0.14 ± 0.02 (10)	0.11 ± 0.02 (9)	0.15 ± 0.03 (9)	0.14 ± 0.03 (9)
Percent of Control			81.1	111.9	102.2
Basophils (10 ³ /uL)	SD 91 - 92	0.01 ± 0.00 (10)	0.01 ± 0.00 (9)	0.01 ± 0.00 (9)	0.01 ± 0.00 (9)
Percent of Control			83.3	83.3	83.3
Eosinophils (10 ³ /uL)	SD 91 - 92	0.10 ± 0.03 (10)	0.11 ± 0.02 (9)	0.12 ± 0.03 (9)	0.09 ± 0.02 (9)
Percent of Control			109.0	115.4	89.5
Large Unstained Cells (10 ³ /uL)	SD 91 - 92	0.02 ± 0.00 (10)	0.01 ± 0.00 (9)	0.02 ± 0.00 (9)	0.01 ± 0.00 (9)
Percent of Control			69.4	104.2	90.3

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	Phase Day	Treatment Groups (mg/L)	
		168	335
Hematocrit (%)	SD 91 - 92	52.4 ± 0.5 (9)	51.6 ± 0.4 (10)
Percent of Control		99.7	98.1
Manual Hematocrit (%)	SD 91 - 92	48.2 ± 0.2 (10)	48.0 ± 0.4 (10)
Percent of Control		100.8	100.4
Hemoglobin (g/dL)	SD 91 - 92	15.0 ± 0.1 (9)	14.6 ± 0.1 (10) **
Percent of Control		97.5	94.9
Erythrocytes (10 ⁶ /uL)	SD 91 - 92	10.79 ± 0.14 (9)	10.98 ± 0.10 (10)
Percent of Control		101.8	103.6
Reticulocytes (10 ³ /uL)	SD 91 - 92	272.5 ± 8.7 (9)	302.0 ± 7.0 (9) **
Percent of Control		102.6	113.6
Mean Cell Volume (fL)	SD 91 - 92	48.6 ± 0.3 (9) *	47.0 ± 0.3 (10) **
Percent of Control		98.0	94.7
Mean Cell Hemoglobin (pg)	SD 91 - 92	13.9 ± 0.1 (9) **	13.3 ± 0.1 (10) **
Percent of Control		95.9	91.8
Mean Cell Hemoglobin Concentration (g/dL)	SD 91 - 92	28.7 ± 0.1 (9) **	28.4 ± 0.2 (10) **
Percent of Control		97.9	96.9
Platelets (10 ³ /uL)	SD 91 - 92	1016 ± 27 (9)	964 ± 58 (10)
Percent of Control		100.0	94.9
White Blood Cells (10 ³ /uL)	SD 91 - 92	3.75 ± 0.25 (9)	4.23 ± 0.42 (10)
Percent of Control		88.9	100.3
Neutrophils (10 ³ /uL)	SD 91 - 92	0.59 ± 0.13 (9)	0.64 ± 0.07 (10)
Percent of Control		98.2	105.5

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	Phase Day	Treatment Groups (mg/L)	
		168	335
Lymphocytes (10 ³ /uL)	SD 91 - 92	2.94 ± 0.26 (9)	3.33 ± 0.40 (10)
Percent of Control		87.8	99.5
Monocytes (10 ³ /uL)	SD 91 - 92	0.11 ± 0.01 (9)	0.11 ± 0.01 (10)
Percent of Control		80.3	80.3
Basophils (10 ³ /uL)	SD 91 - 92	0.01 ± 0.00 (9)	0.01 ± 0.00 (10)
Percent of Control		64.8	91.7
Eosinophils (10 ³ /uL)	SD 91 - 92	0.09 ± 0.01 (9)	0.13 ± 0.02 (10)
Percent of Control		89.5	125.2
Large Unstained Cells (10 ³ /uL)	SD 91 - 92	0.01 ± 0.00 (9)	0.01 ± 0.00 (10)
Percent of Control		69.4	75.0

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Female: Core Females

	Phase Day	Treatment Groups (mg/L)			
		0	21	41.9	83.8
Hematocrit (%)	SD 91	50.7 ± 0.5 (9)	46.6 ± 4.9 (9)	45.8 ± 4.6 (10)	51.8 ± 0.3 (10)
Percent of Control			92.0	90.4	102.2
Manual Hematocrit (%)	SD 91	48.4 ± 0.5 (10)	48.1 ± 0.4 (10)	47.9 ± 0.4 (10)	50.4 ± 0.8 (10)
Percent of Control			99.4	99.0	104.1
Hemoglobin (g/dL)	SD 91	15.1 ± 0.1 (9)	15.0 ± 0.1 (9)	13.7 ± 1.3 (10)	15.3 ± 0.1 (10)
Percent of Control			99.6	90.9	101.5
Erythrocytes (10 ⁶ /uL)	SD 91	10.14 ± 0.09 (9) **	9.30 ± 0.98 (9)	9.28 ± 0.94 (10)	10.51 ± 0.06 (10) *
Percent of Control			91.7	91.5	103.6
Reticulocytes (10 ³ /uL)	SD 91	264.6 ± 21.6 (9)	261.7 ± 29.9 (9)	254.4 ± 32.5 (10)	303.2 ± 28.1 (10)
Percent of Control			98.9	96.2	114.6
Mean Cell Volume (fL)	SD 91	50.0 ± 0.3 (9) **	50.0 ± 0.2 (9)	49.4 ± 0.3 (10)	49.3 ± 0.2 (10)
Percent of Control			100.1	98.8	98.6
Mean Cell Hemoglobin (pg)	SD 91	14.9 ± 0.1 (9) **	23.7 ± 9.0 (9)	15.7 ± 1.0 (10)	14.6 ± 0.1 (10) *
Percent of Control			159.2	105.3	98.0
Mean Cell Hemoglobin Concentration (g/dL)	SD 91	29.8 ± 0.2 (9) **	47.7 ± 18.4 (9)	31.8 ± 2.0 (10)	29.6 ± 0.2 (10)
Percent of Control			160.2	106.7	99.3
Platelets (10 ³ /uL)	SD 91	992 ± 38 (9)	852 ± 95 (9)	838 ± 85 (10)	915 ± 25 (10)
Percent of Control			85.8	84.4	92.2
White Blood Cells (10 ³ /uL)	SD 91	4.00 ± 0.36 (9)	3.79 ± 0.41 (9)	3.83 ± 0.24 (10)	4.30 ± 0.23 (10)
Percent of Control			94.6	95.6	107.4
Neutrophils (10 ³ /uL)	SD 91	0.52 ± 0.08 (9)	0.41 ± 0.04 (9)	0.39 ± 0.04 (10)	0.53 ± 0.05 (10)
Percent of Control			79.4	75.9	102.0

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Female: Core Females

	Phase Day	Treatment Groups (mg/L)			
		0	21	41.9	83.8
Lymphocytes (10 ³ /uL)	SD 91	3.26 ± 0.31 (9)	3.14 ± 0.35 (9)	3.23 ± 0.22 (10)	3.53 ± 0.20 (10)
Percent of Control			96.3	99.1	108.1
Monocytes (10 ³ /uL)	SD 91	0.13 ± 0.01 (9)	0.11 ± 0.01 (9)	0.11 ± 0.01 (10)	0.13 ± 0.01 (10)
Percent of Control			88.6	87.6	104.2
Basophils (10 ³ /uL)	SD 91	0.01 ± 0.00 (9)	0.01 ± 0.00 (9)	0.01 ± 0.00 (10)	0.01 ± 0.00 (10)
Percent of Control			100.0	81.0	126.0
Eosinophils (10 ³ /uL)	SD 91	0.07 ± 0.02 (9)	0.10 ± 0.02 (9)	0.06 ± 0.01 (10)	0.08 ± 0.01 (10)
Percent of Control			133.8	87.2	108.0
Large Unstained Cells (10 ³ /uL)	SD 91	0.02 ± 0.00 (9)	0.02 ± 0.00 (9)	0.01 ± 0.00 (10)	0.02 ± 0.00 (10)
Percent of Control			93.3	84.0	138.0

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	Phase Day	Treatment Groups (mg/L)	
		168	335
Hematocrit (%)	SD 91	51.3 ± 0.6 (10)	50.2 ± 0.6 (9)
Percent of Control		101.2	99.1
Manual Hematocrit (%)	SD 91	48.7 ± 1.0 (10)	48.1 ± 0.4 (10)
Percent of Control		100.6	99.4
Hemoglobin (g/dL)	SD 91	15.0 ± 0.2 (10)	14.4 ± 0.2 (9)
Percent of Control		99.1	95.7
Erythrocytes (10 ⁶ /uL)	SD 91	10.61 ± 0.12 (10) **	10.75 ± 0.13 (9) **
Percent of Control		104.6	106.0
Reticulocytes (10 ³ /uL)	SD 91	276.7 ± 11.5 (10)	251.4 ± 14.0 (9)
Percent of Control		104.6	95.0
Mean Cell Volume (fL)	SD 91	48.3 ± 0.2 (10) **	46.7 ± 0.3 (9) **
Percent of Control		96.7	93.5
Mean Cell Hemoglobin (pg)	SD 91	14.1 ± 0.1 (10) **	13.4 ± 0.1 (9) **
Percent of Control		94.9	90.4
Mean Cell Hemoglobin Concentration (g/dL)	SD 91	29.2 ± 0.1 (10) *	28.8 ± 0.1 (9) **
Percent of Control		98.0	96.7
Platelets (10 ³ /uL)	SD 91	895 ± 39 (10)	972 ± 48 (9)
Percent of Control		90.1	97.9
White Blood Cells (10 ³ /uL)	SD 91	3.65 ± 0.37 (10)	3.80 ± 0.28 (9)
Percent of Control		91.3	95.0
Neutrophils (10 ³ /uL)	SD 91	0.44 ± 0.04 (10)	0.50 ± 0.05 (9)
Percent of Control		85.2	97.4

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	Phase Day	Treatment Groups (mg/L)	
		168	335
Lymphocytes (10 ³ /uL)	SD 91	2.98 ± 0.32 (10)	3.07 ± 0.24 (9)
Percent of Control		91.3	94.1
Monocytes (10 ³ /uL)	SD 91	0.12 ± 0.02 (10)	0.12 ± 0.02 (9)
Percent of Control		95.5	97.4
Basophils (10 ³ /uL)	SD 91	0.01 ± 0.00 (10)	0.01 ± 0.00 (9)
Percent of Control		81.0	80.0
Eosinophils (10 ³ /uL)	SD 91	0.09 ± 0.01 (10)	0.08 ± 0.01 (9)
Percent of Control		120.5	107.7
Large Unstained Cells (10 ³ /uL)	SD 91	0.01 ± 0.00 (10)	0.02 ± 0.00 (9)
Percent of Control		84.0	120.0

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LEGEND

Values given as mean \pm SEM (N) with Percent of Control calculated by (dosed group mean / control group mean) x 100

SD – Study Day

Statistical analysis was performed by Jonckheere (trend) and Shirley or Dunn (pairwise) tests.

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 ****