

**Study Number:** C94043-04

**Test Type:** TOX

**Route:** Dosing in Water

**Species/Strain:** Mouse/B6C3F1/N

**C Number:**

**Study Gender:**

**PWG Approval Date**

**PA43: Hematology Summary**

**Test Compound:** Sodium Metavanadate

**CAS Number:** 13718-26-8

C94043-04

Both

See web page for date of PWG Approval

**Date Report Requested:** 01/24/2020

**Time Report Requested:** 15:09:25

**Lab:** Battelle

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**Male: Core Males**

	Phase Day	Treatment Groups (mg/L)			
		0	31.3	62.5	125
Hematocrit (%)	SD 91	53.6 ± 0.4 (10) **	54.1 ± 0.3 (10)	53.5 ± 0.4 (9)	52.4 ± 0.3 (10)
Percent of Control			101.0	99.8	97.8
Manual Hematocrit (%)	SD 91	46.5 ± 0.6 (10) **	47.4 ± 0.3 (10)	46.8 ± 0.6 (10)	45.8 ± 0.5 (10)
Percent of Control			101.9	100.6	98.5
Hemoglobin (g/dL)	SD 91	15.2 ± 0.1 (10) **	15.5 ± 0.1 (10)	15.1 ± 0.1 (9)	14.7 ± 0.1 (10) **
Percent of Control			101.5	99.4	96.6
Erythrocytes (10 <sup>6</sup> /uL)	SD 91	10.50 ± 0.08 (10) **	10.74 ± 0.05 (10)	10.71 ± 0.08 (9)	10.86 ± 0.11 (10) **
Percent of Control			102.3	102.0	103.5
Reticulocytes (10 <sup>3</sup> /uL)	SD 91	267.0 ± 7.0 (10) **	262.7 ± 5.6 (10)	262.6 ± 6.7 (9)	273.1 ± 5.2 (10)
Percent of Control			98.4	98.3	102.3
Nucleated Red Blood Cells (/100 WBC)	SD 91	0.00 ± 0.00 (10)	0.00 ± 0.00 (10)	0.00 ± 0.00 (10)	0.00 ± 0.00 (10)
Mean Cell Volume (fL)	SD 91	51.1 ± 0.2 (10) **	50.4 ± 0.2 (10) *	50.0 ± 0.2 (9) **	48.3 ± 0.2 (10) **
Percent of Control			98.7	97.9	94.5
Mean Cell Hemoglobin (pg)	SD 91	14.5 ± 0.1 (10) **	14.4 ± 0.1 (10)	14.1 ± 0.1 (9) **	13.5 ± 0.1 (10) **
Percent of Control			99.4	97.5	93.4
Mean Cell Hemoglobin Concentration (g/dL)	SD 91	28.4 ± 0.1 (10) **	28.6 ± 0.1 (10)	28.3 ± 0.2 (9)	28.1 ± 0.2 (10)
Percent of Control			100.7	99.5	98.8
Platelets (10 <sup>3</sup> /uL)	SD 91	1016 ± 64 (10) *	1015 ± 36 (10)	1110 ± 32 (9)	1101 ± 28 (10)
Percent of Control			100.0	109.3	108.4
White Blood Cells (10 <sup>3</sup> /uL)	SD 91	4.59 ± 0.30 (10)	4.56 ± 0.42 (10)	3.70 ± 0.40 (9)	4.14 ± 0.52 (10)
Percent of Control			99.3	80.6	90.1
Neutrophils (10 <sup>3</sup> /uL)	SD 91	0.69 ± 0.06 (10) **	0.57 ± 0.05 (10)	0.61 ± 0.04 (9)	0.53 ± 0.08 (10)

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**Male: Core Males**

	Phase Day	Treatment Groups (mg/L)			
		0	31.3	62.5	125
Percent of Control			83.1	88.3	76.8
Lymphocytes (10 <sup>3</sup> /uL)	SD 91	3.53 ± 0.24 (10)	3.58 ± 0.34 (10)	2.81 ± 0.34 (9)	3.35 ± 0.43 (10)
Percent of Control			101.4	79.4	94.9
Monocytes (10 <sup>3</sup> /uL)	SD 91	0.23 ± 0.04 (10) *	0.18 ± 0.03 (10)	0.14 ± 0.03 (9)	0.16 ± 0.02 (10)
Percent of Control			79.3	58.4	66.8
Basophils (10 <sup>3</sup> /uL)	SD 91	0.00 ± 0.00 (10)	0.01 ± 0.00 (10)	0.00 ± 0.00 (9)	0.01 ± 0.00 (10)
Percent of Control			150.0	111.1	175.0
Eosinophils (10 <sup>3</sup> /uL)	SD 91	0.11 ± 0.03 (10)	0.19 ± 0.05 (10)	0.13 ± 0.03 (9)	0.07 ± 0.02 (10)
Percent of Control			172.3	118.1	65.2
Large Unstained Cells (10 <sup>3</sup> /uL)	SD 91	0.02 ± 0.01 (10)	0.02 ± 0.00 (10)	0.02 ± 0.00 (9)	0.02 ± 0.01 (10)
Percent of Control			91.3	72.5	100.0

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**Male: Core Males**

	Phase Day	Treatment Groups (mg/L)	
		250	500
Hematocrit (%)	SD 91	52.0 ± 0.6 (10) *	51.4 ± 0.5 (9) **
Percent of Control		97.1	95.9
Manual Hematocrit (%)	SD 91	44.9 ± 0.5 (10)	45.0 ± 0.6 (9)
Percent of Control		96.6	96.8
Hemoglobin (g/dL)	SD 91	14.2 ± 0.2 (10) **	13.7 ± 0.1 (9) **
Percent of Control		93.6	89.7
Erythrocytes (10 <sup>6</sup> /uL)	SD 91	11.60 ± 0.11 (10) **	12.28 ± 0.11 (9) **
Percent of Control		110.5	117.0
Reticulocytes (10 <sup>3</sup> /uL)	SD 91	299.8 ± 9.7 (10) *	368.2 ± 9.2 (9) **
Percent of Control		112.3	137.9
Nucleated Red Blood Cells (/100 WBC)	SD 91	0.00 ± 0.00 (10)	0.00 ± 0.00 (9)
Mean Cell Volume (fL)	SD 91	44.9 ± 0.2 (10) **	41.9 ± 0.4 (9) **
Percent of Control		87.8	82.0
Mean Cell Hemoglobin (pg)	SD 91	12.3 ± 0.1 (10) **	11.1 ± 0.1 (9) **
Percent of Control		84.6	76.8
Mean Cell Hemoglobin Concentration (g/dL)	SD 91	27.4 ± 0.1 (10) **	26.6 ± 0.1 (9) **
Percent of Control		96.4	93.6
Platelets (10 <sup>3</sup> /uL)	SD 91	1091 ± 41 (10)	1162 ± 30 (9)
Percent of Control		107.4	114.4
White Blood Cells (10 <sup>3</sup> /uL)	SD 91	4.14 ± 0.40 (10)	3.57 ± 0.40 (9)
Percent of Control		90.1	77.7
Neutrophils (10 <sup>3</sup> /uL)	SD 91	0.49 ± 0.04 (10) *	0.47 ± 0.06 (9) *

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**Male: Core Males**

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	Phase Day	Treatment Groups (mg/L)	
		250	500
Percent of Control		70.7	67.9
Lymphocytes (10 <sup>3</sup> /uL)	SD 91	3.29 ± 0.32 (10)	2.85 ± 0.37 (9)
Percent of Control		93.1	80.7
Monocytes (10 <sup>3</sup> /uL)	SD 91	0.16 ± 0.02 (10)	0.13 ± 0.03 (9)
Percent of Control		66.8	55.6
Basophils (10 <sup>3</sup> /uL)	SD 91	0.00 ± 0.00 (10)	0.00 ± 0.00 (9)
Percent of Control		75.0	55.6
Eosinophils (10 <sup>3</sup> /uL)	SD 91	0.19 ± 0.05 (10)	0.11 ± 0.03 (9)
Percent of Control		168.8	98.2
Large Unstained Cells (10 <sup>3</sup> /uL)	SD 91	0.02 ± 0.00 (10)	0.01 ± 0.00 (9)
Percent of Control		65.2	58.0

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**Female: Core Females**

	Phase Day	Treatment Groups (mg/L)			
		0	31.3	62.5	125
Hematocrit (%)	SD 91	54.2 ± 0.7 (10)	55.0 ± 1.0 (9)	53.3 ± 0.7 (9)	53.9 ± 0.6 (9)
Percent of Control			101.5	98.4	99.5
Manual Hematocrit (%)	SD 91	47.4 ± 0.4 (10) *	48.0 ± 0.7 (10)	46.7 ± 0.4 (10)	46.4 ± 0.5 (10)
Percent of Control			101.3	98.5	97.9
Hemoglobin (g/dL)	SD 91	15.7 ± 0.2 (10) **	15.3 ± 0.6 (9)	15.4 ± 0.2 (9)	15.2 ± 0.1 (9)
Percent of Control			97.5	98.3	96.9
Erythrocytes (10 <sup>6</sup> /uL)	SD 91	10.58 ± 0.17 (10) **	10.81 ± 0.18 (9)	10.77 ± 0.14 (9)	11.57 ± 0.12 (9) **
Percent of Control			102.2	101.7	109.3
Reticulocytes (10 <sup>3</sup> /uL)	SD 91	310.8 ± 15.0 (10) **	280.9 ± 19.1 (9)	268.5 ± 17.2 (9)	352.9 ± 16.1 (9)
Percent of Control			90.4	86.4	113.5
Nucleated Red Blood Cells (/100 WBC)	SD 91	0.20 ± 0.13 (10)	0.10 ± 0.10 (10)	0.10 ± 0.10 (10)	0.10 ± 0.10 (10)
Percent of Control			50.0	50.0	50.0
Mean Cell Volume (fL)	SD 91	51.3 ± 0.3 (10) **	50.9 ± 0.3 (9)	49.5 ± 0.2 (9) **	46.6 ± 0.1 (9) **
Percent of Control			99.3	96.6	91.0
Mean Cell Hemoglobin (pg)	SD 91	14.8 ± 0.1 (10) **	14.1 ± 0.4 (9)	14.3 ± 0.1 (9) **	13.2 ± 0.1 (9) **
Percent of Control			95.3	96.5	88.7
Mean Cell Hemoglobin Concentration (g/dL)	SD 91	28.9 ± 0.1 (10) **	27.7 ± 0.8 (9)	28.9 ± 0.1 (9)	28.2 ± 0.1 (9) **
Percent of Control			95.8	99.9	97.4
Platelets (10 <sup>3</sup> /uL)	SD 91	921 ± 39 (10)	952 ± 54 (9)	1021 ± 40 (9)	982 ± 36 (9)
Percent of Control			103.3	110.9	106.6
White Blood Cells (10 <sup>3</sup> /uL)	SD 91	4.51 ± 0.35 (10)	4.41 ± 0.30 (9)	4.53 ± 0.37 (9)	4.61 ± 0.43 (9)
Percent of Control			97.9	100.4	102.3

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**Female: Core Females**

	Phase Day	Treatment Groups (mg/L)			
		0	31.3	62.5	125
Neutrophils (10 <sup>3</sup> /uL)	SD 91	0.54 ± 0.04 (10)	0.42 ± 0.05 (9)	0.50 ± 0.06 (9)	0.46 ± 0.05 (9)
Percent of Control			79.1	92.6	85.2
Lymphocytes (10 <sup>3</sup> /uL)	SD 91	3.70 ± 0.33 (10)	3.71 ± 0.27 (9)	3.73 ± 0.31 (9)	3.86 ± 0.36 (9)
Percent of Control			100.2	100.6	104.3
Monocytes (10 <sup>3</sup> /uL)	SD 91	0.17 ± 0.01 (10)	0.16 ± 0.02 (9)	0.18 ± 0.02 (9)	0.17 ± 0.02 (9)
Percent of Control			92.6	105.2	99.9
Basophils (10 <sup>3</sup> /uL)	SD 91	0.01 ± 0.00 (10) *	0.01 ± 0.00 (9)	0.01 ± 0.00 (9)	0.01 ± 0.00 (9)
Percent of Control			79.4	95.2	111.1
Eosinophils (10 <sup>3</sup> /uL)	SD 91	0.08 ± 0.02 (10) *	0.09 ± 0.04 (9)	0.10 ± 0.04 (9)	0.09 ± 0.02 (9)
Percent of Control			116.6	124.8	115.2
Large Unstained Cells (10 <sup>3</sup> /uL)	SD 91	0.01 ± 0.00 (10)	0.02 ± 0.01 (9)	0.02 ± 0.00 (9)	0.02 ± 0.00 (9)
Percent of Control			148.1	157.4	185.2

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	Phase Day	Treatment Groups (mg/L)	
		250	500
Hematocrit (%)	SD 91	54.7 ± 1.2 (9)	53.6 ± 0.7 (10)
Percent of Control		100.9	98.9
Manual Hematocrit (%)	SD 91	45.9 ± 0.8 (8)	46.5 ± 0.6 (10)
Percent of Control		96.8	98.1
Hemoglobin (g/dL)	SD 91	14.9 ± 0.3 (9)	14.3 ± 0.2 (10) **
Percent of Control		95.2	91.0
Erythrocytes (10 <sup>6</sup> /uL)	SD 91	12.57 ± 0.19 (9) **	13.25 ± 0.19 (10) **
Percent of Control		118.7	125.2
Reticulocytes (10 <sup>3</sup> /uL)	SD 91	406.8 ± 14.2 (9) **	465.7 ± 13.6 (10) **
Percent of Control		130.9	149.8
Nucleated Red Blood Cells (/100 WBC)	SD 91	0.00 ± 0.00 (9)	0.20 ± 0.13 (10)
Percent of Control		0.0	100.0
Mean Cell Volume (fL)	SD 91	43.5 ± 0.4 (9) **	40.5 ± 0.3 (10) **
Percent of Control		85.0	79.0
Mean Cell Hemoglobin (pg)	SD 91	11.9 ± 0.1 (9) **	10.8 ± 0.2 (10) **
Percent of Control		80.0	72.7
Mean Cell Hemoglobin Concentration (g/dL)	SD 91	27.3 ± 0.2 (9) **	26.6 ± 0.2 (10) **
Percent of Control		94.4	92.1
Platelets (10 <sup>3</sup> /uL)	SD 91	976 ± 43 (9)	864 ± 61 (10)
Percent of Control		105.9	93.8
White Blood Cells (10 <sup>3</sup> /uL)	SD 91	4.53 ± 0.37 (9)	4.95 ± 0.49 (10)
Percent of Control		100.4	109.8



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	Phase Day	Treatment Groups (mg/L)	
		250	500
Neutrophils (10 <sup>3</sup> /uL)	SD 91	0.59 ± 0.06 (9)	0.57 ± 0.09 (10)
Percent of Control		109.7	106.5
Lymphocytes (10 <sup>3</sup> /uL)	SD 91	3.68 ± 0.30 (9)	3.92 ± 0.37 (10)
Percent of Control		99.4	105.9
Monocytes (10 <sup>3</sup> /uL)	SD 91	0.15 ± 0.02 (9)	0.19 ± 0.02 (10)
Percent of Control		88.6	113.1
Basophils (10 <sup>3</sup> /uL)	SD 91	0.01 ± 0.00 (9)	0.01 ± 0.00 (10)
Percent of Control		127.0	157.1
Eosinophils (10 <sup>3</sup> /uL)	SD 91	0.08 ± 0.01 (9)	0.24 ± 0.05 (10)
Percent of Control		100.1	292.6
Large Unstained Cells (10 <sup>3</sup> /uL)	SD 91	0.02 ± 0.01 (9)	0.02 ± 0.00 (10)
Percent of Control		175.9	191.7

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#### LEGEND

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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 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 \*\***