

Experiment Number: C03038-02

Test Type: TOX

Route: Dosing in Water

Species/Strain: Mouse/B6C3F1/N

C Number:

C03038-02

Cage Range:

All

Date Range:

All

Reasons For Removal:

All

Removal Date Range:

All

Treatment Groups:

All

Study Gender:

Both

PA43: Hematology Summary

Test Compound: Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

Date Report Requested: 09/14/2017

Time Report Requested: 13:28:52

Lab: NTP

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PA43: Hematology Summary

Test Compound: Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

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Lab: NTP

Male

	Phase Day	Treatment Groups (mg/L)			
		0	125	250	500
Hematocrit (%)	SD 92	48.1 ± 0.4 (10)	48.5 ± 0.4 (10)	47.6 ± 0.5 (10)	47.3 ± 0.3 (10)
Percent of Control			101.0	99.1	98.4
Manual Hematocrit (%)	SD 92	48.9 ± 0.3 (10)	48.5 ± 0.5 (10)	48.8 ± 0.6 (10)	47.7 ± 0.4 (10)
Percent of Control			99.2	99.8	97.5
Hemoglobin (g/dL)	SD 92	15.2 ± 0.1 (10)	15.3 ± 0.1 (10)	15.0 ± 0.1 (10)	14.9 ± 0.1 (10)
Percent of Control			100.7	99.1	98.4
Erythrocytes (10 ⁶ /uL)	SD 92	10.23 ± 0.08 (10)	10.40 ± 0.09 (10)	10.14 ± 0.10 (10)	10.11 ± 0.09 (10)
Percent of Control			101.68	99.13	98.86
Reticulocytes (10 ³ /uL)	SD 92	234.3 ± 5.8 (10)	227.5 ± 9.7 (10)	233.8 ± 5.5 (10)	229.9 ± 7.0 (10)
Percent of Control			97.1	99.8	98.1
Mean Cell Volume (fL)	SD 92	47.0 ± 0.2 (10)	46.7 ± 0.1 (10)	47.0 ± 0.2 (10)	46.8 ± 0.2 (10)
Percent of Control			99.3	100.0	99.6
Mean Cell Hemoglobin (pg)	SD 92	14.8 ± 0.1 (10)	14.7 ± 0.1 (10)	14.8 ± 0.0 (10)	14.8 ± 0.1 (10)
Percent of Control			99.2	100.1	99.7
Mean Cell Hemoglobin Concentration (g/dL)	SD 92	31.5 ± 0.2 (10)	31.5 ± 0.2 (10)	31.6 ± 0.1 (10)	31.6 ± 0.2 (10)
Percent of Control			100.0	100.2	100.1
Platelets (10 ³ /uL)	SD 92	1043. ± 32 (10)	1050. ± 28 (10)	1046. ± 37 (10)	1038. ± 32 (10)
Percent of Control			101.	100.	100.
White Blood Cells (10 ³ /uL)	SD 92	5.91 ± 0.52 (10) **	4.87 ± 0.61 (10)	5.32 ± 0.42 (10)	4.94 ± 0.51 (10)
Percent of Control			82.36	90.02	83.55
Neutrophils (10 ³ /uL)	SD 92	0.70 ± 0.05 (10)	0.70 ± 0.08 (10)	0.69 ± 0.06 (10)	0.67 ± 0.07 (10)
Percent of Control			100.14	98.85	96.41

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CAS Number: 10213-10-2

Date Report Requested: 09/14/2017

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Lab: NTP

Male

	Phase Day	Treatment Groups (mg/L)			
		0	125	250	500
Lymphocytes (10 ³ /uL)	SD 92	4.83 ± 0.45 (10) **	3.93 ± 0.49 (10)	4.38 ± 0.34 (10)	4.07 ± 0.43 (10)
Percent of Control			81.40	90.66	84.30
Total Lymphocytes (10 ³ /uL)	SD 92	4.86 ± 0.45 (10) **	3.95 ± 0.50 (10)	4.41 ± 0.35 (10)	4.09 ± 0.43 (10)
Percent of Control			81.27	90.68	84.08
Monocytes (10 ³ /uL)	SD 92	0.20 ± 0.02 (10) **	0.13 ± 0.02 (10)	0.14 ± 0.02 (10)	0.10 ± 0.02 (10) **
Percent of Control			67.34	68.34	50.75
Basophils (10 ³ /uL)	SD 92	0.01 ± 0.00 (10) *	0.01 ± 0.00 (10)	0.01 ± 0.00 (10)	0.01 ± 0.00 (10)
Percent of Control			63.64	81.82	45.45
Eosinophils (10 ³ /uL)	SD 92	0.15 ± 0.03 (10) **	0.08 ± 0.01 (10) *	0.08 ± 0.01 (10) *	0.07 ± 0.02 (10) *
Percent of Control			55.86	55.86	51.03

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Male

	Phase Day	Treatment Groups (mg/L)	
		1000	2000
Hematocrit (%)	SD 92	46.8 ± 0.2 (10)	47.9 ± 0.4 (10)
Percent of Control		97.3	99.6
Manual Hematocrit (%)	SD 92	47.7 ± 0.4 (10)	48.4 ± 0.5 (10)
Percent of Control		97.5	99.0
Hemoglobin (g/dL)	SD 92	14.7 ± 0.1 (10) *	15.1 ± 0.1 (10)
Percent of Control		97.1	99.8
Erythrocytes (10 ⁶ /uL)	SD 92	10.01 ± 0.05 (10)	10.23 ± 0.08 (10)
Percent of Control		97.81	100.05
Reticulocytes (10 ³ /uL)	SD 92	229.6 ± 5.2 (10)	246.4 ± 7.5 (10)
Percent of Control		98.0	105.2
Mean Cell Volume (fL)	SD 92	46.8 ± 0.2 (10)	46.8 ± 0.1 (10)
Percent of Control		99.5	99.6
Mean Cell Hemoglobin (pg)	SD 92	14.7 ± 0.0 (10)	14.8 ± 0.1 (10)
Percent of Control		99.4	99.8
Mean Cell Hemoglobin Concentration (g/dL)	SD 92	31.5 ± 0.1 (10)	31.6 ± 0.1 (10)
Percent of Control		100.0	100.2
Platelets (10 ³ /uL)	SD 92	1087. ± 20 (10)	984. ± 28 (10)
Percent of Control		104.	94.
White Blood Cells (10 ³ /uL)	SD 92	4.20 ± 0.37 (10) **	3.83 ± 0.56 (10) **
Percent of Control		71.05	64.81
Neutrophils (10 ³ /uL)	SD 92	0.61 ± 0.06 (10)	0.55 ± 0.07 (10)
Percent of Control		87.80	79.20

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Male

	Phase Day	Treatment Groups (mg/L)	
		1000	2000
Lymphocytes (10 ³ /uL) Percent of Control	SD 92	3.41 ± 0.31 (10) ** 70.63	3.12 ± 0.45 (10) ** 64.56
Total Lymphocytes (10 ³ /uL) Percent of Control	SD 92	3.43 ± 0.31 (10) ** 70.53	3.13 ± 0.46 (10) ** 64.43
Monocytes (10 ³ /uL) Percent of Control	SD 92	0.09 ± 0.02 (10) ** 44.72	0.09 ± 0.03 (10) ** 44.22
Basophils (10 ³ /uL) Percent of Control	SD 92	0.00 ± 0.00 (10) 36.36	0.01 ± 0.00 (10) 45.45
Eosinophils (10 ³ /uL) Percent of Control	SD 92	0.07 ± 0.01 (10) ** 45.52	0.06 ± 0.02 (10) ** 38.62

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Lab: NTP

Female

	Phase Day	Treatment Groups (mg/L)			
		0	125	250	500
Hematocrit (%)	SD 92	48.1 ± 0.5 (10)	47.4 ± 0.7 (10)	47.5 ± 0.4 (10)	48.7 ± 0.6 (10)
Percent of Control			98.5	98.6	101.1
Manual Hematocrit (%)	SD 92	48.3 ± 0.7 (8) *	47.9 ± 0.7 (8)	48.3 ± 0.6 (9)	49.4 ± 0.4 (7)
Percent of Control			99.2	100.2	102.4
Hemoglobin (g/dL)	SD 92	15.7 ± 0.2 (10)	15.3 ± 0.2 (10)	15.3 ± 0.1 (10)	15.8 ± 0.2 (10)
Percent of Control			97.9	97.6	100.6
Erythrocytes (10 ⁶ /uL)	SD 92	10.32 ± 0.08 (10)	10.10 ± 0.14 (10)	10.07 ± 0.09 (10)	10.38 ± 0.10 (10)
Percent of Control			97.87	97.56	100.54
Reticulocytes (10 ³ /uL)	SD 92	250.5 ± 12.9 (10)	283.9 ± 20.8 (10)	250.9 ± 17.6 (10)	266.7 ± 15.0 (10)
Percent of Control			113.3	100.2	106.5
Mean Cell Volume (fL)	SD 92	46.6 ± 0.2 (10)	46.9 ± 0.2 (10)	47.1 ± 0.2 (10)	46.9 ± 0.2 (10)
Percent of Control			100.6	101.1	100.6
Mean Cell Hemoglobin (pg)	SD 92	15.2 ± 0.1 (10)	15.2 ± 0.1 (10)	15.2 ± 0.0 (10)	15.2 ± 0.1 (10)
Percent of Control			100.1	100.1	100.1
Mean Cell Hemoglobin Concentration (g/dL)	SD 92	32.5 ± 0.2 (10)	32.4 ± 0.2 (10)	32.2 ± 0.2 (10)	32.4 ± 0.2 (10)
Percent of Control			99.5	99.0	99.4
Platelets (10 ³ /uL)	SD 92	875. ± 49 (10) *	907. ± 44 (10)	960. ± 49 (10)	851. ± 54 (10)
Percent of Control			104.	110.	97.
White Blood Cells (10 ³ /uL)	SD 92	4.58 ± 0.45 (10)	5.14 ± 0.40 (10)	4.79 ± 0.43 (10)	4.19 ± 0.26 (10)
Percent of Control			112.16	104.50	91.44
Neutrophils (10 ³ /uL)	SD 92	0.64 ± 0.11 (10)	0.57 ± 0.05 (10)	0.46 ± 0.05 (10)	0.39 ± 0.02 (10)
Percent of Control			89.22	71.88	61.56

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Lab: NTP

Female

	Phase Day	Treatment Groups (mg/L)			
		0	125	250	500
Lymphocytes (10 ³ /uL)	SD 92	3.71 ± 0.34 (10)	4.27 ± 0.38 (10)	4.08 ± 0.37 (10)	3.64 ± 0.26 (10)
Percent of Control			115.02	109.75	98.01
Total Lymphocytes (10 ³ /uL)	SD 92	3.73 ± 0.34 (10)	4.29 ± 0.38 (10)	4.10 ± 0.37 (10)	3.65 ± 0.26 (10)
Percent of Control			115.12	109.87	97.91
Monocytes (10 ³ /uL)	SD 92	0.11 ± 0.02 (10) *	0.16 ± 0.03 (10)	0.11 ± 0.01 (10)	0.09 ± 0.02 (10)
Percent of Control			142.48	97.35	83.19
Basophils (10 ³ /uL)	SD 92	0.01 ± 0.00 (10)	0.01 ± 0.00 (10)	0.01 ± 0.00 (10)	0.00 ± 0.00 (10)
Percent of Control			100.00	157.14	42.86
Eosinophils (10 ³ /uL)	SD 92	0.09 ± 0.02 (10)	0.11 ± 0.02 (10)	0.11 ± 0.03 (10)	0.05 ± 0.02 (10)
Percent of Control			117.78	120.00	51.11

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Female

	Phase Day	Treatment Groups (mg/L)	
		1000	2000
Hematocrit (%)	SD 92	48.2 ± 0.6 (10)	48.7 ± 0.9 (10)
Percent of Control		100.2	101.1
Manual Hematocrit (%)	SD 92	49.9 ± 0.8 (9)	49.6 ± 0.7 (10)
Percent of Control		103.4	102.8
Hemoglobin (g/dL)	SD 92	15.8 ± 0.2 (10)	15.8 ± 0.2 (10)
Percent of Control		100.7	100.6
Erythrocytes (10 ⁶ /uL)	SD 92	10.35 ± 0.11 (10)	10.45 ± 0.16 (10)
Percent of Control		100.27	101.23
Reticulocytes (10 ³ /uL)	SD 92	256.2 ± 24.9 (10)	270.4 ± 11.2 (10)
Percent of Control		102.3	107.9
Mean Cell Volume (fL)	SD 92	46.6 ± 0.1 (10)	46.6 ± 0.2 (10)
Percent of Control		100.0	99.9
Mean Cell Hemoglobin (pg)	SD 92	15.2 ± 0.1 (10)	15.1 ± 0.1 (10)
Percent of Control		100.4	99.4
Mean Cell Hemoglobin Concentration (g/dL)	SD 92	32.7 ± 0.2 (10)	32.4 ± 0.2 (10)
Percent of Control		100.6	99.5
Platelets (10 ³ /uL)	SD 92	758. ± 41 (10)	797. ± 44 (10)
Percent of Control		87.	91.
White Blood Cells (10 ³ /uL)	SD 92	4.82 ± 0.55 (10)	4.00 ± 0.44 (10)
Percent of Control		105.15	87.42
Neutrophils (10 ³ /uL)	SD 92	0.56 ± 0.06 (10)	0.49 ± 0.06 (10)
Percent of Control		87.66	77.19

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Female

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		1000	2000
Lymphocytes (10 ³ /uL)	SD 92	4.03 ± 0.48 (10)	3.31 ± 0.35 (10)
Percent of Control		108.54	89.23
Total Lymphocytes (10 ³ /uL)	SD 92	4.05 ± 0.49 (10)	3.33 ± 0.36 (10)
Percent of Control		108.58	89.25
Monocytes (10 ³ /uL)	SD 92	0.09 ± 0.02 (10)	0.08 ± 0.02 (10)
Percent of Control		81.42	69.03
Basophils (10 ³ /uL)	SD 92	0.01 ± 0.00 (10)	0.00 ± 0.00 (10)
Percent of Control		128.57	57.14
Eosinophils (10 ³ /uL)	SD 92	0.10 ± 0.02 (10)	0.10 ± 0.03 (10)
Percent of Control		114.44	111.11

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LEGEND

SD – Study Day; GD – Gestation Day; LD – Lactation Day; PND – Postnatal Day, adults post-weaning

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

Hematology for gestation phase includes pregnant females only

Statistical analysis performed by Jonckheere (trend) and Shirley or Dunn (pairwise) tests (unless otherwise noted).

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 ****