

**Study Number:** C20712-01

**Test Type:** TOX

**Route:** Dosing in Feed

**Species/Strain:** Rat/Harlan Sprague Dawley

**C Number:**

**Study Gender:**

**PWG Approval Date**

**PA43: Hematology Summary**

**Test Compound:** Tris(Chloropropyl)phosphate

**CAS Number:** 13674-84-5

C20712-01

Both

See web page for date of PWG Approval

**Date Report Requested:** 04/12/2019

**Time Report Requested:** 06:43:28

**Lab:** NTP

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F1 Male

	Phase Day	Treatment Groups (ppm)			
		0	2500	5000	10000
Hematocrit (%)	SD 95	48.3 ± 0.5 (5)	46.7 ± 0.5 (5)	47.0 ± 0.6 (5)	46.4 ± 0.3 (5) *
Percent of Control			96.7	97.4	96.1
Manual Hematocrit (%)	SD 95	48.1 ± 0.5 (5)	46.8 ± 0.6 (5)	47.7 ± 0.5 (5)	46.8 ± 0.3 (5)
Percent of Control			97.3	99.2	97.3
Hemoglobin (g/dL)	SD 95	15.2 ± 0.2 (5)	14.8 ± 0.2 (5)	15.0 ± 0.2 (5)	14.6 ± 0.1 (5)
Percent of Control			97.2	99.0	96.3
Erythrocytes (10 <sup>6</sup> /uL)	SD 95	8.60 ± 0.17 (5)	8.39 ± 0.07 (5)	8.45 ± 0.11 (5)	8.18 ± 0.09 (5)
Percent of Control			97.53	98.30	95.08
Reticulocytes (10 <sup>3</sup> /uL)	SD 95	180.5 ± 1.7 (5)	189.3 ± 10.4 (5)	192.7 ± 8.9 (5)	202.7 ± 3.9 (5) *
Percent of Control			104.8	106.8	112.3
Mean Cell Volume (fL)	SD 95	56.2 ± 0.8 (5)	55.7 ± 0.9 (5)	55.7 ± 0.3 (5)	56.8 ± 0.5 (5)
Percent of Control			99.1	99.1	101.0
Mean Cell Hemoglobin (pg)	SD 95	17.7 ± 0.3 (5)	17.6 ± 0.3 (5)	17.8 ± 0.2 (5)	17.9 ± 0.2 (5)
Percent of Control			99.7	100.7	101.4
Mean Cell Hemoglobin Concentration (g/dL)	SD 95	31.4 ± 0.1 (5)	31.6 ± 0.1 (5)	31.9 ± 0.2 (5)	31.5 ± 0.2 (5)
Percent of Control			100.7	101.7	100.3
Platelets (10 <sup>3</sup> /uL)	SD 95	902 ± 24 (5)	864 ± 41 (5)	807 ± 42 (5)	920 ± 15 (5)
Percent of Control			96	89	102
White Blood Cells (10 <sup>3</sup> /uL)	SD 95	8.64 ± 0.42 (5)	8.30 ± 0.49 (5)	9.90 ± 0.30 (5) *	9.65 ± 0.22 (5)
Percent of Control			96.11	114.63	111.71
Neutrophils (10 <sup>3</sup> /uL)	SD 95	1.05 ± 0.11 (5)	0.88 ± 0.04 (5)	1.23 ± 0.08 (5)	1.14 ± 0.11 (5)
Percent of Control			83.02	116.41	107.78

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F1 Male

	Phase Day	Treatment Groups (ppm)			
		0	2500	5000	10000
Total Lymphocytes (10 <sup>3</sup> /uL)	SD 95	7.24 ± 0.30 (5)	7.13 ± 0.43 (5)	8.27 ± 0.33 (5) *	8.13 ± 0.13 (5)
Percent of Control			98.47	114.22	112.30
Monocytes (10 <sup>3</sup> /uL)	SD 95	0.22 ± 0.02 (5)	0.19 ± 0.04 (5)	0.27 ± 0.04 (5)	0.27 ± 0.02 (5)
Percent of Control			86.05	123.72	127.44
Basophils (10 <sup>3</sup> /uL)	SD 95	0.03 ± 0.00 (5)	0.03 ± 0.00 (5)	0.04 ± 0.00 (5)	0.03 ± 0.00 (5)
Percent of Control			96.43	128.57	92.86
Eosinophils (10 <sup>3</sup> /uL)	SD 95	0.10 ± 0.01 (5)	0.09 ± 0.01 (5)	0.11 ± 0.01 (5)	0.08 ± 0.01 (5)
Percent of Control			86.54	104.81	77.88

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F1 Female

	Phase Day	Treatment Groups (ppm)			
		0	2500	5000	10000
Hematocrit (%)	SD 95	43.4 ± 0.6 (5)	43.5 ± 0.7 (5)	42.8 ± 0.2 (5)	43.4 ± 0.4 (5)
Percent of Control			100.1	98.5	99.9
Manual Hematocrit (%)	SD 95	44.5 ± 0.8 (5)	44.8 ± 0.9 (5)	43.6 ± 0.3 (5)	44.3 ± 0.6 (5)
Percent of Control			100.7	98.0	99.6
Hemoglobin (g/dL)	SD 95	14.1 ± 0.2 (5)	14.0 ± 0.2 (5)	13.9 ± 0.0 (5)	14.0 ± 0.2 (5)
Percent of Control			99.5	98.4	99.2
Erythrocytes (10 <sup>6</sup> /uL)	SD 95	7.71 ± 0.11 (5)	7.74 ± 0.14 (5)	7.55 ± 0.03 (5)	7.63 ± 0.07 (5)
Percent of Control			100.35	97.95	98.95
Reticulocytes (10 <sup>3</sup> /uL)	SD 95	180.1 ± 14.9 (5)	184.6 ± 13.8 (5)	187.3 ± 15.4 (5)	182.6 ± 10.1 (5)
Percent of Control			102.5	104.0	101.4
Mean Cell Volume (fL)	SD 95	56.4 ± 0.7 (5)	56.2 ± 0.7 (5)	56.6 ± 0.2 (5)	56.8 ± 0.6 (5)
Percent of Control			99.8	100.5	100.9
Mean Cell Hemoglobin (pg)	SD 95	18.3 ± 0.4 (5)	18.1 ± 0.2 (5)	18.4 ± 0.1 (5)	18.3 ± 0.3 (5)
Percent of Control			99.2	100.5	100.3
Mean Cell Hemoglobin Concentration (g/dL)	SD 95	32.5 ± 0.3 (5)	32.3 ± 0.2 (5)	32.4 ± 0.2 (5)	32.3 ± 0.2 (5)
Percent of Control			99.4	99.9	99.4
Platelets (10 <sup>3</sup> /uL)	SD 95	998 ± 11 (5)	921 ± 39 (5)	893 ± 30 (5)	947 ± 23 (5)
Percent of Control			92	89	95
White Blood Cells (10 <sup>3</sup> /uL)	SD 95	6.56 ± 0.39 (5)	7.40 ± 1.00 (5)	6.83 ± 0.79 (5)	6.88 ± 1.01 (5)
Percent of Control			112.80	104.21	104.93
Neutrophils (10 <sup>3</sup> /uL)	SD 95	0.81 ± 0.09 (5)	0.95 ± 0.19 (5)	0.89 ± 0.17 (5)	0.72 ± 0.04 (5)
Percent of Control			117.16	110.25	88.89

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F1 Female

	Phase Day	Treatment Groups (ppm)			
		0	2500	5000	10000
Total Lymphocytes (10 <sup>3</sup> /uL)	SD 95	5.48 ± 0.31 (5)	6.16 ± 0.98 (5)	5.65 ± 0.60 (5)	5.92 ± 0.93 (5)
Percent of Control			112.54	103.12	108.00
Monocytes (10 <sup>3</sup> /uL)	SD 95	0.17 ± 0.01 (5)	0.17 ± 0.04 (5)	0.18 ± 0.03 (5)	0.17 ± 0.05 (5)
Percent of Control			103.01	110.24	99.40
Basophils (10 <sup>3</sup> /uL)	SD 95	0.02 ± 0.00 (5)	0.02 ± 0.01 (5)	0.02 ± 0.01 (5)	0.02 ± 0.01 (5)
Percent of Control			94.44	105.56	88.89
Eosinophils (10 <sup>3</sup> /uL)	SD 95	0.08 ± 0.01 (5)	0.09 ± 0.03 (5)	0.09 ± 0.02 (5)	0.07 ± 0.01 (5)
Percent of Control			110.71	103.57	82.14

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**F1 Female**

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	<b>Phase Day</b>	<b>Treatment Groups</b>
		<b>20000</b>
Hematocrit (%)	SD 95	44.0 ± 0.9 (5)
Percent of Control		101.4
Manual Hematocrit (%)	SD 95	45.0 ± 0.7 (5)
Percent of Control		101.1
Hemoglobin (g/dL)	SD 95	14.1 ± 0.2 (5)
Percent of Control		99.7
Erythrocytes (10 <sup>6</sup> /uL)	SD 95	7.72 ± 0.16 (5)
Percent of Control		100.09
Reticulocytes (10 <sup>3</sup> /uL)	SD 95	209.0 ± 19.9 (5)
Percent of Control		116.0
Mean Cell Volume (fL)	SD 95	57.1 ± 0.4 (5)
Percent of Control		101.3
Mean Cell Hemoglobin (pg)	SD 95	18.3 ± 0.2 (5)
Percent of Control		99.9
Mean Cell Hemoglobin Concentration (g/dL)	SD 95	32.0 ± 0.2 (5)
Percent of Control		98.6
Platelets (10 <sup>3</sup> /uL)	SD 95	947 ± 48 (5)
Percent of Control		95
White Blood Cells (10 <sup>3</sup> /uL)	SD 95	5.96 ± 0.70 (5)
Percent of Control		90.88
Neutrophils (10 <sup>3</sup> /uL)	SD 95	0.67 ± 0.05 (5)
Percent of Control		82.72

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**F1 Female**

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		<b>Treatment Groups</b>
	<b>Phase Day</b>	<b>20000</b>
Total Lymphocytes (10 <sup>3</sup> /uL)	SD 95	5.05 ± 0.67 (5)
Percent of Control		92.28
Monocytes (10 <sup>3</sup> /uL)	SD 95	0.14 ± 0.02 (5)
Percent of Control		86.75
Basophils (10 <sup>3</sup> /uL)	SD 95	0.02 ± 0.00 (5)
Percent of Control		88.89
Eosinophils (10 <sup>3</sup> /uL)	SD 95	0.08 ± 0.01 (5)
Percent of Control		92.86

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LEGEND

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

SD – Study Day

Statistical analysis performed using a bootstrapped Jonckheere test for trend and a Datta-Satten modified Wilcoxon test with Hommel adjustment for pairwise 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 \*\***