

**Study Number:** C20712-01

**Test Type:** TOX

**Route:** Dosing in Feed

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

**C Number:**

**Study Gender:**

**PWG Approval Date**

**PA41: Clinical Chemistry 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:** 06:43:19

**Lab:** NTP

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F1 Male

	Phase Day	Treatment Groups (ppm)			
		0	2500	5000	10000
Urea Nitrogen (mg/dL)	SD 95	17.7 ± 0.6 (5)	17.2 ± 0.4 (5)	16.7 ± 0.8 (5)	15.9 ± 0.5 (5)
Percent of Control			97.2	94.4	89.8
Creatinine (mg/dL)	SD 95	0.72 ± 0.01 (5)	0.71 ± 0.01 (5)	0.71 ± 0.01 (5)	0.70 ± 0.02 (5)
Percent of Control			98.61	98.61	97.22
Glucose (mg/dL)	SD 95	149.5 ± 9.5 (5)	137.8 ± 4.8 (5)	127.2 ± 5.2 (5)	132.5 ± 2.8 (5)
Percent of Control			92.2	85.1	88.6
Total Protein (g/dL)	SD 95	6.84 ± 0.07 (5)	6.73 ± 0.03 (5)	6.92 ± 0.03 (5)	6.90 ± 0.10 (5)
Percent of Control			98.39	101.17	100.88
Albumin (g/dL)	SD 95	4.37 ± 0.03 (5) **	4.40 ± 0.02 (5)	4.55 ± 0.04 (5) *	4.59 ± 0.05 (5) *
Percent of Control			100.69	104.12	105.03
Cholesterol (mg/dL)	SD 95	127.5 ± 4.0 (5) *	141.8 ± 7.6 (5)	139.7 ± 6.4 (5)	149.2 ± 5.0 (5) *
Percent of Control			111.2	109.6	117.0
Triglyceride (mg/dL)	SD 95	84.9 ± 5.9 (5)	78.9 ± 6.5 (5)	101.5 ± 9.4 (5)	86.3 ± 4.7 (5)
Percent of Control			92.9	119.6	101.6
Alanine Aminotransferase (IU/L)	SD 95	51.9 ± 1.8 (5) **	40.7 ± 1.4 (5) **	40.4 ± 1.1 (5) **	31.0 ± 1.2 (5) **
Percent of Control			78.4	77.8	59.7
Alkaline Phosphatase (IU/L)	SD 95	196.8 ± 6.7 (5) **	178.8 ± 14.4 (5)	160.1 ± 4.2 (5) *	143.8 ± 3.5 (5) **
Percent of Control			90.9	81.4	73.1
Creatine Kinase (IU/L)	SD 95	245.3 ± 75.7 (5)	190.1 ± 35.6 (5)	204.3 ± 42.5 (5)	294.7 ± 95.0 (5)
Percent of Control			77.5	83.3	120.1
Sorbitol Dehydrogenase (IU/L)	SD 95	10.0 ± 0.6 (5)	10.2 ± 0.5 (5)	9.7 ± 0.9 (5)	9.5 ± 0.4 (5)
Percent of Control			102.0	97.0	95.0

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**F1 Male**

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		<b>Treatment Groups (ppm)</b>			
	<b>Phase Day</b>	<b>0</b>	<b>2500</b>	<b>5000</b>	<b>10000</b>
Bile salt/acids ( $\mu\text{mol/L}$ )	SD 95	17.2 $\pm$ 2.3 (5)	27.7 $\pm$ 3.7 (5)	19.7 $\pm$ 4.4 (5)	22.9 $\pm$ 1.3 (5)
Percent of Control			161.0	114.5	133.1

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## F1 Female

	Phase Day	Treatment Groups (ppm)				
		0	2500	5000	10000	20000
Urea Nitrogen (mg/dL)	SD 95	18.2 ± 0.9 (5)	15.4 ± 0.3 (5)	16.0 ± 0.7 (5)	13.6 ± 0.3 (5) *	21.7 ± 1.3 (5)
Percent of Control			84.6	87.9	74.7	119.2
Creatinine (mg/dL)	SD 95	0.77 ± 0.01 (5)	0.78 ± 0.01 (5)	0.77 ± 0.02 (5)	0.78 ± 0.03 (5)	0.78 ± 0.01 (5)
Percent of Control			101.30	100.00	101.30	101.30
Glucose (mg/dL)	SD 95	147.1 ± 10.9 (5)	132.2 ± 4.8 (5)	137.2 ± 9.1 (5)	136.4 ± 5.8 (5)	137.1 ± 7.6 (5)
Percent of Control			89.9	93.3	92.7	93.2
Total Protein (g/dL)	SD 95	6.84 ± 0.05 (5)	6.92 ± 0.09 (5)	7.14 ± 0.04 (5) *	7.01 ± 0.04 (5)	7.10 ± 0.06 (5) *
Percent of Control			101.17	104.39	102.49	103.80
Albumin (g/dL)	SD 95	4.63 ± 0.08 (5) **	4.71 ± 0.08 (5)	4.95 ± 0.04 (5) *	4.84 ± 0.04 (5)	4.97 ± 0.05 (5) *
Percent of Control			101.73	106.91	104.54	107.34
Cholesterol (mg/dL)	SD 95	127.1 ± 2.9 (5) **	134.6 ± 7.8 (5)	136.4 ± 4.0 (5)	153.7 ± 3.7 (5) *	163.3 ± 8.9 (5) *
Percent of Control			105.9	107.3	120.9	128.5
Triglyceride (mg/dL)	SD 95	61.8 ± 5.2 (5)	64.9 ± 5.7 (5)	64.6 ± 6.2 (5)	66.5 ± 5.6 (5)	76.9 ± 5.2 (5)
Percent of Control			105.0	104.5	107.6	124.4
Alanine Aminotransferase (IU/L)	SD 95	48.9 ± 1.9 (5) **	46.1 ± 2.1 (5)	39.2 ± 2.5 (5) *	22.6 ± 1.0 (5) **	16.3 ± 1.4 (5) **
Percent of Control			94.3	80.2	46.2	33.3
Alkaline Phosphatase (IU/L)	SD 95	162.8 ± 12.9 (5) **	143.0 ± 7.4 (5)	134.4 ± 10.2 (5)	109.2 ± 6.7 (5) *	109.9 ± 8.2 (5) *
Percent of Control			87.8	82.6	67.1	67.5
Creatine Kinase (IU/L)	SD 95	161.8 ± 16.0 (5)	163.3 ± 23.2 (5)	136.9 ± 13.7 (5)	195.3 ± 71.9 (5)	163.6 ± 20.3 (5)
Percent of Control			100.9	84.6	120.7	101.1
Sorbitol Dehydrogenase (IU/L)	SD 95	8.8 ± 0.2 (5)	8.0 ± 0.7 (5)	8.5 ± 0.8 (5)	7.5 ± 0.6 (5)	9.5 ± 1.8 (5)
Percent of Control			90.9	96.6	85.2	108.0

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**F1 Female**

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		<b>Treatment Groups (ppm)</b>				
	<b>Phase Day</b>	<b>0</b>	<b>2500</b>	<b>5000</b>	<b>10000</b>	<b>20000</b>
Bile salt/acids ( $\mu\text{mol/L}$ )	SD 95	26.1 $\pm$ 2.9 (5)	25.7 $\pm$ 3.5 (5)	26.9 $\pm$ 3.7 (5)	35.7 $\pm$ 6.0 (5)	33.3 $\pm$ 8.0 (5)
Percent of Control			98.5	103.1	136.8	127.6

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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 \*\***