

Experiment Number: C04049

Test Type: TOX

Route: Oral Gavage

Species/Strain: Rat/Harlan Sprague Dawley

PA41: Clinical Chemistry Summary

Test Compound: Perfluororononanoic Acid

CAS Number: 375-95-1

Date Report Requested: 04/04/2018

Time Report Requested: 13:58:03

Lab: Battelle

C Number: C04049

Cage Range: All

Date Range: All

Reasons For Removal: All

Removal Date Range: All

Treatment Groups: All

Study Gender: Male

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	Phase Day	Treatment Groups (mg/kg/day)										
		0	0.625	1.25	2.5	5						
Urea Nitrogen (mg/dL)	SD 28	18.5 ± 0.9 (10) **	21.6 ± 0.6 (10) *	24.8 ± 0.7 (10) **	27.6 ± 1.5 (10) **							13.0 (1)
Percent of Control			116.8		134.1							70.3
Creatinine (mg/dL)	SD 28	0.73 ± 0.02 (10) **	0.72 ± 0.01 (10)	0.69 ± 0.02 (10)	0.62 ± 0.02 (10) **							0.40 (1)
Percent of Control			98.63		94.52							54.79
Glucose (mg/dL)	SD 28	187.7 ± 8.3 (10) **	201.8 ± 6.5 (10)	168.1 ± 6.0 (10)	103.8 ± 5.3 (10) **							125.0 (1)
Percent of Control			107.5		89.6							66.6
Total Protein (g/dL)	SD 28	6.56 ± 0.04 (10) **	5.96 ± 0.08 (10) **	5.48 ± 0.08 (10) **	4.31 ± 0.12 (10) **							3.10 (1)
Percent of Control			90.85		83.54							47.26
Globulin (g/dL)	SD 28	2.21 ± 0.03 (10) **	1.53 ± 0.04 (10) **	1.36 ± 0.05 (10) **	1.07 ± 0.04 (10) **							1.00 (1)
Percent of Control			69.23		61.54							45.25
A/G Ratio	SD 28	1.97 ± 0.04 (10) **	2.91 ± 0.06 (10) **	3.06 ± 0.10 (10) **	3.05 ± 0.10 (10) **							2.10 (1)
Percent of Control			147.31		154.91							106.45
Albumin (g/dL)	SD 28	4.35 ± 0.04 (10) **	4.43 ± 0.05 (10)	4.12 ± 0.05 (10) **	3.24 ± 0.09 (10) **							2.10 (1)
Percent of Control			101.84		94.71							48.28
Total Bilirubin (mg/dL)	SD 28	0.157 ± 0.009 (10) **	0.145 ± 0.008 (10)	0.197 ± 0.010 (10) *	0.720 ± 0.080 (10) **							2.088 ± 0.221 (2) **
Percent of Control			91.804		125.222							1326.557
Direct Bilirubin (mg/dL)	SD 28	0.025 ± 0.002 (10) **	0.030 ± 0.001 (10)	0.047 ± 0.003 (10) **	0.322 ± 0.043 (10) **							1.419 ± 0.228 (2) **
Percent of Control			120.319		186.853							5651.394
Indirect Bilirubin (mg/dL)	SD 28	0.132 ± 0.009 (10) **	0.114 ± 0.009 (10)	0.150 ± 0.009 (10)	0.398 ± 0.040 (10) **							0.670 ± 0.007 (2) **
Percent of Control			86.395		113.530							506.047
Cholesterol (mg/dL)	SD 28	117.4 ± 4.8 (10)	86.2 ± 2.3 (10) **	90.9 ± 3.6 (10) **	108.3 ± 8.7 (10)							74.0 (1)
Percent of Control			73.4		77.4							63.0

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		0	0.625	1.25	2.5	5						
Triglyceride (mg/dL)	SD 28	120.1 ± 9.4 (10) **	58.7 ± 8.8 (10) **	81.1 ± 5.6 (10) **	59.1 ± 3.6 (10) **	52.0 (1)						
Percent of Control			48.9	67.5	49.2	43.3						
Alanine Aminotransferase (IU/L)	SD 28	57.67 ± 1.45 (9)	74.60 ± 4.81 (10)	86.30 ± 4.21 (10) **	58.70 ± 4.32 (10)	104.00 (1)						
Percent of Control			129.36	149.65	101.79	180.35						
Alkaline Phosphatase (IU/L)	SD 28	207.3 ± 4.5 (10)	247.3 ± 14.8 (10)	397.3 ± 25.2 (10) **	204.4 ± 31.1 (10)	350.0 (1)						
Percent of Control			119.3	191.7	98.6	168.8						
Aspartate Aminotransferase (U/L)	SD 28	85.10 ± 22.51 (10) **	73.60 ± 3.30 (10)	95.80 ± 2.62 (10) **	118.50 ± 10.62 (10) **	255.50 ± 91.50 (2) **						
Percent of Control			86.49	112.57	139.25	300.24						
Creatine Kinase (IU/L)	SD 28	107.1 ± 5.5 (10) *	117.5 ± 5.5 (10)	130.9 ± 9.7 (10)	159.2 ± 23.3 (10)	101.0 (1)						
Percent of Control			109.7	122.2	148.6	94.3						
Sorbitol Dehydrogenase (IU/L)	SD 28	9.2 ± 1.1 (9) **	11.5 ± 1.4 (10)	13.3 ± 1.0 (10) *	13.4 ± 1.2 (10) *	8.0 (1)						
Percent of Control			124.7	144.2	145.3	86.7						
Bile salt/acids (umol/L)	SD 28	13.1 ± 2.4 (10) **	27.6 ± 3.1 (10) **	71.0 ± 7.8 (10) **	221.9 ± 16.1 (10) **	84.0 (1)						
Percent of Control			210.7	542.0	1693.9	641.2						

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LEGEND

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

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

Clinical Chemistry 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 $P \leq 0.01$

Indirect Bilirubin calculated as Total Bilirubin - Direct Bilirubin.

Decrease in N for Alanine Aminotransferase, Aspartate Aminotransferase, and Sorbitol Dehydrogenase in the 0 mg/kg dose group is due to one male's values being excluded because they were outliers.

** END OF REPORT **