

Experiment Number: C20614-01
Test Type: TOX
Route: Dosing in Feed
Species/Strain: Rat/Sprague Dawley

PA41: Clinical Chemistry Summary
Test Compound: Perfluorooctanoic Acid
CAS Number: 335-67-1

Date Report Requested: 04/23/2018
Time Report Requested: 09:44:27
Lab: NTP

C Number: C20614-01
Cage Range: All
Date Range: All
Reasons For Removal: All
Removal Date Range: All
Treatment Groups: All
Study Gender: Both

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F1 Male: Non-Perinatal

	Phase Day	Treatment Groups (ppm)		
		0/0	0/150	0/300
Urea Nitrogen (mg/dL)	SD 109	15.3 ± 0.6 (10) **	21.2 ± 0.7 (10) **	21.3 ± 0.8 (10) **
Creatinine (mg/dL)	SD 109	0.68 ± 0.01 (10)	0.67 ± 0.02 (10)	0.65 ± 0.02 (10)
Glucose (mg/dL)	SD 109	125.8 ± 2.3 (10)	125.3 ± 1.6 (10)	117.6 ± 7.8 (10)
Total Protein (g/dL)	SD 109	6.59 ± 0.07 (10) **	6.17 ± 0.09 (10) **	5.18 ± 0.15 (10) **
Globulin (g/dL)	SD 109	2.46 ± 0.06 (10) **	1.48 ± 0.07 (10) **	1.18 ± 0.03 (10) **
A/G Ratio	SD 109	1.69 ± 0.05 (10) **	3.24 ± 0.18 (10) **	3.40 ± 0.12 (10) **
Albumin (g/dL)	SD 109	4.13 ± 0.04 (10)	4.69 ± 0.07 (10) **	4.00 ± 0.14 (10)
Cholesterol (mg/dL)	SD 109	128.1 ± 4.1 (10)	120.1 ± 4.4 (10)	121.5 ± 8.1 (10)
Triglyceride (mg/dL)	SD 109	115.1 ± 6.2 (10) **	61.5 ± 6.5 (10) **	52.4 ± 6.4 (10) **
Alanine Aminotransferase (IU/L)	SD 109	50.70 ± 1.80 (10) *	71.20 ± 4.05 (10) **	66.70 ± 6.71 (10) *
Alkaline Phosphatase (IU/L)	SD 109	174.1 ± 9.3 (10) **	412.6 ± 38.1 (10) **	399.1 ± 27.0 (10) **
Creatine Kinase (IU/L)	SD 109	104.4 ± 5.9 (10)	158.9 ± 27.7 (10) *	178.2 ± 45.7 (10)
Sorbitol Dehydrogenase (IU/L)	SD 109	8.2 ± 0.7 (10) **	16.7 ± 1.8 (10) **	20.6 ± 7.7 (10) **
Bile salt/acids (µmol/L)	SD 109	25.4 ± 1.6 (10) **	45.7 ± 3.6 (10) **	127.0 ± 26.5 (10) **

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F1 Male: Perinatal

	Phase Day	Treatment Groups (ppm)		
		0/0	150/150	300/300
Urea Nitrogen (mg/dL)	SD 109	15.3 ± 0.6 (10) **	20.6 ± 1.0 (10) **	24.1 ± 1.0 (10) **
Creatinine (mg/dL)	SD 109	0.68 ± 0.01 (10)	0.66 ± 0.02 (10)	0.67 ± 0.02 (10)
Glucose (mg/dL)	SD 109	125.8 ± 2.3 (10) *	122.4 ± 3.9 (10)	115.8 ± 2.2 (10) *
Total Protein (g/dL)	SD 109	6.59 ± 0.07 (10) **	5.87 ± 0.13 (10) **	5.35 ± 0.22 (10) **
Globulin (g/dL)	SD 109	2.46 ± 0.06 (10) **	1.39 ± 0.06 (10) **	1.26 ± 0.08 (10) **
A/G Ratio	SD 109	1.69 ± 0.05 (10) **	3.27 ± 0.15 (10) **	3.31 ± 0.16 (10) **
Albumin (g/dL)	SD 109	4.13 ± 0.04 (10)	4.48 ± 0.09 (10) *	4.09 ± 0.16 (10)
Cholesterol (mg/dL)	SD 109	128.1 ± 4.1 (10) *	113.8 ± 3.1 (10)	115.4 ± 6.2 (10)
Triglyceride (mg/dL)	SD 109	115.1 ± 6.2 (10) **	58.4 ± 3.6 (10) **	52.3 ± 2.0 (10) **
Alanine Aminotransferase (IU/L)	SD 109	50.70 ± 1.80 (10) **	70.20 ± 3.09 (10) **	65.10 ± 4.49 (10) **
Alkaline Phosphatase (IU/L)	SD 109	174.1 ± 9.3 (10) **	398.7 ± 25.0 (10) **	410.8 ± 33.1 (10) **
Creatine Kinase (IU/L)	SD 109	104.4 ± 5.9 (10)	118.1 ± 11.5 (10)	131.0 ± 22.3 (10)
Sorbitol Dehydrogenase (IU/L)	SD 109	8.2 ± 0.7 (10) **	15.9 ± 1.3 (10) **	16.3 ± 1.8 (10) **
Bile salt/acids (µmol/L)	SD 109	25.4 ± 1.6 (10) **	46.2 ± 6.4 (10) **	69.8 ± 15.2 (10) **

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F1 Female: Non-Perinatal

	Phase Day	Treatment Groups (ppm)		
		0/0	0/300	0/1000
Urea Nitrogen (mg/dL)	SD 109	14.6 ± 0.7 (10)	14.2 ± 0.6 (10)	15.6 ± 0.8 (10)
Creatinine (mg/dL)	SD 109	0.70 ± 0.01 (10) *	0.73 ± 0.02 (10)	0.76 ± 0.02 (10)
Glucose (mg/dL)	SD 109	126.3 ± 1.8 (10)	125.1 ± 3.0 (10)	124.4 ± 2.8 (10)
Total Protein (g/dL)	SD 109	6.87 ± 0.04 (10)	6.80 ± 0.10 (10)	7.09 ± 0.11 (10)
Globulin (g/dL)	SD 109	2.22 ± 0.04 (10) **	1.95 ± 0.04 (10) **	1.84 ± 0.04 (10) **
A/G Ratio	SD 109	2.10 ± 0.05 (10) **	2.49 ± 0.06 (10) **	2.86 ± 0.05 (10) **
Albumin (g/dL)	SD 109	4.65 ± 0.05 (10) **	4.85 ± 0.08 (10)	5.25 ± 0.09 (10) **
Cholesterol (mg/dL)	SD 109	140.0 ± 4.3 (10)	126.7 ± 4.0 (10)	130.4 ± 3.5 (10)
Triglyceride (mg/dL)	SD 109	56.1 ± 8.2 (10)	47.1 ± 4.0 (10)	65.4 ± 7.3 (10)
Alanine Aminotransferase (IU/L)	SD 109	43.70 ± 2.18 (10) **	50.50 ± 3.08 (10)	56.00 ± 3.06 (10) **
Alkaline Phosphatase (IU/L)	SD 109	129.8 ± 9.0 (10) *	122.4 ± 7.8 (10)	166.3 ± 6.9 (10) *
Creatine Kinase (IU/L)	SD 109	253.4 ± 62.2 (10)	447.2 ± 154.6 (10)	206.3 ± 58.2 (10)
Sorbitol Dehydrogenase (IU/L)	SD 109	8.1 ± 0.6 (10)	9.2 ± 0.9 (10)	10.3 ± 1.1 (10)
Bile salt/acids (µmol/L)	SD 109	28.9 ± 3.5 (10)	30.9 ± 3.4 (10)	29.9 ± 3.9 (10)

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F1 Female: Perinatal

	Phase Day	Treatment Groups (ppm)		
		0/0	150/300	300/1000
Urea Nitrogen (mg/dL)	SD 109	14.6 ± 0.7 (10) *	15.1 ± 0.6 (10)	16.8 ± 0.7 (10)
Creatinine (mg/dL)	SD 109	0.70 ± 0.01 (10) **	0.73 ± 0.02 (10)	0.79 ± 0.01 (10) **
Glucose (mg/dL)	SD 109	126.3 ± 1.8 (10)	121.6 ± 2.7 (10)	124.8 ± 2.8 (10)
Total Protein (g/dL)	SD 109	6.87 ± 0.04 (10) *	6.70 ± 0.08 (10)	7.19 ± 0.08 (10) *
Globulin (g/dL)	SD 109	2.22 ± 0.04 (10) **	1.96 ± 0.07 (10) **	1.86 ± 0.05 (10) **
A/G Ratio	SD 109	2.10 ± 0.05 (10) **	2.44 ± 0.09 (10) **	2.88 ± 0.08 (10) **
Albumin (g/dL)	SD 109	4.65 ± 0.05 (10) **	4.74 ± 0.04 (10)	5.33 ± 0.07 (10) **
Cholesterol (mg/dL)	SD 109	140.0 ± 4.3 (10)	119.1 ± 3.7 (10) **	133.1 ± 5.0 (10)
Triglyceride (mg/dL)	SD 109	56.1 ± 8.2 (10)	42.6 ± 3.0 (10)	64.4 ± 8.8 (10)
Alanine Aminotransferase (IU/L)	SD 109	43.70 ± 2.18 (10) **	51.00 ± 2.75 (10)	54.90 ± 2.07 (10) **
Alkaline Phosphatase (IU/L)	SD 109	129.8 ± 9.0 (10)	154.8 ± 11.3 (10)	144.5 ± 11.6 (10)
Creatine Kinase (IU/L)	SD 109	253.4 ± 62.2 (10)	346.6 ± 96.3 (10)	307.7 ± 67.4 (10)
Sorbitol Dehydrogenase (IU/L)	SD 109	8.1 ± 0.6 (10) *	9.8 ± 0.9 (10)	10.9 ± 0.7 (10) *
Bile salt/acids (µmol/L)	SD 109	28.9 ± 3.5 (10)	30.3 ± 4.2 (10)	30.6 ± 3.2 (10)

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LEGEND

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

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

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 $P \leq 0.01$

Statistically significant at $P \leq 0.05$ for male multiple comparisons of 0/150 to 150/150 and 0/300 to 300/300 using a Wilcoxon rank-sum test with a Hommel p-value adjustment.

Statistically significant at $P \leq 0.01$ for male multiple comparisons of 0/150 to 150/150 and 0/300 to 300/300 using a Wilcoxon rank-sum test with a Hommel p-value adjustment.

\$ Statistically significant at $P \leq 0.05$ for female multiple comparisons of 0/300 to 150/300 and 0/1000 to 300/1000 using a Wilcoxon rank-sum test with a Hommel p-value adjustment.

\$\$ Statistically significant at $P \leq 0.01$ for female multiple comparisons of 0/300 to 150/300 and 0/1000 to 300/1000 using a Wilcoxon rank-sum test with a Hommel p-value adjustment.

**** END OF REPORT ****