

Experiment Number: C07040

Test Type: TOX

Route: Oral Gavage

Species/Strain: Rat/Harlan Sprague Dawley

C Number:

C07040

Cage Range:

All

Date Range:

All

Reasons For Removal:

All

Removal Date Range:

All

Treatment Groups:

All

Study Gender:

Both

PA41: Clinical Chemistry Summary

Test Compound: Perfluorobutane sulfonate

CAS Number: 375-73-5

Date Report Requested: 04/04/2018

Time Report Requested: 13:45:36

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Male

	Phase Day	Treatment Groups (mg/kg/day)									
		0		62.6		125		250		500	
Urea Nitrogen (mg/dL)	SD 28	18.0 ± 0.6 (9) **	17.8 ± 0.4 (10)	18.6 ± 0.4 (10)	20.0 ± 0.4 (10) **	20.7 ± 1.2 (9) *					
Percent of Control			98.9	103.3	111.1	114.8					
Creatinine (mg/dL)	SD 28	0.74 ± 0.02 (9)	0.75 ± 0.02 (10)	0.74 ± 0.02 (10)	0.74 ± 0.02 (10)	0.71 ± 0.01 (9)					
Percent of Control			100.75	99.40	99.40	95.52					
Glucose (mg/dL)	SD 28	180.6 ± 6.8 (9) *	178.7 ± 10.8 (10)	182.2 ± 10.3 (10)	160.6 ± 7.1 (10)	156.3 ± 4.0 (9)					
Percent of Control			99.0	100.9	88.9	86.6					
Total Protein (g/dL)	SD 28	6.64 ± 0.03 (9) **	6.42 ± 0.07 (10) *	6.40 ± 0.06 (10) **	6.31 ± 0.10 (10) **	5.99 ± 0.06 (9) **					
Percent of Control			96.62	96.32	94.97	90.13					
Globulin (g/dL)	SD 28	2.34 ± 0.02 (9) **	2.25 ± 0.05 (10) *	2.16 ± 0.04 (10) **	2.02 ± 0.08 (10) **	1.67 ± 0.03 (9) **					
Percent of Control			95.97	92.13	86.16	71.09					
A/G Ratio	SD 28	1.84 ± 0.03 (9) **	1.86 ± 0.05 (10)	1.97 ± 0.04 (10) *	2.15 ± 0.08 (10) **	2.60 ± 0.05 (9) **					
Percent of Control			101.43	107.24	117.16	141.67					
Albumin (g/dL)	SD 28	4.30 ± 0.04 (9)	4.17 ± 0.05 (10)	4.24 ± 0.04 (10)	4.29 ± 0.04 (10)	4.32 ± 0.04 (9)					
Percent of Control			96.98	98.60	99.77	100.52					
Total Bilirubin (mg/dL)	SD 28	0.171 ± 0.009 (9)	0.184 ± 0.024 (10)	0.177 ± 0.012 (10)	0.176 ± 0.013 (10)	0.179 ± 0.010 (10)					
Percent of Control			107.440	103.474	102.832	104.407					
Direct Bilirubin (mg/dL)	SD 28	0.022 ± 0.003 (9) **	0.020 ± 0.002 (10)	0.022 ± 0.003 (10)	0.026 ± 0.002 (10)	0.041 ± 0.004 (10) **					
Percent of Control			90.914	100.051	116.497	185.025					
Indirect Bilirubin (mg/dL)	SD 28	0.150 ± 0.011 (9)	0.164 ± 0.024 (10)	0.156 ± 0.012 (10)	0.151 ± 0.012 (10)	0.139 ± 0.011 (10)					
Percent of Control			109.859	103.975	100.832	92.608					
Cholesterol (mg/dL)	SD 28	132.9 ± 6.1 (9) **	109.9 ± 3.8 (10) **	93.0 ± 2.1 (10) **	75.0 ± 4.5 (10) **	33.3 ± 2.1 (9) **					
Percent of Control			82.7	70.0	56.4	25.1					

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		0				62.6				125				250				500	
Triglyceride (mg/dL)	SD 28	110.6	± 7.6	(9) **	149.0	± 18.1	(10)	121.0	± 12.7	(10)	101.2	± 14.9	(10)	34.3	± 5.5	(9) **			
Percent of Control					134.8			109.4			91.5			31.1					
Alanine Aminotransferase (IU/L)	SD 28	59.50	± 1.73	(8) **	59.40	± 2.20	(10)	51.90	± 2.44	(10)	64.80	± 2.19	(10)	90.56	± 7.04	(9) **			
Percent of Control					99.83			87.23			108.91			152.19					
Alkaline Phosphatase (IU/L)	SD 28	207.8	± 6.2	(9) **	206.5	± 10.1	(10)	219.8	± 9.0	(10)	239.1	± 9.4	(10) *	297.3	± 14.0	(9) **			
Percent of Control					99.4			105.8			115.1			143.1					
Aspartate Aminotransferase (U/L)	SD 28	102.78	± 41.91	(9) **	65.00	± 2.38	(10)	61.50	± 1.75	(10)	65.70	± 1.42	(10)	74.90	± 2.92	(10) **			
Percent of Control					63.24			59.84			63.92			72.88					
Creatine Kinase (IU/L)	SD 28	88.2	± 3.3	(9)	94.7	± 9.2	(10)	80.7	± 2.7	(10)	87.3	± 2.9	(10)	91.3	± 2.9	(9)			
Percent of Control					107.3			91.5			99.0			103.5					
Sorbitol Dehydrogenase (IU/L)	SD 28	5.1	± 0.6	(8) **	4.9	± 0.9	(10)	5.1	± 0.8	(10)	8.0	± 1.0	(10)	7.9	± 0.7	(9) *			
Percent of Control					95.6			99.5			156.1			153.9					
Bile salt/acids (umol/L)	SD 28	16.0	± 3.4	(9) **	14.0	± 2.9	(10)	8.5	± 1.2	(10)	17.5	± 1.4	(10)	30.6	± 4.5	(9) *			
Percent of Control					87.5			53.1			109.4			191.0					

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Lab: Battelle

Female

	Phase Day	Treatment Groups (mg/kg/day)																	
		0				62.6				125				250				500	
Triglyceride (mg/dL)	SD 28	78.1	± 5.2	(10)	91.8	± 9.3	(10)	67.6	± 8.6	(10)	70.3	± 7.1	(9)	73.3	± 9.5	(9)			
Percent of Control					117.5			86.6			90.1			93.9					
Alanine Aminotransferase (IU/L)	SD 28	47.70	± 1.43	(10) **	46.00	± 2.39	(10)	48.20	± 3.00	(10)	59.89	± 1.69	(9) **	70.89	± 4.61	(9) **			
Percent of Control					96.44			101.05			125.55			148.61					
Alkaline Phosphatase (IU/L)	SD 28	147.0	± 4.2	(10) **	147.1	± 7.8	(10)	152.8	± 9.8	(10)	167.2	± 10.7	(9)	194.8	± 8.1	(9) **			
Percent of Control					100.1			103.9			113.8			132.5					
Aspartate Aminotransferase (U/L)	SD 28	54.30	± 1.39	(10) **	57.80	± 1.42	(10)	63.10	± 6.80	(10)	58.44	± 1.31	(9)	61.44	± 1.95	(9) **			
Percent of Control					106.45			116.21			107.63			113.16					
Creatine Kinase (IU/L)	SD 28	85.5	± 6.9	(10)	76.2	± 3.9	(10)	82.7	± 4.1	(10)	83.9	± 3.8	(9)	93.0	± 3.6	(9)			
Percent of Control					89.1			96.7			98.1			108.8					
Sorbitol Dehydrogenase (IU/L)	SD 28	5.1	± 0.4	(10)	4.2	± 0.5	(10)	6.9	± 1.8	(10)	4.2	± 0.4	(9)	5.1	± 0.8	(9)			
Percent of Control					82.4			135.3			82.8			100.2					
Bile salt/acids (umol/L)	SD 28	9.8	± 2.3	(10) **	7.6	± 1.0	(10)	14.9	± 3.3	(10)	26.2	± 5.4	(9) **	52.4	± 6.7	(9) **			
Percent of Control					77.6			152.0			267.6			535.1					

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		Treatment Groups	
	Phase Day	1000	
Urea Nitrogen (mg/dL)	SD 28	17.0 (1)	
Percent of Control		96.6	
Creatinine (mg/dL)	SD 28	0.70 (1)	
Percent of Control		87.50	
Glucose (mg/dL)	SD 28	139.0 (1)	
Percent of Control		59.6	
Total Protein (g/dL)	SD 28	7.20 (1)	
Percent of Control		110.94	
Globulin (g/dL)	SD 28	1.90 (1)	
Percent of Control		95.96	
A/G Ratio	SD 28	2.79 (1)	
Percent of Control		121.24	
Albumin (g/dL)	SD 28	5.30 (1)	
Percent of Control		117.52	
Total Bilirubin (mg/dL)	SD 28	0.347 ± 0.088 (2) *	
Percent of Control		236.054	
Direct Bilirubin (mg/dL)	SD 28	0.145 ± 0.082 (2) *	
Percent of Control		578.000	
Indirect Bilirubin (mg/dL)	SD 28	0.203 ± 0.007 (2)	
Percent of Control		165.984	
Cholesterol (mg/dL)	SD 28	27.0 (1)	
Percent of Control		26.2	

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		Treatment Groups	
	Phase Day	1000	
Triglyceride (mg/dL)	SD 28	75.0 (1)	
Percent of Control		96.0	
Alanine Aminotransferase (IU/L)	SD 28	99.00 (1)	
Percent of Control		207.55	
Alkaline Phosphatase (IU/L)	SD 28	311.0 (1)	
Percent of Control		211.6	
Aspartate Aminotransferase (U/L)	SD 28	400.00 ± 329.00 (2) **	
Percent of Control		736.65	
Creatine Kinase (IU/L)	SD 28	89.0 (1)	
Percent of Control		104.1	
Sorbitol Dehydrogenase (IU/L)	SD 28	2.0 (1)	
Percent of Control		39.2	
Bile salt/acids (umol/L)	SD 28	46.0 (1)	
Percent of Control		469.4	

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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

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 ****